

## **If you plan to submit a bid directly to the Department of Transportation**

### **PREQUALIFICATION**

Any contractor who desires to become pre-qualified to bid on work advertised by IDOT must submit the properly completed pre-qualification forms to the Bureau of Construction no later than 4:30 p.m. prevailing time twenty-one days prior to the letting of interest. This pre-qualification requirement applies to first time contractors, contractors renewing expired ratings, contractors maintaining continuous pre-qualification or contractors requesting revised ratings. To be eligible to bid, existing pre-qualification ratings must be effective through the date of letting.

### **REQUESTS FOR AUTHORIZATION TO BID**

Contractors wanting to bid on items included in a particular letting must submit the properly completed "Request for Authorization to Bid/or Not For Bid Status" (BDE 124INT) and the ORIGINAL "Affidavit of Availability" (BC 57) to the proper office no later than 4:30 p.m. prevailing time, three (3) days prior to the letting date.

### **WHO CAN BID ?**

Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction.

**WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?:** When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status" (BDE 124INT) he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued an **Authorization to Bid or Not for Bid Report**, approved by the Central Bureau of Construction that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Authorization to Bid or Not for Bid Report** will indicate the reason for denial.

**ABOUT AUTHORIZATION TO BID:** Firms that have not received an authorization form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

**ADDENDA AND REVISIONS:** It is the contractor's responsibility to determine which, if any, addenda or revisions pertain to any project they may be bidding. Failure to incorporate all relevant addenda or revisions may cause the bid to be declared unacceptable.

Each addendum will be placed with the contract number. Addenda and revisions will also be placed on the Addendum/Revision Checklist and each subscription service subscriber will be notified by e-mail of each addendum and revision issued.

The Internet is the Department's primary way of doing business. The subscription server e-mails are an added courtesy the Department provides. It is suggested that bidders check IDOT's website at <http://www.dot.il.gov/desenv/delett.html> before submitting final bid information.

### ***IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.***

Addenda Questions may be directed to the Contracts Office at (217)782-7806 or [D&Econtracts@dot.il.gov](mailto:D&Econtracts@dot.il.gov)

Technical Questions about downloading these files may be directed to Tim Garman (217)524-1642 or [Timothy.Garman@illinois.gov](mailto:Timothy.Garman@illinois.gov).

**WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?:** Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

**ABOUT SUBMITTING BIDS:** It is recommended that bidders deliver bids in person to insure they arrive at the proper location prior to the time specified for the receipt of bids. Any bid received at the place of letting after the time specified will not be accepted.

**WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?**

<b>Questions Regarding</b>	<b>Call</b>
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of plans and proposals	217/782-7806

**ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS**

Planholders should verify that they have received and incorporated any addendum and/or revision prior to submitting their bid. Failure by the bidder to include an addendum or revision could result in a bid being rejected as irregular.

RETURN WITH BID

1P

Proposal Submitted By
Name
Address
City

Letting November 5, 2010

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL  
(See instructions inside front cover)

**NOTICE TO PROSPECTIVE BIDDERS**

This proposal can be used for bidding purposes by only those companies that request and receive written AUTHORIZATION TO BID from IDOT's Central Bureau of Construction.

(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

**Notice to Bidders,  
Specifications,  
Proposal, Contract  
and Contract Bond**



**Illinois Department  
of Transportation**

Springfield, Illinois 62764

Contract No. 85521  
WINNEBAGO County  
Section 06-00543-00-BT (Rockford)  
Route ROCKFORD RIVERWALK  
Project TE-D2(133)  
District 2 Construction Funds

PLEASE MARK THE APPROPRIATE BOX BELOW:

- A Bid Bond is included.
- A Cashier's Check or a Certified Check is included

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

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## INSTRUCTIONS

**ABOUT IDOT PROPOSALS:** All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond required for Prime Contractors to submit a bid after written **Authorization to Bid** has been issued by IDOT's Central Bureau of Construction. In addition, this proposal contains new statutory requirements applicable to the use of subcontractors and, in particular, includes the State Required Ethical Standards Governing Subcontractors to be signed and incorporated into all subcontracts.

**WHO CAN BID?:** Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction. To request authorization, a potential bidder must complete and submit Part B of the Request for Authorization to Bid/or Not For Bid Status form (BDE 124 INT) and submit an original Affidavit of Availability (BC 57).

**WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?:** When a prospective prime bidder submits a "**Authorization to Bid or Not for Bid**" form, he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Authorization to Bid or Not for Bid Report**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Authorization to Bid or Not for Bid Report** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Authorization to Bid or Not for Bid Report**, they should contact the Central Bureau of Construction in advance of the letting date.

**WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?:** Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

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Questions Regarding	Call
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806

RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of \_\_\_\_\_  
\_\_\_\_\_

Taxpayer Identification Number (Mandatory) \_\_\_\_\_

for the improvement identified and advertised for bids in the Invitation for Bids as:

**Contract No. 85521  
WINNEBAGO County  
Section 06-00543-00-BT (Rockford)  
Project TE-D2(133)  
Route ROCKFORD RIVERWALK  
District 2 Construction Funds**

**Project consists of the construction of a pedestrian riverwalk, PCC sidewalk, soldier pile retaining walls, two pedestrian structures, HMA paving, lighting and electrical work, landscaping and the construction of an amphitheatre, located on the west bank of the Rock River, between Locust Street and Whitman Street in the city of Rockford.**

2. The undersigned bidder will furnish all labor, material and equipment to complete the above described project in a good and workmanlike manner as provided in the contract documents provided by the Department of Transportation. This proposal will become part of the contract and the terms and conditions contained in the contract documents shall govern performance and payments.

**RETURN WITH BID**

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned further declares that he/she has carefully examined the proposal, plans, specifications, addenda form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he/she waives all right to plead any misunderstanding regarding the same.
  
4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned further agrees to execute a contract for this work and present the same to the department within fifteen (15) days after the contract has been mailed to him/her. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen (15) days after the contract has been mailed to him/her contract bond satisfactory to and in the form prescribed by the Department of Transportation, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.
  
5. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

<u>Amount of Bid</u>		<u>Proposal Guaranty</u>	<u>Amount of Bid</u>		<u>Proposal Guaranty</u>	
Up to	\$5,000 .....	\$150	\$2,000,000	to	\$3,000,000 .....	\$100,000
\$5,000	to \$10,000 .....	\$300	\$3,000,000	to	\$5,000,000 .....	\$150,000
\$10,000	to \$50,000 .....	\$1,000	\$5,000,000	to	\$7,500,000 .....	\$250,000
\$50,000	to \$100,000 .....	\$3,000	\$7,500,000	to	\$10,000,000 .....	\$400,000
\$100,000	to \$150,000 .....	\$5,000	\$10,000,000	to	\$15,000,000 .....	\$500,000
\$150,000	to \$250,000 .....	\$7,500	\$15,000,000	to	\$20,000,000 .....	\$600,000
\$250,000	to \$500,000 .....	\$12,500	\$20,000,000	to	\$25,000,000 .....	\$700,000
\$500,000	to \$1,000,000 .....	\$25,000	\$25,000,000	to	\$30,000,000 .....	\$800,000
\$1,000,000	to \$1,500,000 .....	\$50,000	\$30,000,000	to	\$35,000,000 .....	\$900,000
\$1,500,000	to \$2,000,000 .....	\$75,000	over		\$35,000,000 .....	\$1,000,000

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois, when the state is awarding authority; the county treasurer, when a county is the awarding authority; or the city, village, or town treasurer, when a city, village, or town is the awarding authority.

If a combination bid is submitted, the proposal guaranties which accompany the individual proposals making up the combination will be considered as also covering the combination bid.

The amount of the proposal guaranty check is \_\_\_\_\_ \$( \_\_\_\_\_ ). If this proposal is accepted and the undersigned shall fail to execute a contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty shall become the property of the State of Illinois, and shall be considered as payment of damages due to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise, the bid bond shall become void or the proposal guaranty check shall be returned to the undersigned.

**Attach Cashier's Check or Certified Check Here**

In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual proposal. If the guaranty check is placed in another proposal, state below where it may be found.

The proposal guaranty check will be found in the proposal for:

Item \_\_\_\_\_

Section No. \_\_\_\_\_

County \_\_\_\_\_

**Mark the proposal cover sheet as to the type of proposal guaranty submitted.**

**RETURN WITH BID**

6. **COMBINATION BIDS.** The undersigned further agrees that if awarded the contract for the sections contained in the following combination, he/she will perform the work in accordance with the requirements of each individual proposal comprising the combination bid specified in the schedule below, and that the combination bid shall be prorated against each section in proportion to the bid submitted for the same. If an error is found to exist in the gross sum bid for one or more of the individual sections included in a combination, the combination bid shall be corrected as provided in the specifications.

**When a combination bid is submitted, the schedule below must be completed in each proposal comprising the combination.**

**If alternate bids are submitted for one or more of the sections comprising the combination, a combination bid must be submitted for each alternate.**

**Schedule of Combination Bids**

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices shall govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.

8. **AUTHORITY TO DO BUSINESS IN ILLINOIS.** Section 20-43 of the Illinois Procurement Code (30 ILCS 500/20-43) provides that a person (other than an individual acting as a sole proprietor) must be a legal entity authorized to do business in the State of Illinois prior to submitting the bid.

9. **The services of a subcontractor will or may be used.**

Check box Yes   
 Check box No

For known subcontractors with subcontracts with an annual value of more than \$25,000, the contract shall include their name, address, and the dollar allocation for each subcontractor.

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STATE JOB # - C-92-019-07  
 PPS NBR - 0-00991-0000

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
WINNEBAGO	201	02	06-00543-00-BT (ROCKFORD)	TE-00D2/133/000	ROCKFORD RIVERWALK

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2000118	T-ACERX FREM AB 3	EACH	3.000	X	=		
A2005424	T-LIRIODEN TUL 3	EACH	3.000	X	=		
A2005920	T-PLAT X ACR BG 2-1/2	EACH	4.000	X	=		
A2006524	T-QUERCUS BICOL 3	EACH	3.000	X	=		
A2006624	T-QUERCUS IMBR 3	EACH	3.000	X	=		
A2006726	T-QUERCUS MACR 3	EACH	2.000	X	=		
A2007122	T-QUERCUS RUBRA 3	EACH	3.000	X	=		
B2000768	T-AMEL X GF AB SF 7'	EACH	6.000	X	=		
B2001668	T-CRATAE CRU-I SF 7'	EACH	5.000	X	=		
C2C03424	S-HYDRA ARBOR AN 2'C	EACH	89.000	X	=		
C2C03428	S-HYDRA MACRO ES 2'C	EACH	22.000	X	=		
C2C05824	S-RHUS AROMA GRO 2'C	EACH	71.000	X	=		
C2004536	S-MYRICA PEN 3'	EACH	29.000	X	=		
C2007224	S-ROSA KNOCKOUT 24	EACH	50.000	X	=		
D2C00624	E-JUNIPER CHIN SG 2'C	EACH	97.000	X	=		



ROCKFORD  
 06-00543-00-BT (ROCKFORD)  
 WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 85521

ECMS002 DTGECM03 ECMR003 PAGE 2  
 RUN DATE - 10/04/10  
 RUN TIME - 184202

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
D2C00724	E-JUNI CH SAR V 2'C	EACH	28.000 X	=			
D2C03524	E-TAXUS X MD DN 2'C	EACH	77.000 X	=			
K0012990	P PL ORNAMENT T GAL P	UNIT	169.500 X	=			
K1005481	SHRED BARK MULCH 3	SQ YD	2,650.000 X	=			
XX001249	ORNAMENTAL FENCE	FOOT	150.000 X	=			
XX003308	TRENCH DRAIN	FOOT	80.000 X	=			
XX003885	IRRIGATION SYSTEM	L SUM	1.000 X	=			
XX005913	TEMP ACCESS CAUSEWAY	L SUM	1.000 X	=			
XX005963	ANTI-GRAFFITI COATING	SQ FT	1,256.000 X	=			
XX007023	STAIN CONC STRUCTURES	SQ YD	78.000 X	=			
XX007107	SILT CURTAIN	FOOT	600.000 X	=			
XX007297	MASONRY COLUMN, LARGE	EACH	2.000 X	=			
XX007298	MASONRY COLUMN, SMALL	EACH	7.000 X	=			
XX008402	TIMBER DECK REM & REP	L SUM	1.000 X	=			
XX008421	PED TRUSS CABLE STAY	SQ FT	2,740.000 X	=			

ROCKFORD  
 06-00543-00-BT (ROCKFORD)  
 WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 85521

ECMS002 DTGECM03 ECMR003 PAGE 3  
 RUN DATE - 10/04/10  
 RUN TIME - 184202

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX008423	PRECAST CONC LAGGING	SQ FT	1,616.000 X	=	=	=	=
XX008424	LIGHT FIX ASSEMBLY-TA	EACH	15.000 X	=	=	=	=
XX008425	LIGHT FIX ASSEMBLY-TB	EACH	11.000 X	=	=	=	=
XX008426	LIGHT FIX ASSEMBLY-TC	EACH	11.000 X	=	=	=	=
XX008427	LIGHT FIX ASSEMBLY-TD	EACH	16.000 X	=	=	=	=
XX008428	LIGHT FIX ASSEMBLY-TE	EACH	16.000 X	=	=	=	=
XX008429	LIGHT FIX ASSEMBLY-TF	EACH	6.000 X	=	=	=	=
XX008430	LIGHT FIX ASSEMBLY-TG	EACH	4.000 X	=	=	=	=
XX008431	PAN BOARD, NEMA X4, SPL	EACH	1.000 X	=	=	=	=
X0301446	GATE, SPECIAL	EACH	1.000 X	=	=	=	=
X0322118	REM CON FLAR END SEC	EACH	1.000 X	=	=	=	=
X0322508	PED TRUSS SUPERSTR	SQ FT	1,097.000 X	=	=	=	=
X0324450	SEG CONC BLK WALL, SP	SQ FT	105.000 X	=	=	=	=
X0324455	DRILL/SET SOLD P SOIL	CU FT	6,049.000 X	=	=	=	=
X0324456	DRILL/SET SOLD P ROCK	CU FT	8,880.000 X	=	=	=	=

ROCKFORD  
 06-00543-00-BT (ROCKFORD)  
 WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 85521

ECMS002 DTGECM03 ECMR003 PAGE 4  
 RUN DATE - 10/04/10  
 RUN TIME - 184202

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0326146	SOIL CONDITIONER	SQ YD	1,590.000 X	=	=	=	=
X0326498	GFC120A DX RECEPTACLE	EACH	15.000 X	=	=	=	=
X2810110	STONE RIPRAP CL A5 SP	SQ YD	1,973.000 X	=	=	=	=
X4240440	PC CONC SIDEWALK 6 SP	SQ FT	5,083.000 X	=	=	=	=
X4402020	CONC MEDIAN SURF REM	SQ FT	540.000 X	=	=	=	=
X5015225	PIPE CULVERT REM SPL	FOOT	552.000 X	=	=	=	=
X5021410	ROCK EXC STRUCT SPL	CU YD	191.900 X	=	=	=	=
X5090810	PEDESTRIAN RAIL SPL	FOOT	531.000 X	=	=	=	=
X5150110	NAME PLATES SPL	EACH	2.000 X	=	=	=	=
X6026050	SANITARY MANHOLE ADJ	EACH	1.000 X	=	=	=	=
X7800630	URETH PAVT MK LINE 6	FOOT	172.000 X	=	=	=	=
X7800680	URETH PAVT MK LINE 24	FOOT	44.000 X	=	=	=	=
X8570015	CONTROLLER (SPECIAL)	EACH	1.000 X	=	=	=	=
Z0003855	BICYCLE RACKS	EACH	10.000 X	=	=	=	=
Z0004542	HMA REMOVAL SPL	SQ YD	795.000 X	=	=	=	=

ROCKFORD  
 06-00543-00-BT (ROCKFORD)  
 WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 85521

ECMS002 DTGECM03 ECMR003 PAGE 5  
 RUN DATE - 10/04/10  
 RUN TIME - 184202

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0006700	BRIDGE DRAINAGE SYS	EACH	2.000 X	=			
Z0007118	UNTREATED TIMBER LAG	SQ FT	3,570.000 X	=			
Z0007120	WELD WIRE FAB 6X6	SQ YD	547.000 X	=			
Z0007601	BLDG REMOV NO 1	L SUM	1.000 X	=			
Z0007602	BLDG REMOV NO 2	L SUM	1.000 X	=			
Z0026404	FUR SOLDIER PILES WS	FOOT	2,544.000 X	=			
Z0033042	REMOV EX TS EQUIP	L SUM	1.000 X	=			
Z0043750	PREC MOD BLOCK WALL	SQ FT	6,326.000 X	=			
Z0046304	P UNDR FOR STRUCT 4	FOOT	850.000 X	=			
Z0056700	SAN SEW 4	FOOT	15.000 X	=			
Z0064540	SEEPAGE COLLAR	EACH	5.000 X	=			
Z0065000	SET PILES IN ROCK	EACH	16.000 X	=			
Z0075496	CONC RETAIN WALL REM	FOOT	71.000 X	=			
Z0076600	TRAINEES	hour	500.000 X	=	0.80		400.00
20100110	TREE REMOV 6-15	UNIT	2,847.000 X	=			

ROCKFORD  
 06-00543-00-BT (ROCKFORD)  
 WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 85521

ECMS002 DTGECM03 ECMR003 PAGE 6  
 RUN DATE - 10/04/10  
 RUN TIME - 184202

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20100210	TREE REMOV OVER 15	UNIT	544.000 X	=			
20101100	TREE TRUNK PROTECTION	EACH	3.000 X	=			
20101700	SUPPLE WATERING	UNIT	10.000 X	=			
20200100	EARTH EXCAVATION	CU YD	4,576.000 X	=			
20300100	CHANNEL EXCAVATION	CU YD	1,476.000 X	=			
20400800	FURNISHED EXCAVATION	CU YD	362.000 X	=			
20700220	POROUS GRAN EMBANK	CU YD	203.000 X	=			
20800150	TRENCH BACKFILL	CU YD	685.000 X	=			
21000310	GRAN EMBANK SPEC	CU YD	547.000 X	=			
21101625	TOPSOIL F & P 6	SQ YD	6,340.000 X	=			
25000100	SEEDING CL 1	ACRE	0.850 X	=			
25000300	SEEDING CL 3	ACRE	0.100 X	=			
25000400	NITROGEN FERT NUTR	POUND	90.000 X	=			
25000500	PHOSPHORUS FERT NUTR	POUND	90.000 X	=			
25000600	POTASSIUM FERT NUTR	POUND	90.000 X	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
25100630	EROSION CONTR BLANKET	SQ YD	4,750.000 X	=	=	=	=
25200100	SODDING	SQ YD	135.000 X	=	=	=	=
28000250	TEMP EROS CONTR SEED	POUND	150.000 X	=	=	=	=
28000400	PERIMETER EROS BAR	FOOT	538.000 X	=	=	=	=
28000500	INLET & PIPE PROTECT	EACH	19.000 X	=	=	=	=
28200200	FILTER FABRIC	SQ YD	1,735.000 X	=	=	=	=
31101000	SUB GRAN MAT B	TON	1,721.000 X	=	=	=	=
35101400	AGG BASE CSE B	TON	1,999.000 X	=	=	=	=
40600200	BIT MATLS PR CT	TON	11.300 X	=	=	=	=
40600300	AGG PR CT	TON	15.200 X	=	=	=	=
40603080	HMA BC IL-19.0 N50	TON	544.000 X	=	=	=	=
40603310	HMA SC "C" N50	TON	326.000 X	=	=	=	=
42000210	PCC PVT 7 1/2	SQ YD	426.800 X	=	=	=	=
42300400	PCC DRIVEWAY PAVT 8	SQ YD	540.000 X	=	=	=	=
42400300	PC CONC SIDEWALK 6	SQ FT	13,950.000 X	=	=	=	=

ROCKFORD  
06-00543-00-BT (ROCKFORD)  
WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF PRICES  
CONTRACT NUMBER - 85521

ECMS002 DTGECM03 ECMR003 PAGE 8  
RUN DATE - 10/04/10  
RUN TIME - 184202

ITEM NUMBER	PAY. ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
42400800	DETECTABLE WARNINGS	SQ FT	102.000 X	=			
44000500	COMB CURB GUTTER REM	FOOT	1,118.000 X	=			
44000600	SIDEWALK REM	SQ FT	4,246.000 X	=			
44213200	SAW CUTS	FOOT	1,262.000 X	=			
50104400	CONC HDWL REM	EACH	1.000 X	=			
50200100	STRUCTURE EXCAVATION	CU YD	1,467.000 X	=			
50200450	REM/DISP UNS MATL-STR	CU YD	100.000 X	=			
50300225	CONC STRUCT	CU YD	814.400 X	=			
50300254	RUBBED FINISH	SQ FT	3,977.000 X	=			
50300285	FORM LINER TEX SURF	SQ FT	7,755.000 X	=			
50300300	PROTECTIVE COAT	SQ YD	1,823.000 X	=			
50500505	STUD SHEAR CONNECTORS	EACH	2,162.000 X	=			
50800105	REINFORCEMENT BARS	POUND	9,101.000 X	=			
50800205	REINF BARS, EPOXY CTD	POUND	68,729.000 X	=			
50901760	PIPE HANDRAIL	FOOT	774.000 X	=			

ROCKFORD  
 06-00543-00-BT (ROCKFORD)  
 WINNEBAGO

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 85521

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 RUN DATE - 10/04/10  
 RUN TIME - 184202

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
54213669	PRC FLAR END SEC 24	EACH	1.000 X	=	=	=	=
550A0050	STORM SEW CL A 1 12	FOOT	164.000 X	=	=	=	=
550A0070	STORM SEW CL A 1 15	FOOT	84.000 X	=	=	=	=
550A0090	STORM SEW CL A 1 18	FOOT	134.000 X	=	=	=	=
550A0120	STORM SEW CL A 1 24	FOOT	62.000 X	=	=	=	=
550B0020	STORM SEW CL B 1 6	FOOT	61.000 X	=	=	=	=
58700300	CONCRETE SEALER	SQ FT	304.000 X	=	=	=	=
59100100	GEOCOMPOSITE WALL DR	SQ YD	451.100 X	=	=	=	=
60218400	MAN TA 4 DIA T1F CL	EACH	4.000 X	=	=	=	=
60224600	RD MAN 4 DIA T1F CL	EACH	1.000 X	=	=	=	=
60236200	INLETS TA T8G	EACH	1.000 X	=	=	=	=
60242500	INLETS SPL N1	EACH	4.000 X	=	=	=	=
60242600	INLETS SPL N2	EACH	3.000 X	=	=	=	=
60246541	INLET BOX SPL N1	EACH	2.000 X	=	=	=	=
60258100	MAN RECON NEW T1F OL	EACH	1.000 X	=	=	=	=



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ILLINOIS DEPARTMENT OF TRANSPORTATION  
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60260050	SAN MAN RECONST	EACH	4.000 X	=	=	=	=
60260100	INLETS ADJUST	EACH	6.000 X	=	=	=	=
60500060	REMOV INLETS	EACH	10.000 X	=	=	=	=
60602800	CONC GUTTER TB	FOOT	167.000 X	=	=	=	=
60604700	COMB CC&G TB6.18 MOD	FOOT	1,222.000 X	=	=	=	=
60618320	CONC MEDIAN SURF 6	SQ FT	540.000 X	=	=	=	=
63000130	SPBGR TY A SPL	FOOT	246.000 X	=	=	=	=
63200310	GUARDRAIL REMOV	FOOT	320.000 X	=	=	=	=
67100100	MOBILIZATION	L SUM	1.000 X	=	=	=	=
70101700	TRAF CONT & PROT	L SUM	1.000 X	=	=	=	=
78001110	PAINT PVT MK LINE 4	FOOT	1,726.000 X	=	=	=	=
78200455	BIDIRECT GDRL REFL	EACH	15.000 X	=	=	=	=
78300100	PAVT MARKING REMOVAL	SQ FT	170.000 X	=	=	=	=
80400105	ELECT SERV INSTALL SP	EACH	1.000 X	=	=	=	=
81012300	CON T 1 PVC	FOOT	2,625.000 X	=	=	=	=

ROCKFORD (WINNEBAGO) (ROCKFORD) ILLINOIS DEPARTMENT OF TRANSPORTATION ECMS002 DTGECM03 ECMR003 PAGE 11  
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 WINNEBAGO CONTRACT NUMBER - 85521 RUN TIME - 184202

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
81012600	CON T 2 PVC	FOOT	1,930.000	X	=		
81104200	CON AT ST 3/4 IM	FOOT	1,050.000	X	=		
81300100	JUN BX SS AS 4X4X3	EACH	38.000	X	=		
81301400	JUN BX SS ES 18X18X6	EACH	12.000	X	=		
81400115	HANDHOLE TO BE ADJUST	EACH	3.000	X	=		
81400730	HANDHOLE C CONC	EACH	6.000	X	=		
81603100	UD 4#6GXLPUSE 1 1/4	FOOT	1,880.000	X	=		
81702110	EC C XLP USE 1C 10	FOOT	350.000	X	=		
81702120	EC C XLP USE 1C 8	FOOT	18,620.000	X	=		
81702400	EC C XLP USE 3-1C 2	FOOT	4,905.000	X	=		
81900200	TR & BKFIL F ELECT WK	FOOT	4,560.000	X	=		
83600120	LIGHT POLE FDN SPL	FOOT	30.000	X	=		
83600200	LIGHT POLE FDN 24D	FOOT	90.000	X	=		
84200500	REM LT UNIT SALV	EACH	5.000	X	=		
84200804	REM POLE FDN	EACH	5.000	X	=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
88102845	PED SH P LED 2F BM CT	EACH	8.000 X		=		

TOTAL \$

- 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.

## RETURN WITH BID

### **STATE REQUIRED ETHICAL STANDARDS GOVERNING CONTRACT PROCUREMENT: ASSURANCES, CERTIFICATIONS AND DISCLOSURES**

#### **I. GENERAL**

**A.** Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

**B.** In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. Except as otherwise required in subsection III, paragraphs J-M, by execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances have been read and understood, that each certification is made and understood, and that each disclosure requirement has been understood and completed.

**C.** In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for the chief procurement officer to void the contract, or subcontract, and may result in the suspension or debarment of the bidder or subcontractor.

#### **II. ASSURANCES**

The assurances hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder.

##### **A. Conflicts of Interest**

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

(a) Prohibition. It is unlawful for any person holding an elective office in this State, holding a seat in the General Assembly, or appointed to or employed in any of the offices or agencies of state government and who receives compensation for such employment in excess of 60% of the salary of the Governor of the State of Illinois, or who is an officer or employee of the Capital Development Board or the Illinois Toll Highway Authority, or who is the spouse or minor child of any such person to have or acquire any contract, or any direct pecuniary interest in any contract therein, whether for stationery, printing, paper, or any services, materials, or supplies, that will be wholly or partially satisfied by the payment of funds appropriated by the General Assembly of the State of Illinois or in any contract of the Capital Development Board or the Illinois Toll Highway authority.

(b) Interests. It is unlawful for any firm, partnership, association or corporation, in which any person listed in subsection (a) is entitled to receive (i) more than 7 1/2% of the total distributable income or (ii) an amount in excess of the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(c) Combined interests. It is unlawful for any firm, partnership, association, or corporation, in which any person listed in subsection (a) together with his or her spouse or minor children is entitled to receive (i) more than 15%, in the aggregate, of the total distributable income or (ii) an amount in excess of 2 times the salary of the Governor, to have or acquire any such contract or direct pecuniary interest therein.

(d) Securities. Nothing in this Section invalidates the provisions of any bond or other security previously offered or to be offered for sale or sold by or for the State of Illinois.

(e) Prior interests. This Section does not affect the validity of any contract made between the State and an officer or employee of the State or member of the General Assembly, his or her spouse, minor child or any combination of those persons if that contract was in existence before his or her election or employment as an officer, member, or employee. The contract is voidable, however, if it cannot be completed within 365 days after the officer, member, or employee takes office or is employed.

The current salary of the Governor is \$177,412.00. Sixty percent of the salary is \$106,447.20.

## RETURN WITH BID

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-13, or that an effective exemption has been issued by the Board of Ethics to any individual subject to the Section 50-13 prohibitions pursuant to the provisions of Section 50-20 of the Code and Executive Order Number 3 (1998). Information concerning the exemption process is available from the Department upon request.

### **B. Negotiations**

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

(a) It is unlawful for any person employed in or on a continual contractual relationship with any of the offices or agencies of State government to participate in contract negotiations on behalf of that office or agency with any firm, partnership, association, or corporation with whom that person has a contract for future employment or is negotiating concerning possible future employment.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-15, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

### **C. Inducements**

1. The Illinois Procurement Code provides:

Section 50-25. Inducement. Any person who offers or pays any money or other valuable thing to any person to induce him or her not to bid for a State contract or as recompense for not having bid on a State contract is guilty of a Class 4 felony. Any person who accepts any money or other valuable thing for not bidding for a State contract or who withholds a bid in consideration of the promise for the payment of money or other valuable thing is guilty of a Class 4 felony.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-25, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

### **D. Revolving Door Prohibition**

1. The Illinois Procurement Code provides:

Section 50-30. Revolving door prohibition. Chief procurement officers, State purchasing officers, procurement compliance monitors, their designees whose principal duties are directly related to State procurement, and executive officers confirmed by the Senate are expressly prohibited for a period of 2 years after terminating an affected position from engaging in any procurement activity relating to the State agency most recently employing them in an affected position for a period of at least 6 months. The prohibition includes, but is not limited to: lobbying the procurement process; specifying; bidding; proposing bid, proposal, or contract documents; on their own behalf or on behalf of any firm, partnership, association, or corporation. This Section applies only to persons who terminate an affected position on or after January 15, 1999.

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-30, and that the bidder has no knowledge of any facts relevant to the kinds of acts prohibited therein.

### **E. Reporting Anticompetitive Practices**

1. The Illinois Procurement Code provides:

Section 50-40. Reporting anticompetitive practices. When, for any reason, any vendor, bidder, contractor, chief procurement officer, State purchasing officer, designee, elected official, or State employee suspects collusion or other anticompetitive practice among any bidders, offerors, contractors, proposers, or employees of the State, a notice of the relevant facts shall be transmitted to the Attorney General and the chief procurement officer.

2. The bidder assures the Department that it has not failed to report any relevant facts concerning the practices addressed in Section 50-40 which may involve the contract for which the bid is submitted.

### **F. Confidentiality**

1. The Illinois Procurement Code provides:

Section 50-45. Confidentiality. Any chief procurement officer, State purchasing officer, designee, or executive officer who willfully uses or allows the use of specifications, competitive bid documents, proprietary competitive information, proposals, contracts, or selection information to compromise the fairness or integrity of the procurement, bidding, or contract process shall be subject to immediate dismissal, regardless of the Personnel code, any contract, or any collective bargaining agreement, and may in addition be subject to criminal prosecution.

2. The bidder assures the Department that it has no knowledge of any fact relevant to the practices addressed in Section 50-45 which may involve the contract for which the bid is submitted.

## RETURN WITH BID

### **G. Insider Information**

1. The Illinois Procurement Act provides:

Section 50-50. Insider information. It is unlawful for any current or former elected or appointed State official or State employee to knowingly use confidential information available only by virtue of that office or employment for actual or anticipated gain for themselves or another person.

2. The bidder assures the Department that it has no knowledge of any facts relevant to the practices addressed in Section 50-50 which may involve the contract for which the bid is submitted.

### **III. CERTIFICATIONS**

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. Section 50-2 of the Illinois Procurement Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible chief procurement officer whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

#### **A. Bribery**

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

- (a) Prohibition. No person or business shall be awarded a contract or subcontract under this Code who:

- (1) has been convicted under the laws of Illinois or any other state of bribery or attempting to bribe an officer or employee of the State of Illinois or any other state in that officer's or employee's official capacity; or

- (2) has made an admission of guilt of that conduct that is a matter of record but has not been prosecuted for that conduct.

- (b) Businesses. No business shall be barred from contracting with any unit of State or local government, or subcontracting under such a contract, as a result of a conviction under this Section of any employee or agent of the business if the employee or agent is no longer employed by the business and:

- (1) the business has been finally adjudicated not guilty; or

- (2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

- (c) Conduct on behalf of business. For purposes of this Section, when an official, agent, or employee of a business committed the bribery or attempted bribery on behalf of the business and in accordance with the direction or authorization of a responsible official of the business, the business shall be chargeable with the conduct.

- (d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the Procurement Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the chief procurement officer may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

2. The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50.5.

#### **B. Felons**

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

3. Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement Code shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the chief procurement officer may declare the related contract void if any of the certifications required by this Section are false.

## RETURN WITH BID

### **C. Debt Delinquency**

1. The Illinois Procurement Code provides:

Section 50-11 and 50-12. Debt Delinquency.

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the Procurement Code. Section 50-11 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it knows or should know that it, or any affiliate, is delinquent in the payment of any debt to the State as defined by the Debt Collection Board. Section 50-12 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it, or any affiliate, has failed to collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with the provisions of the Illinois Use Tax Act. The bidder or contractor or subcontractor, respectively, further acknowledges that the chief procurement officer may declare the related contract void if this certification is false or if the bidder, contractor, or subcontractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

### **D. Prohibited Bidders, Contractors and Subcontractors**

1. The Illinois Procurement Code provides:

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the chief procurement officer shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

### **E. Section 42 of the Environmental Protection Act**

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-12 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Procurement Code by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The bidder or contractor or subcontractor, respectively, acknowledges that the chief procurement officer may declare the contract void if this certification is false.

### **F. Educational Loan**

1. Section 3 of the Educational Loan Default Act provides:

§ 3. No State agency shall contract with an individual for goods or services if that individual is in default, as defined in Section 2 of this Act, on an educational loan. Any contract used by any State agency shall include a statement certifying that the individual is not in default on an educational loan as provided in this Section.

2. The bidder, if an individual as opposed to a corporation, partnership or other form of business organization, certifies that the bidder is not in default on an educational loan as provided in Section 3 of the Act.

### **G. Bid-Rigging/Bid Rotating**

1. Section 33E-11 of the Criminal Code of 1961 provides:

§ 33E-11. (a) Every bid submitted to and public contract executed pursuant to such bid by the State or a unit of local government shall contain a certification by the prime contractor that the prime contractor is not barred from contracting with any unit of State or local government as a result of a violation of either Section 33E-3 or 33E-4 of this Article. The State and units of local government shall provide the appropriate forms for such certification.

- (b) A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

A violation of Section 33E-3 would be represented by a conviction of the crime of bid-rigging which, in addition to Class 3 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be barred for 5 years from the date of conviction from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

## RETURN WITH BID

A violation of Section 33E-4 would be represented by a conviction of the crime of bid-rotating which, in addition to Class 2 felony sentencing, provides that any person convicted of this offense or any similar offense of any state or the United States which contains the same elements as this offense shall be permanently barred from contracting with any unit of State or local government. No corporation shall be barred from contracting with any unit of State or local government as a result of a conviction under this Section of any employee or agent of such corporation if the employee so convicted is no longer employed by the corporation and: (1) it has been finally adjudicated not guilty or (2) if it demonstrates to the governmental entity with which it seeks to contract and that entity finds that the commission of the offense was neither authorized, requested, commanded, nor performed by a director, officer or a high managerial agent in behalf of the corporation.

2. The bidder certifies that it is not barred from contracting with the Department by reason of a violation of either Section 33E-3 or Section 33E-4.

### **H. International Anti-Boycott**

1. Section 5 of the International Anti-Boycott Certification Act provides:

§ 5. State contracts. Every contract entered into by the State of Illinois for the manufacture, furnishing, or purchasing of supplies, material, or equipment or for the furnishing of work, labor, or services, in an amount exceeding the threshold for small purchases according to the purchasing laws of this State or \$10,000.00, whichever is less, shall contain certification, as a material condition of the contract, by which the contractor agrees that neither the contractor nor any substantially-owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act.

2. The bidder makes the certification set forth in Section 5 of the Act.

### **I. Drug Free Workplace**

1. The Illinois "Drug Free Workplace Act" applies to this contract and it is necessary to comply with the provisions of the "Act" if the contractor is a corporation, partnership, or other entity (including a sole proprietorship) which has 25 or more employees.

2. The bidder certifies that if awarded a contract in excess of \$5,000 it will provide a drug free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the contractor's workplace; specifying the actions that will be taken against employees for violations of such prohibition; and notifying the employee that, as a condition of employment on such contract, the employee shall abide by the terms of the statement, and notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

(b) Establishing a drug free awareness program to inform employees about the dangers of drug abuse in the workplace; the contractor's policy of maintaining a drug free workplace; any available drug counseling, rehabilitation, and employee assistance programs; and the penalties that may be imposed upon employees for drug violations.

(c) Providing a copy of the statement required by subparagraph (1) to each employee engaged in the performance of the contract and to post the statement in a prominent place in the workplace.

(d) Notifying the Department within ten (10) days after receiving notice from an employee or otherwise receiving actual notice of the conviction of an employee for a violation of any criminal drug statute occurring in the workplace.

(e) Imposing or requiring, within 30 days after receiving notice from an employee of a conviction or actual notice of such a conviction, an appropriate personnel action, up to and including termination, or the satisfactory participation in a drug abuse assistance or rehabilitation program approved by a federal, state or local health, law enforcement or other appropriate agency.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment, and rehabilitation is required and indicating that a trained referral team is in place.

(g) Making a good faith effort to continue to maintain a drug free workplace through implementation of the actions and efforts stated in this certification.



## RETURN WITH BID

### J. Disclosure of Business Operations in Iran

Section 50-36 of the Illinois Procurement Code, 30ILCS 500/50-36 provides that each bid, offer, or proposal submitted for a State contract shall include a disclosure of whether or not the Company acting as the bidder, offeror, or proposing entity, or any of its corporate parents or subsidiaries, within the 24 months before submission of the bid, offer, or proposal had business operations that involved contracts with or provision of supplies or services to the Government of Iran, companies in which the Government of Iran has any direct or indirect equity share, consortiums or projects commissioned by the Government of Iran, or companies involved in consortiums or projects commissioned by the Government of Iran and either of the following conditions apply:

- (1) More than 10% of the Company's revenues produced in or assets located in Iran involve oil-related activities or mineral-extraction activities; less than 75% of the Company's revenues produced in or assets located in Iran involve contracts with or provision of oil-related or mineral-extraction products or services to the Government of Iran or a project or consortium created exclusively by that government; and the Company has failed to take substantial action.
- (2) The Company has, on or after August 5, 1996, made an investment of \$20 million or more, or any combination of investments of at least \$10 million each that in the aggregate equals or exceeds \$20 million in any 12-month period, which directly or significantly contributes to the enhancement of Iran's ability to develop petroleum resources of Iran.

The terms "Business operations", "Company", "Mineral-extraction activities", "Oil-related activities", "Petroleum resources", and "Substantial action" are all defined in the Code.

Failure to make the disclosure required by the Code shall cause the bid, offer or proposal to be considered not responsive. The disclosure will be considered when evaluating the bid, offer, or proposal or awarding the contract. The name of each Company disclosed as doing business or having done business in Iran will be provided to the State Comptroller.

Check the appropriate statement:

Company has no business operations in Iran to disclose.

Company has business operations in Iran as disclosed the attached document.

### K. Apprenticeship and Training Certification (Does not apply to federal aid projects)

In accordance with the provisions of Section 30-22 (6) of the Illinois Procurement Code, the bidder certifies that it is a participant, either as an individual or as part of a group program, in the approved apprenticeship and training programs applicable to each type of work or craft that the bidder will perform with its own forces. The bidder further certifies for work that will be performed by subcontract that each of its subcontractors submitted for approval either (a) is, at the time of such bid, participating in an approved, applicable apprenticeship and training program; or (b) will, prior to commencement of performance of work pursuant to this contract, begin participation in an approved apprenticeship and training program applicable to the work of the subcontract. The Department, at any time before or after award, may require the production of a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor and any or all of its subcontractors. Applicable apprenticeship and training programs are those that have been approved and registered with the United States Department of Labor. The bidder shall list in the space below, the official name of the program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's forces. Types of work or craft work that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category that does not have an applicable apprenticeship or training program. **The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project as reported on the Construction Employee Workforce Projection (Form BC-1256) and returned with the bid is accounted for and listed.**

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The requirements of this certification and disclosure are a material part of the contract, and the contractor shall require this certification provision to be included in all approved subcontracts. In order to fulfill this requirement, it shall not be necessary that an applicable program sponsor be currently taking or that it will take applications for apprenticeship, training or employment during the performance of the work of this contract.

**L. Political Contributions and Registration with the State Board of Elections**

Sections 20-160 and 50-37 of the Illinois Procurement Code regulate political contributions from business entities and any affiliated entities or affiliated persons bidding on or contracting with the state. Generally under Section 50-37, any business entity, and any affiliated entity or affiliated person of the business entity, whose current year contracts with all state agencies exceed an awarded value of \$50,000, are prohibited from making any contributions to any political committees established to promote the candidacy of the officeholder responsible for the awarding of the contracts or any other declared candidate for that office for the duration of the term of office of the incumbent officeholder or a period 2 years after the termination of the contract, whichever is longer. Any business entity and affiliated entities or affiliated persons whose state contracts in the current year do not exceed an awarded value of \$50,000, but whose aggregate pending bids and proposals on state contracts exceed \$50,000, either alone or in combination with contracts not exceeding \$50,000, are prohibited from making any political contributions to any political committee established to promote the candidacy of the officeholder responsible for awarding the pending contract during the period beginning on the date the invitation for bids or request for proposals is issued and ending on the day after the date of award or selection if the entity was not awarded or selected. Section 20-160 requires certification of registration of affected business entities in accordance with procedures found in Section 9-35 of The Election Code.

By submission of a bid, the contractor business entity acknowledges and agrees that it has read and understands Sections 20-160 and 50-37 of the Illinois Procurement Code, and that it makes the following certification:

**The undersigned business entity certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. A copy of the certificate of registration shall be submitted with the bid. The bidder is cautioned that the Department will not award a contract without submission of the certificate of registration.**

These requirements and compliance with the above referenced statutory sections are a material part of the contract, and any breach thereof shall be cause to void the contract under Section 50-60 of the Illinois Procurement Code. This provision does not apply to Federal-aid contracts.

**M. Lobbyist Disclosure**

Section 50-38 of the Illinois Procurement Code requires that any bidder or offeror on a State contract that hires a person required to register under the Lobbyist Registration Act to assist in obtaining a contract shall:

- (i) Disclose all costs, fees, compensation, reimbursements, and other remunerations paid or to be paid to the lobbyist related to the contract,
- (ii) Not bill or otherwise cause the State of Illinois to pay for any of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration, and
- (iii) Sign a verification certifying that none of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration were billed to the State.

This information, along with all supporting documents, shall be filed with the agency awarding the contract and with the Secretary of State. The chief procurement officer shall post this information, together with the contract award notice, in the online Procurement Bulletin.

Pursuant to Subsection (c) of this Section, no person or entity shall retain a person or entity to attempt to influence the outcome of a procurement decision made under the Procurement Code for compensation contingent in whole or in part upon the decision or procurement. Any person who violates this subsection is guilty of a business offense and shall be fined not more than \$10,000.

Bidder acknowledges that it is required to disclose the hiring of any person required to register pursuant to the Illinois Lobbyist Registration Act (25 ILCS 170) in connection with this contract.

Bidder has not hired any person required to register pursuant to the Illinois Lobbyist Registration Act in connection with this contract.

Or

Bidder has hired the following persons required to register pursuant to the Illinois Lobbyist Registration Act in connection with the contract:

Name and address of person: \_\_\_\_\_  
All costs, fees, compensation, reimbursements and other remuneration paid to said person: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## RETURN WITH BID

### IV. DISCLOSURES

- A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The bidder further certifies that the Department has received the disclosure forms for each bid.

The chief procurement officer may void the bid, contract, or subcontract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Procurement Code. Furthermore, the chief procurement officer may void the contract and the surety providing the performance bond shall be responsible for completion of the contract.

### B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than \$25,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the contract. Furthermore, pursuant to Section 5-5, the Procurement Policy Board may review a proposal, bid, or contract and issue a recommendation to void a contract or reject a proposal or bid based on any violation of the Procurement Code or the existence of a conflict of interest as provided in subsections (b) and (d) of Section 50-35.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

**The current annual salary of the Governor is \$177,412.00.**

In addition, all disclosures shall indicate any other current or pending contracts, proposals, leases, or other ongoing procurement relationships the bidding entity has with any other unit of state government and shall clearly identify the unit and the contract, proposal, lease, or other relationship.

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid.**

### C. Disclosure Form Instructions

#### Form A Instructions for Financial Information & Potential Conflicts of Interest

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES \_\_\_ NO \_\_\_
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES \_\_\_ NO
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the bidding entity's or parent entity's distributive income? YES \_\_\_ NO \_\_\_
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES \_\_\_ NO \_\_\_

(Note: Only one set of forms needs to be completed per person per bid even if a specific individual would require a yes answer to more than one question.)

A "YES" answer to any of these questions requires the completion of Form A. The bidder must determine each individual in the bidding entity or the bidding entity's parent company that would cause the questions to be answered "Yes". Each form must be signed and dated by a person that is authorized to execute contracts for your organization. **Photocopied or stamped signatures are not acceptable.** The person signing can be, but does not have to be, the person for which the form is being completed. The bidder is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the NOT APPLICABLE STATEMENT of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

## RETURN WITH BID

### **Form B: Instructions for Identifying Other Contracts & Procurement Related Information**

Disclosure Form B must be completed for each bid submitted by the bidding entity. *Note: Checking the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, checked, and dated or the bidder may be considered nonresponsive and the bid will not be accepted.*

The Bidder shall identify, by checking Yes or No on Form B, whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the bidder only needs to complete the check box on the bottom of Form B. If "Yes" is checked, the bidder must do one of the following:

Option I: If the bidder did not submit an Affidavit of Availability to obtain authorization to bid, the bidder must list all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Do not include IDOT contracts. Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included. Bidders who submit Affidavits of Availability are suggested to use Option II.

Option II: If the bidder is required and has submitted an Affidavit of Availability in order to obtain authorization to bid, the bidder may write or type "See Affidavit of Availability" which indicates that the Affidavit of Availability is incorporated by reference and includes all non-IDOT State of Illinois agency pending contracts, leases, bids, proposals, and other ongoing procurement relationships. For any contracts that are not covered by the Affidavit of Availability, the bidder must identify them on Form B or on an attached sheet(s). These might be such things as leases.

RETURN WITH BID

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

**Form A  
Financial Information &  
Potential Conflicts of Interest  
Disclosure**

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Code (30 ILCS 500). Vendors desiring to enter into a contract with the State of Illinois must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for bids in excess of \$25,000, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

*The current annual salary of the Governor is \$177,412.00.*

**DISCLOSURE OF FINANCIAL INFORMATION**

- 1. Disclosure of Financial Information.** The individual named below has an interest in the BIDDER (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than 60% of the annual salary of the Governor. **(Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)**

<b>FOR INDIVIDUAL (type or print information)</b>	
<b>NAME:</b>	_____
<b>ADDRESS</b>	_____
<b>Type of ownership/distributable income share:</b>	
stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet):	
% or \$ value of ownership/distributable income share:	_____

- 2. Disclosure of Potential Conflicts of Interest.** Check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If the answer to any question is "Yes", please attach additional pages and describe.

- (a) State employment, currently or in the previous 3 years, including contractual employment of services. Yes \_\_\_ No \_\_\_

If your answer is yes, please answer each of the following questions.

- Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes \_\_\_ No \_\_\_
- Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor provide the name the State agency for which you are employed and your annual salary. \_\_\_\_\_

**RETURN WITH BID**

- 3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor? Yes \_\_\_ No \_\_\_
  
- 4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15% in aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes \_\_\_ No \_\_\_

(b) State employment of spouse, father, mother, son, or daughter, including contractual employment for services in the previous 2 years.

Yes \_\_\_ No \_\_\_

If your answer is yes, please answer each of the following questions.

- 1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes \_\_\_ No \_\_\_
  
- 2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. \_\_\_\_\_

- 3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess 100% of the annual salary of the Governor? Yes \_\_\_ No \_\_\_
  
- 4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?

Yes \_\_\_ No \_\_\_

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.

Yes \_\_\_ No \_\_\_

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter.

Yes \_\_\_ No \_\_\_

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United State of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years.

Yes \_\_\_ No \_\_\_

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter.

Yes \_\_\_ No \_\_\_

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government.

Yes \_\_\_ No \_\_\_

**RETURN WITH BID**

(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes \_\_\_ No \_\_\_

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(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes \_\_\_ No \_\_\_

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(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes \_\_\_ No \_\_\_

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**3. Communication Disclosure.**

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4. Debarment Disclosure.** For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below:

Name of person(s): \_\_\_\_\_

Nature of disclosure: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**APPLICABLE STATEMENT**

**This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Under penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of my knowledge.**

Completed by:  \_\_\_\_\_ Date \_\_\_\_\_  
Signature of Individual or Authorized Representative

**NOT APPLICABLE STATEMENT**

**Under penalty of perjury, I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.**

**This Disclosure Form A is submitted on behalf of the CONTRACTOR listed on the previous page.**

\_\_\_\_\_ Date \_\_\_\_\_  
Signature of Authorized Representative

The bidder has a continuing obligation to supplement these disclosures under Sec. 50-35 of the Procurement Code.



**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

**Form B  
Other Contracts &  
Procurement Related Information  
Disclosure**

Contractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of \$25,000, and for all open-ended contracts.

**DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION**

**1. Identifying Other Contracts & Procurement Related Information.** The BIDDER shall identify whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes \_\_\_ No \_\_\_

**If "No" is checked,** the bidder only needs to complete the signature box on the bottom of this page.

**2. If "Yes" is checked.** Identify each such relationship by showing State of Illinois agency name and other descriptive information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

**THE FOLLOWING STATEMENT MUST BE CHECKED**

<input type="checkbox"/>	<hr style="width: 80%; margin: 0 auto;"/> Signature of Authorized Representative	<hr style="width: 10%; margin: 0 auto;"/> Date
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## **RETURN WITH BID**

### **SPECIAL NOTICE TO CONTRACTORS**

The following requirements of the Illinois Department of Human Rights' Rules and Regulations are applicable to bidders on all construction contracts advertised by the Illinois Department of Transportation:

#### **CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION**

- (a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.
- (b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.
- (c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.



**Contract No. 85521  
WINNEBAGO County  
Section 06-00543-00-BT (Rockford)  
Project TE-D2(133)  
Route ROCKFORD RIVERWALK  
District 2 Construction Funds**

**PART I. IDENTIFICATION**

Dept. Human Rights # \_\_\_\_\_ Duration of Project: \_\_\_\_\_

Name of Bidder: \_\_\_\_\_

**PART II. WORKFORCE PROJECTION**

A. The undersigned bidder has analyzed minority group and female populations, unemployment rates and availability of workers for the location in which this contract work is to be performed, and for the locations from which the bidder recruits employees, and hereby submits the following workforce projection including a projection for minority and female employee utilization in all job categories in the workforce to be allocated to this contract:

TABLE A

TABLE B

TOTAL Workforce Projection for Contract													
JOB CATEGORIES	TOTAL EMPLOYEES		MINORITY EMPLOYEES						TRAINEES				
	M	F	BLACK		HISPANIC		*OTHER MINOR.		APPREN-TICES		ON THE JOB TRAINEES		
			M	F	M	F	M	F	M	F	M	F	
OFFICIALS (MANAGERS)													
SUPERVISORS													
FOREMEN													
CLERICAL													
EQUIPMENT OPERATORS													
MECHANICS													
TRUCK DRIVERS													
IRONWORKERS													
CARPENTERS													
CEMENT MASONS													
ELECTRICIANS													
PIPEFITTERS, PLUMBERS													
PAINTERS													
LABORERS, SEMI-SKILLED													
LABORERS, UNSKILLED													
TOTAL													

CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT			
TOTAL EMPLOYEES		MINORITY EMPLOYEES	
M	F	M	F

TABLE C

TOTAL Training Projection for Contract								
EMPLOYEES IN TRAINING	TOTAL EMPLOYEES		BLACK		HISPANIC		*OTHER MINOR.	
	M	F	M	F	M	F	M	F
APPRENTICES								
ON THE JOB TRAINEES								

\*Other minorities are defined as Asians (A) or Native Americans (N). Please specify race of each employee shown in Other Minorities column.

FOR DEPARTMENT USE ONLY

Note: See instructions on page 2

**RETURN WITH BID**

**Contract No. 85521  
WINNEBAGO County  
Section 06-00543-00-BT (Rockford)  
Project TE-D2(133)  
Route ROCKFORD RIVERWALK  
District 2 Construction Funds**

**PART II. WORKFORCE PROJECTION - continued**

- B. Included in "Total Employees" under Table A is the total number of **new hires** that would be employed in the event the undersigned bidder is awarded this contract.

The undersigned bidder projects that: (number) \_\_\_\_\_ new hires would be recruited from the area in which the contract project is located; and/or (number) \_\_\_\_\_ new hires would be recruited from the area in which the bidder's principal office or base of operation is located.

- C. Included in "Total Employees" under Table A is a projection of numbers of persons to be employed directly by the undersigned bidder as well as a projection of numbers of persons to be employed by subcontractors.

The undersigned bidder estimates that (number) \_\_\_\_\_ persons will be directly employed by the prime contractor and that (number) \_\_\_\_\_ persons will be employed by subcontractors.

**PART III. AFFIRMATIVE ACTION PLAN**

- A. The undersigned bidder understands and agrees that in the event the foregoing minority and female employee utilization projection included under **PART II** is determined to be an underutilization of minority persons or women in any job category, and in the event that the undersigned bidder is awarded this contract, he/she will, prior to commencement of work, develop and submit a written Affirmative Action Plan including a specific timetable (geared to the completion stages of the contract) whereby deficiencies in minority and/or female employee utilization are corrected. Such Affirmative Action Plan will be subject to approval by the contracting agency and the **Department of Human Rights**.
- B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company \_\_\_\_\_ Telephone Number \_\_\_\_\_

Address \_\_\_\_\_

**NOTICE REGARDING SIGNATURE**

The Bidder's signature on the Proposal Signature Sheet will constitute the signing of this form. The following signature block needs to be completed only if revisions are required.

Signature:  \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

- Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.
- Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.
- Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.
- Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

**RETURN WITH BID**

**ADDITIONAL FEDERAL REQUIREMENTS**

In addition to the Required Contract Provisions for Federal-Aid Construction Contracts (FHWA 1273), all bidders make the following certifications.

- A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.
- B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:
1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES \_\_\_\_\_ NO \_\_\_\_\_
  2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES \_\_\_\_\_ NO \_\_\_\_\_

**RETURN WITH BID**

**Contract No. 85521  
WINNEBAGO County  
Section 06-00543-00-BT (Rockford)  
Project TE-D2(133)  
Route ROCKFORD RIVERWALK  
District 2 Construction Funds**

PROPOSAL SIGNATURE SHEET

The undersigned bidder hereby makes and submits this bid on the subject Proposal, thereby assuring the Department that all requirements of the Invitation for Bids and rules of the Department have been met, that there is no misunderstanding of the requirements of paragraph 3 of this Proposal, and that the contract will be executed in accordance with the rules of the Department if an award is made on this bid.

(IF AN INDIVIDUAL)

Firm Name \_\_\_\_\_  
Signature of Owner \_\_\_\_\_  
Business Address \_\_\_\_\_  
\_\_\_\_\_

(IF A CO-PARTNERSHIP)

Firm Name \_\_\_\_\_  
By \_\_\_\_\_  
Business Address \_\_\_\_\_  
Name and Address of All Members of the Firm: \_\_\_\_\_  
\_\_\_\_\_

(IF A CORPORATION)

Corporate Name \_\_\_\_\_  
By \_\_\_\_\_  
Signature of Authorized Representative \_\_\_\_\_  
Typed or printed name and title of Authorized Representative \_\_\_\_\_  
Attest \_\_\_\_\_  
Signature \_\_\_\_\_  
(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW)  
Business Address \_\_\_\_\_

(IF A JOINT VENTURE)

Corporate Name \_\_\_\_\_  
By \_\_\_\_\_  
Signature of Authorized Representative \_\_\_\_\_  
Typed or printed name and title of Authorized Representative \_\_\_\_\_  
Attest \_\_\_\_\_  
Signature \_\_\_\_\_  
Business Address \_\_\_\_\_

If more than two parties are in the joint venture, please attach an additional signature sheet.



Return with Bid

Division of Highways
Proposal Bid Bond
(Effective November 1, 1992)

Item No. \_\_\_\_\_

Letting Date \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, That We \_\_\_\_\_

as PRINCIPAL, and \_\_\_\_\_

\_\_\_\_\_ as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of invitation for bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, that whereas, the PRINCIPAL has submitted a bid proposal to the STATE OF ILLINOIS, acting through the Department of Transportation, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents, submit a DBE Utilization Plan that is accepted and approved by the Department; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to make the required DBE submission or to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the Department determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then Surety shall pay the penal sum to the Department within fifteen (15) days of written demand therefor. If Surety does not make full payment within such period of time, the Department may bring an action to collect the amount owed. Surety is liable to the Department for all its expenses, including attorney's fees, incurred in any litigation in which it prevails either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this \_\_\_\_\_ day of \_\_\_\_\_ A.D., \_\_\_\_\_.

PRINCIPAL
\_\_\_\_\_  
(Company Name)

SURETY
\_\_\_\_\_  
(Company Name)

By \_\_\_\_\_  
(Signature & Title)

By: \_\_\_\_\_  
(Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
County of \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public in and for said County, do hereby certify that \_\_\_\_\_ and \_\_\_\_\_ (Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this \_\_\_\_\_ day of \_\_\_\_\_ A.D. \_\_\_\_\_

My commission expires \_\_\_\_\_ Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing the proposal and marking the check box next to the Signature and Title line below, the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the State of Illinois under the conditions of the bid bond as shown above.

Electronic Bid Bond ID# \_\_\_\_\_ Company / Bidder Name \_\_\_\_\_ Signature and Title \_\_\_\_\_



**(1) Policy**

It is public policy that disadvantageded businesses as defined in 49 CFR Part 26 and the Special Provision shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal or State funds. Consequently the requirements of 49 CFR Part 26 apply to this contract.

**(2) Obligation**

The contractor agrees to ensure that disadvantageded businesses as defined in 49 CFR Part 26 and the Special Provision have the maximum opportunity to participate in the performance of contracts or subcontracts financed in whole or in part with Federal or State funds. The contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 and the Special Provision to ensure that said businesses have the maximum opportunity to compete for and perform under this contract. The contractor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts.

**(3) Project and Bid Identification**

Complete the following information concerning the project and bid:

Route _____	Total Bid _____
Section _____	Contract DBE Goal _____ (Percent) _____ (Dollar Amount)
Project _____	
County _____	
Letting Date _____	
Contract No. _____	
Letting Item No. _____	

**(4) Assurance**

I, acting in my capacity as an officer of the undersigned bidder (or bidders if a joint venture), hereby assure the Department that on this project my company : (check one)

Meets or exceeds contract award goals and has provided documented participation as follows:  
Disadvantaged Business Participation \_\_\_\_\_ percent

Attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

Failed to meet contract award goals and has included good faith effort documentation to meet the goals and that my company has provided participation as follows:  
Disadvantaged Business Participation \_\_\_\_\_ percent

The contract goals should be accordingly modified or waived. Attached is all information required by the Special Provision in support of this request including good faith effort. Also attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

\_\_\_\_\_  
Company

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

The "as read" Low Bidder is required to comply with the Special Provision.

Submit only one utilization plan for each project. The utilization plan shall be submitted in accordance with the special provision.

Bureau of Small Business Enterprises      **Local Let Projects**  
2300 South Dirksen Parkway                  Submit forms to the  
Springfield, Illinois 62764                  Local Agency





Subcontractor Registration \_\_\_\_\_

Letting \_\_\_\_\_

**Participation Statement**

Item No. \_\_\_\_\_

(1) Instructions

Contract \_\_\_\_\_

This form must be completed for each disadvantaged business participating in the Utilization Plan. This form shall be submitted in accordance with the special provision and will be attached to the Utilization Plan form.. If additional space is needed complete an additional form for the firm.

(2) Work

Pay Item No.	Description	Quantity	Unit Price	Total
Total				

(3) Partial Payment Items

For any of the above items which are partial pay items, specifically describe the work and subcontract dollar amount:

(4) Commitment

The undersigned certify that the information included herein is true and correct, and that the DBE firm listed below has agreed to perform a commercially useful function in the work of the contract item(s) listed above and to execute a contract with the prime contractor. The undersigned further understand that no changes to this statement may be made without prior approval from the Department’s Bureau of Small Business Enterprises and that complete and accurate information regarding actual work performed on this project and the payment therefore must be provided to the Department.

Signature for Prime Contractor

Signature for DBE Firm

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Contact \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

Phone \_\_\_\_\_

Firm Name \_\_\_\_\_

Firm Name \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

City/State/Zi \_\_\_\_\_

E \_\_\_\_\_

WC \_\_\_\_\_

# PROPOSAL ENVELOPE



# PROPOSALS

for construction work advertised for bids by the  
Illinois Department of Transportation

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

Bidders should use an IDOT proposal envelope or affix this form to the front of a 10" x 13" envelope for the submittal of bids. If proposals are mailed, they should be enclosed in a second or outer envelope addressed to:

Engineer of Design and Environment - Room 326  
Illinois Department of Transportation  
2300 South Dirksen Parkway  
Springfield, Illinois 62764

## **NOTICE**

**Individual bids, including Bid Bond and/or supplemental information if required, should be securely stapled.**

# CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

## NOTICE

None of the following material needs to be returned with the bid package unless the special provisions require documentation and/or other information to be submitted.

**Contract No. 85521  
WINNEBAGO County  
Section 06-00543-00-BT (Rockford)  
Project TE-D2(133)  
Route ROCKFORD RIVERWALK  
District 2 Construction Funds**



**Illinois Department of Transportation**

## **SUBCONTRACTOR DOCUMENTATION**

Public Acts 96-0795 and 96-0920, enacted substantial changes to the provisions of the Illinois Procurement Code (30 ILCS 500). Among the changes are provisions affecting subcontractors. The Contractor awarded this contract will be required as a material condition of the contract to implement and enforce the contract requirements applicable to subcontractors approved in accordance with article 108.01 of the Standard Specifications for Road and Bridge Construction.

If the Contractor seeks approval of subcontractors to perform a portion of the work, and approval is granted by the Department, the Contractor shall provide a copy of the subcontract to the Chief Procurement Officer within 20 calendar days after execution of the subcontract.

The subcontract shall contain the certifications required to be made by subcontractors pursuant to Article 50 of the Illinois Procurement Code. This Notice to Bidders includes a document incorporating all required subcontractor certifications and disclosures for use by the Contractor in compliance with this mandate. The document is entitled State Required Ethical Standards Governing Subcontractors.

**STATE ETHICAL STANDARDS**  
**GOVERNING SUBCONTRACTORS**

Article 50 of the Illinois Procurement Code establishes the duty of all State chief procurement officers, State purchasing officers, and their designees to maximize the value of the expenditure of public moneys in procuring goods, services, and contracts for the State of Illinois and to act in a manner that maintains the integrity and public trust of State government. In discharging this duty, they are charged by law to use all available information, reasonable efforts, and reasonable actions to protect, safeguard, and maintain the procurement process of the State of Illinois.

The certifications hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed should the Department approve the subcontractor. The chief procurement officer may terminate or void the subcontract approval if it is later determined that the bidder or subcontractor rendered a false or erroneous certification.

Section 50-2 of the Illinois Procurement Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible chief procurement officer whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

**A. Bribery**

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

(a) Prohibition. No person or business shall be awarded a contract or subcontract under this Code who:

(1) has been convicted under the laws of Illinois or any other state of bribery or attempting to bribe an officer or employee of the State of Illinois or any other state in that officer's or employee's official capacity; or

(2) has made an admission of guilt of that conduct that is a matter of record but has not been prosecuted for that conduct.

(b) Businesses. No business shall be barred from contracting with any unit of State or local government, or subcontracting under such a contract, as a result of a conviction under this Section of any employee or agent of the business if the employee or agent is no longer employed by the business and:

(1) the business has been finally adjudicated not guilty; or

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract to which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

(c) Conduct on behalf of business. For purposes of this Section, when an official, agent, or employee of a business committed the bribery or attempted bribery on behalf of the business and in accordance with the direction or authorization of a responsible official of the business, the business shall be chargeable with the conduct.

(d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the Procurement Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the chief procurement officer may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

2. The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50.5.

**B. Felons**

1. The Illinois Procurement Code provides:

Section 50-10. Felons. Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, from the date of conviction until 5 years after the date of completion of the sentence for that felony, unless no person held responsible by a prosecutorial office for the facts upon which the conviction was based continues to have any involvement with the business.

2. Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement Code shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the chief procurement officer may declare the related contract void if any of the certifications required by this Section are false.

**C. Debt Delinquency**

1. The Illinois Procurement Code provides:

Section 50-11 and 50-12. Debt Delinquency.

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the Procurement Code. Section 50-11 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it knows or should know that it, or any affiliate, is delinquent in the payment of any debt to the State as defined by the Debt Collection Board. Section 50-12 prohibits a person from entering into a contract with a State agency, or entering into a subcontract, if it, or any affiliate, has failed to collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with the provisions of the Illinois Use Tax Act. The bidder or contractor or subcontractor, respectively, further acknowledges that the chief procurement officer may declare the related contract void if this certification is false or if the bidder, contractor, or subcontractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

**D. Prohibited Bidders, Contractors and Subcontractors**

1. The Illinois Procurement Code provides:

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction.. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Procurement Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the chief procurement officer shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

**E. Section 42 of the Environmental Protection Act**

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-12 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Procurement Code by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The bidder or contractor or subcontractor, respectively, acknowledges that the chief procurement officer may declare the contract void if this certification is false.

**The undersigned, on behalf of the subcontracting company, has read and understands the above certifications and makes the certifications as required by law.**

<hr/>		
Name of Subcontracting Company		
<hr/>		<hr/>
Authorized Officer		Date

**RETURN WITH SUBCONTRACT**  
**SUBCONTRACTOR DISCLOSURES**

**I. DISCLOSURES**

- A.** The disclosures hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed. The subcontractor further certifies that the Department has received the disclosure forms for each subcontract.

The chief procurement officer may void the bid, contract, or subcontract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Procurement Code. Furthermore, the chief procurement officer may void the contract or subcontract.

**B. Financial Interests and Conflicts of Interest**

1. Section 50-35 of the Illinois Procurement Code provides that all subcontracts with a total value of \$25,000 or more, from subcontractors identified in Section 20-120 of the Illinois Procurement Code, shall be accompanied by disclosure of the financial interests of the subcontractor. This disclosed information for the subcontractor, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the Prime Contractor's contract. Furthermore, pursuant to this Section, the Procurement Policy Board may recommend to allow or void a contract or subcontract based on a potential conflict of interest.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the subcontracting entity or its parent entity, whichever is less, unless the subcontractor is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

**The current annual salary of the Governor is \$177,412.00.**

In addition, all disclosures shall indicate any other current or pending contracts, subcontracts, proposals, leases, or other ongoing procurement relationships the subcontracting entity has with any other unit of state government and shall clearly identify the unit and the contract, subcontract, proposal, lease, or other relationship.

2. **Disclosure Forms.** Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies.

**C. Disclosure Form Instructions**

**Form A Instructions for Financial Information & Potential Conflicts of Interest**

If the subcontractor is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a subcontractor is not subject to Federal 10K reporting, the subcontractor must determine if any individuals are required by law to complete a financial disclosure form. To do this, the subcontractor should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the **NOT APPLICABLE STATEMENT** on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the subcontracting company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES \_\_\_ NO \_\_\_
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than 60% of the annual salary of the Governor? YES \_\_\_ NO \_\_\_
3. Does anyone in your organization receive more than 60% of the annual salary of the Governor of the subcontracting entity's or parent entity's distributive income? YES \_\_\_ NO \_\_\_

(Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.)

4. Does anyone in your organization receive greater than 5% of the subcontracting entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES \_\_\_ NO \_\_\_

(Note: Only one set of forms needs to be completed per person per subcontract even if a specific individual would require a yes answer to more than one question.)

A "YES" answer to any of these questions requires the completion of Form A. The subcontractor must determine each individual in the subcontracting entity or the subcontracting entity's parent company that would cause the questions to be answered "Yes". Each form must be signed and dated by a person that is authorized to execute contracts for your organization. **Photocopied or stamped signatures are not acceptable.** The person signing can be, but does not have to be, the person for which the form is being completed. The subcontractor is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the **NOT APPLICABLE STATEMENT** on page 2 of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

## RETURN WITH SUBCONTRACT

### **Form B: Instructions for Identifying Other Contracts & Procurement Related Information**

Disclosure Form B must be completed for each subcontract submitted by the subcontracting entity. *Note: Checking the NOT APPLICABLE STATEMENT on Form A does not allow the subcontractor to ignore Form B. Form B must be completed, checked, and dated or the subcontract will not be approved.*

The Subcontractor shall identify, by checking Yes or No on Form B, whether it has any pending contracts, subcontracts, leases, bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the subcontractor only needs to complete the check box on the bottom of Form B. If "Yes" is checked, the subcontractor must list all non-IDOT State of Illinois agency pending contracts, subcontracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts or subcontracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included.



RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Subcontractor: Financial Information & Potential Conflicts of Interest Disclosure

Subcontractor Name, Legal Address, City, State, Zip, Telephone Number, Email Address, Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for subcontracts with a total value of \$25,000 or more, from subcontractors identified in Section 20-120 of the Illinois Procurement Code, and for all open-ended contracts. A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.

The current annual salary of the Governor is \$177,412.00.

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the SUBCONTRACTOR (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than 60% of the annual salary of the Governor. (Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)

FOR INDIVIDUAL (type or print information) NAME: ADDRESS Type of ownership/distributable income share: stock sole proprietorship Partnership other: (explain on separate sheet): % or \$ value of ownership/distributable income share:

2. Disclosure of Potential Conflicts of Interest. Check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If the answer to any question is "Yes", please attach additional pages and describe.

(a) State employment, currently or in the previous 3 years, including contractual employment of services. Yes \_\_\_ No \_\_\_

If your answer is yes, please answer each of the following questions.

- 1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes \_\_\_ No \_\_\_
2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, provide the name the State agency for which you are employed and your annual salary.

**RETURN WITH SUBCONTRACT**

3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?  
Yes \_\_\_ No \_\_\_

4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?  
Yes \_\_\_ No \_\_\_

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(b) State employment of spouse, father, mother, son, or daughter, including contractual employment services in the previous 2 years.

Yes \_\_\_ No \_\_\_

If your answer is yes, please answer each of the following questions.

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority?  
Yes \_\_\_ No \_\_\_

2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of your spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. \_\_\_\_\_

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3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?  
Yes \_\_\_ No \_\_\_

4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15 % in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?  
Yes \_\_\_ No \_\_\_

---

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.  
Yes \_\_\_ No \_\_\_

---

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter.  
Yes \_\_\_ No \_\_\_

---

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United States of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years.  
Yes \_\_\_ No \_\_\_

---

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter.  
Yes \_\_\_ No \_\_\_

---

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government.  
Yes \_\_\_ No \_\_\_

**RETURN WITH SUBCONTRACT**

(h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes \_\_\_ No \_\_\_

---

(i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes \_\_\_ No \_\_\_

---

(j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes \_\_\_ No \_\_\_

---

**3. Communication Disclosure.**

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RETURN WITH SUBCONTRACT**

**4. Debarment Disclosure.** For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below:

Name of person(s): \_\_\_\_\_

Nature of disclosure: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**APPLICABLE STATEMENT**

**This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Under penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of my knowledge.**

Completed by:  \_\_\_\_\_ Date \_\_\_\_\_  
Signature of Individual or Authorized Officer

**NOT APPLICABLE STATEMENT**

**Under penalty of perjury, I have determined that no individuals associated with this organization meet the criteria that would require the completion of this Form A.**

**This Disclosure Form A is submitted on behalf of the SUBCONTRACTOR listed on the previous page.**

\_\_\_\_\_ Date \_\_\_\_\_  
Signature of Authorized Officer

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT  
OF TRANSPORTATION

Form B  
Subcontractor: Other Contracts &  
Procurement Related Information  
Disclosure

Subcontractor Name		
Legal Address		
City, State, Zip		
Telephone Number	Email Address	Fax Number (if available)

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for subcontracts with a total value of \$25,000 or more, from subcontractors identified in Section 20-120 of the Illinois Procurement Code, and for all open-ended contracts.

**DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION**

**1. Identifying Other Contracts & Procurement Related Information.** The SUBCONTRACTOR shall identify whether it has any pending contracts, subcontracts, including leases, bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes \_\_\_ No \_\_\_

If "No" is checked, the subcontractor only needs to complete the signature box on the bottom of this page.

**2. If "Yes" is checked.** Identify each such relationship by showing State of Illinois agency name and other descriptive information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

**THE FOLLOWING STATEMENT MUST BE CHECKED**

<input type="checkbox"/>	_____	_____
	Signature of Authorized Officer	Date



1. **TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., November 5, 2010. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.
2. **DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 85521  
WINNEBAGO County  
Section 06-00543-00-BT (Rockford)  
Project TE-D2(133)  
Route ROCKFORD RIVERWALK  
District 2 Construction Funds**

**Project consists of the construction of a pedestrian riverwalk, PCC sidewalk, soldier pile retaining walls, two pedestrian structures, HMA paving, lighting and electrical work, landscaping and the construction of an amphitheatre, located on the west bank of the Rock River, between Locust Street and Whitman Street in the city of Rockford.**

3. **INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.  
  
(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
4. **AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the  
Illinois Department of Transportation

Gary Hannig,  
Secretary

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2010

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

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RIVERWALK MUSEUM CAMPUS  
Section No. 06-00543-00-BT  
Project No. TE-D2(133)  
Job No. C-92-019-07  
Contract: 85521

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**GUIDE BRIDGE SPECIAL PROVISION INDEX/CHECK SHEET**

Effective as of the: July 30, 2010 Letting

Pg #	√	File Name	Title	Effective	Revised
		GBSP4	Polymer Modified Portland Cement Mortar	June 7, 1994	June 1, 2007
		GBSP11	Permanent Steel Sheet Piling	Dec 15, 1993	Jan 1, 2007
		GBSP12	Drainage System	June 10, 1994	Jan 1, 2007
		GBSP13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Mar 6, 2009
		GBSP14	Jack and Remove Existing Bearings	April 20, 1994	Jan 1, 2007
		GBSP15	Three Sided Precast Concrete Structure	July 12, 1994	Oct 9, 2009
		GBSP16	Jacking Existing Superstructure	Jan 11, 1993	Jan 1, 2007
		GBSP17	Bonded Preformed Joint Seal	July 12, 1994	Jan 1, 2007
		GBSP18	Modular Expansion Joint	May 19, 1994	Jan 1, 2007
		GBSP21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	Jan 1, 2007
125	X	GBSP22	Cleaning and Painting New Metal Structures	Sept 13, 1994	April 30, 2010
		GBSP25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	April 30, 2010
		GBSP26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	April 30, 2010
		GBSP28	Deck Slab Repair	May 15, 1995	Jan 22, 2010
		GBSP29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	April 30, 2010
		GBSP30	Bridge Deck Latex Concrete Overlay	May 15, 1995	April 30, 2010
		GBSP31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	April 30, 2010
		GBSP32	Temporary Sheet Piling	Sept 2, 1994	Jan 1, 2007
134	X	GBSP33	Pedestrian Truss Superstructure	Jan 13, 1998	Mar 6, 2009
		GBSP34	Concrete Wearing Surface	June 23, 1994	Jan 12, 2009
		GBSP35	Silicone Bridge Joint Sealer	Aug 1, 1995	April 30, 2010
		GBSP36	Surface Preparation and Painting Req. for Weathering Steel	Nov 21, 1997	May 11, 2009
		GBSP37	Underwater Structure Excavation Protection	April 1, 1995	Mar 6, 2009
		GBSP38	Mechanically Stabilized Earth Retaining Walls	Feb 3, 1999	April 30, 2010
137	X	GBSP42	Drilled Soldier Pile Retaining Wall	Sept 20, 2001	Oct 9, 2009
		GBSP43	Driven Soldier Pile Retaining Wall	Nov 13, 2002	Oct 9, 2009
		GBSP44	Temporary Soil Retention System	Dec 30, 2002	May 11, 2009
		GBSP45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Jan 1, 2007
		GBSP46	Geotextile Retaining Walls	Sept 19, 2003	Oct 9, 2009
		GBSP47	High Performance Concrete Structures	Aug 5, 2002	Jan 1, 2007
		GBSP50	Removal of Existing Non-composite Bridge Decks	June 21, 2004	Jan 1, 2007
143	X	GBSP51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
144	X	GBSP52	Porous Granular Embankment (Special)	Sept 28, 2005	Nov 14, 2008
		GBSP53	Structural Repair of Concrete	Mar 15, 2006	Jan 22, 2010
		GBSP55	Erection of Curved Steel Structures	June 1, 2007	
145	X	GBSP56	Setting Piles in Rock	Nov 14, 1996	Jan 1, 2007
		GBSP57	Temporary Mechanically Stabilized Earth Retaining Walls	Jan 6, 2003	Oct 9, 2009
		GBSP58	Mechanical Splicers	Sep 21, 1995	May 11, 2009
		GBSP59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	July 9, 2008
		GBSP60	Containment and Disposal of Non-Lead Pain Cleaning Residues	Nov 25, 2004	Mar 6, 2009
		GBSP61	Slipform Parapet	June 1, 2007	Jan 12, 2009
		GBSP62	Concrete Deck Beams	June 13, 2008	Oct 9, 2009
		GBSP63	Demolition Plans for Removal of Existing Structures	Sept 5, 2007	
146	X	GBSP64	Segmental Concrete Block Wall	Jan 7, 1999	July 9, 2008
151	X	GBSP65	Precast Modular Retaining Walls	Mar 19, 2001	April 30, 2010
		GBSP66	Wave Equation Analysis of Piles	Nov 14, 2008	
		GBSP67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	
		GBSP68	Piling	May 11, 2009	Jan 22, 2010
		GBSP 69	Freeze-Thaw Aggregates for Concrete Superstructures Poured on Grade	April 30, 2010	

LIST ANY ADDITIONAL SPECIAL PROVISIONS BELOW


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LR #	Pg #	Special Provision Title	Effective	Revised
LR SD 12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD 13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR 102		<input type="checkbox"/> Protests on Local Lettings	Jan. 1, 2006	
LR 105		<input type="checkbox"/> Cooperation with Utilities	Jan. 1, 1999	Jan. 1, 2007
LR 107-2		<input type="checkbox"/> Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-3		<input type="checkbox"/> Disadvantaged Business Enterprise Participation	Jan. 1, 2007	Nov. 1, 2008
LR 107-4	157	<input checked="" type="checkbox"/> Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-5		<input type="checkbox"/> Substance Abuse Prevention Program	Jan. 1, 2008	Jan. 8, 2008
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Asphalt Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Asphalt Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Jan. 1, 2008
LR 400-2		<input type="checkbox"/> Bituminous Surface Mixture (Class B)	Jan. 1, 2008	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-2		<input type="checkbox"/> Bituminous Hot Mix Sand Seal Coat	Aug. 1, 1969	Jan. 1, 2007
LR 406		<input type="checkbox"/> Filling HMA Core Holes with Non-shrink Grout	Jan. 1, 2008	
LR 420		<input type="checkbox"/> PCC Pavement (Special)	May 12, 1964	Jan. 2, 2007
LR 442		<input type="checkbox"/> Bituminous Patching Mixtures for Maintenance Use	Jan. 1, 2004	Jun. 1, 2007
LR 451		<input type="checkbox"/> Crack Filling Bituminous Pavement with Fiber-Asphalt	Oct. 1, 1991	Jan. 1, 2007
LR 503-1		<input type="checkbox"/> Furnishing Class SI Concrete	Oct. 1, 1973	Jan. 1, 2002
LR 503-2		<input type="checkbox"/> Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		<input type="checkbox"/> Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		<input type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702	158	<input checked="" type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1013		<input type="checkbox"/> Rock Salt (Sodium Chloride)	Aug. 1, 1969	Jan. 1, 2002
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	
LR 1032-1		<input type="checkbox"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1032-2		<input type="checkbox"/> Multigrade Cold Mix Asphalt	Jan. 1, 2007	Feb. 1, 2007
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS  
For the November 5, 2010 Lettings

The following special provisions indicated by an "x" are applicable to this contract. An \* indicates a new or revised special provision for the letting.

File Name	Pg #		Special Provision Title	Effective	Revised
80240	159	X	Above Grade Inlet Protection	July 1, 2009	
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80243	161	X	American Recovery and Reinvestment Act Provisions	April 1, 2009	
80236	162	X	American Recovery and Reinvestment Act Signing	April 1, 2009	April 15, 2009
80186			Alkali-Silica Reaction for Cast-in-Place Concrete	Aug. 1, 2007	Jan. 1, 2009
80213	168	X	Alkali-Silica Reaction for Precast and Precast Prestressed Concrete	Jan. 1, 2009	
80207	171	X	Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas (NOTE: This special provision was previously named "Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders.")	Nov. 1, 2008	Nov. 1, 2010
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	April 1, 2009
80241			Bridge Demolition Debris	July 1, 2009	
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531	172	X	Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80166	174	X	Cement	Jan. 1, 2007	April 1, 2009
80260	177	X	Certification of Metal Fabricator	July 1, 2010	
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80094	178	X	Concrete Admixtures	Jan. 1, 2003	April 1, 2009
80214			Concrete Gutter, Type A	Jan. 1, 2009	
80215			Concrete Joint Sealer	Jan. 1, 2009	
80226	182	X	Concrete Mix Designs	April 1, 2009	
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	
80237	184	X	Construction Air Quality – Diesel Vehicle Emissions Control	April 1, 2009	July 1, 2009
80239	186	X	Construction Air Quality – Idling Restrictions	April 1, 2009	
80227	188	X	Determination of Thickness	April 1, 2009	
80177			Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
80029	200	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Jan. 1, 2010
80178	209	X	Dowel Bars	April 1, 2007	Jan. 1, 2008
80179			Engineer's Field Office Type A	April 1, 2007	Aug. 1, 2008
80205			Engineer's Field Office Type B	Aug. 1, 2008	
80189	210	X	Equipment Rental Rates	Aug. 2, 2007	Jan. 2, 2008
80228			Flagger at Side Roads and Entrances	April 1, 2009	
80249			Frames and Grates	Jan. 1, 2010	
80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80169			High Tension Cable Median Barrier	Jan. 1, 2007	April 1, 2009
80194			HMA – Hauling on Partially Completed Full-Depth Pavement	Jan. 1, 2008	
80245	212	X	Hot-Mix Asphalt – Anti-Stripping Additive	Nov. 1, 2009	
80246	213	X	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	
80250	214	X	Hot-Mix Asphalt – Drop-Offs	Jan. 1, 2010	
80259	215	X	Hot-Mix Asphalt – Fine Aggregate	April 1, 2010	
80201	216	X	Hot-Mix Asphalt – Plant Test Frequency	April 1, 2008	Jan. 1, 2010
80251	218	X	Hot-Mix Asphalt – QC/QA Acceptance Criteria	Jan. 1, 2010	
80202	219	X	Hot-Mix Asphalt – Transportation	April 1, 2008	
80109			Impact Attenuators	Nov. 1, 2003	Nov. 1, 2008
80110			Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2007
80252	220	X	Improved Subgrade	Jan. 1, 2010	
80230	223	X	Liquidated Damages	April 1, 2009	
80196			Mast Arm Assembly and Pole	Jan. 1, 2008	Jan. 1, 2009
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009



<u>File Name</u>	<u>Pg #</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80203	224	X	Metal Hardware Cast into Concrete	April 1, 2008	April 1, 2009
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80238	225	X	Monthly Employment Report	April 1, 2009	Jan. 1, 2010
80253			Movable Traffic Barrier System	Jan. 1, 2010	
80262			Mulch	Nov. 1, 2010	
80180	226	X	National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction	April 1, 2007	Nov. 1, 2009
80208			Nighttime Work Zone Lighting	Nov. 1, 2008	
80182			Notification of Reduced Width	April 1, 2007	
80069			Organic Zinc-Rich Paint System	Nov. 1, 2001	Jan. 1, 2010
80216			Partial Exit Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
80231			Pavement Marking Removal	April 1, 2009	
80254			Pavement Patching	Jan. 1, 2010	
80022	228	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80209	230	X	Personal Protective Equipment	Nov. 1, 2008	
80232			Pipe Culverts	April 1, 2009	April 1, 2010
80119			Polyurea Pavement Marking	April 1, 2004	Jan. 1, 2009
80210			Portland Cement Concrete Inlay or Overlay	Nov. 1, 2008	
80170	231	X	Portland Cement Concrete Plants	Jan. 1, 2007	
80217			Post Clips for Extruded Aluminum Signs	Jan. 1, 2009	
80171	233	X	Precast Handling Holes	Jan. 1, 2007	
80218			Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2009
80219			Preventive Maintenance – Cape Seal	Jan. 1, 2009	April 1, 2009
80220			Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	
80221			Preventive Maintenance – Slurry Seal	Jan. 1, 2009	
80211			Prismatic Curb Reflectors	Nov. 1, 2008	
80015			Public Convenience and Safety	Jan. 1, 2000	
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80247			Raised Reflective Pavement Markers	Nov. 1, 2009	April 1, 2010
80223			Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
80172	235	X	Reclaimed Asphalt Pavement (RAP)	Jan. 1, 2007	Jan. 1, 2010
80183	243	X	Reflective Sheeting on Channelizing Devices	April 1, 2007	Nov. 1, 2008
80206	244	X	Reinforcement Bars – Storage and Protection	Aug. 1, 2008	April 1, 2009
80224			Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	
80131	245	X	Seeding	July 1, 2004	July 1, 2010
80264			Selection of Labor	July 2, 2010	
80152	248	X	Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	July 1, 2010
80132	253	X	Self-Consolidating Concrete for Precast Products	July 1, 2004	July 1, 2010
80127			Steel Cost Adjustment	April 2, 2004	April 1, 2009
80255			Stone Matrix Asphalt	Jan. 1, 2010	
80234	255	X	Storm Sewers	April 1, 2009	April 1, 2010
80143	262	X	Subcontractor Mobilization Payments	April 2, 2005	
80075			Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
80087	263	X	Temporary Erosion Control	Nov. 1, 2002	July 1, 2010
80256			Temporary Longitudinal Traffic Barrier System	Jan. 1, 2010	
80225			Temporary Raised Pavement Marker	Jan. 1, 2009	
80176			Thermoplastic Pavement Markings	Jan. 1, 2007	
80257			Traffic Barrier Terminal, Type 6	Jan. 1, 2010	
20338	265	X	Training Special Provisions	Oct. 15, 1975	

<u>File Name</u>	<u>Pg #</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80258		Truck Mounted/Trailer Mounted Attenuators	Jan. 1, 2010	
80071	268	Working Days	Jan. 1, 2002	

The following special provisions have been deleted from use:

80244 Filter Fabric  
80082 Multilane Pavement Patching

The following special provisions are in the 2010 Supplemental Specifications and Recurring Special Provisions:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80193	Concrete Barrier	Section 637	Jan. 1, 2008	
80175	Epoxy Pavement Markings	Section 1095	Jan. 1, 2007	
80181	Hot-Mix Asphalt – Field Voids in the Mineral Aggregate	Section 1030	April 1, 2007	April 1, 2008
80136	Hot-Mix Asphalt Mixture IL-4.75	Sections 406, 1003, 1030, 1032 and 1102	Nov. 1, 2004	Jan. 1, 2008
80195	Hot-Mix Asphalt Mixture IL-9.5L	Sections 1004 and 1030	Jan. 1, 2008	
80129	Notched Wedge Longitudinal Joint	Section 406	July 1, 2004	Jan. 1, 2007
80235	Payrolls and Payroll Records	Check Sheets #1 and #5	Mar. 1, 2009	July 1, 2009
80134	Plastic Blockouts for Guardrail	Section 630	Nov. 1, 2004	Jan. 1, 2007
80151	Reinforcement Bars	Section 1006	Nov. 1, 2005	April 1, 2009
80184	Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	Sections 1090, 1091, 1092 and 1093	April 1, 2007	
80212	Sign Panels and Sign Panel Overlays	Supplemental	Nov. 1, 2008	
80197	Silt Filter Fence	Sections 1080 and 1081	Jan. 1, 2008	
80153	Steel Plate Beam Guardrail	Section 1006	Nov. 1, 2005	Aug. 1, 2007
80191	Stone Gradation Testing	Section 1005	Nov. 1, 2007	
80185	Type ZZ Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	Sections 1090, 1091, 1092 and 1093	April 1, 2007	
80149	Variable Spaced Tining	Section 420	Aug. 1, 2005	Jan. 1, 2007
80204	Woven Wire Fence	Section 1006	April 1, 2008	

The following special provisions require additional information from the designer. The additional information needs to be included in a separate document attached to this check sheet. The Project Development and Implementation section will then include the information in the applicable special provision. The Special Provisions are:

- Bridge Demolition Debris
- Building Removal-Case I
- Building Removal-Case II
- Building Removal-Case III
- Building Removal-Case IV
- Completion Date
- Completion Date Plus Working Days
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days



The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", Adopted January 1, 2007, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test Procedures of Materials" in effect on the date of invitation of bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included here in which apply to and govern the construction of Section No. 06-00543-00-BT Riverwalk, and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

This Project is located in the City of Rockford at the common address of 711 North Main Street to 813 North Main Street. Generally it is in Section 23, Township 44 North, Range 1 East of the Third Principal Meridian, on the West bank of the Rock River, between Locust Street and Whitman Street.

All work on City of Rockford Water Division facilities, new or existing shall be in accordance with the Standard Specifications for Water and Sewer Construction in Illinois and the latest revision of Chapter II, Section 12 of the City of Rockford Engineering Design Manual. All work on Rock River Water Reclamation facilities shall be in accordance with the General Provisions and Technical Specifications for Sanitary Sewer Construction in the Rock River Water Reclamation District, latest edition, and all standards and revisions adopted by the Board of Trustees for said Rock River Water Reclamation District shall also apply to this improvement where appropriate. Style, type and grade of all materials used for construction shall be approved per Section 106.05 of the Standard Specifications for Road and Bridge Construction by the City of Rockford Public Works Department, City of Rockford Water Division, and Rock River Water Reclamation District prior to bidding, ordering or placing any materials.

Herein after the terms "Owner", "City", or "Engineer" shall mean the City of Rockford or its designated representative and the term "Contractor" shall mean the entity who proposes to perform the work herein described or its designated subcontractors.

The following Special Provisions supplement the said specifications and, in case of a conflict with any part or parts of said specifications, these Special Provisions shall take precedence and shall govern.

#### **DESCRIPTION OF WORK**

This work involves the construction of a pedestrian Riverwalk along portions of North Main Street and through the properties operated by the Riverfront Museum Park and Burpee Natural History Museum. Proposed improvements include PCC sidewalk, 6", storm sewers, construction and removal of a temporary causeway, soldier pile retaining walls, ~~two~~ (2) pedestrian bridge superstructure, lighting and electrical work, landscaping, irrigation system, reinforced concrete structures, asphalt paving, precast modular block walls, riprap, and seeding and restoration.

### CONSTRUCTION STAKING COMPLETE

The Engineer shall be responsible for setting and staking all lines and grades needed for the placement of the improvements described above. Any deviation from the plans and grades, as established by the Engineer in the field, without written authorization from the Engineer will not be accepted for payment until the Contractor has corrected the construction to the satisfaction of the Engineer.

### CONSTRUCTION INSPECTION

All work performed without the presence of a City designated representative to inspect said construction will not be accepted for payment as directed by the Engineer. The Contractor shall notify the Engineer a minimum of 48 hours in advance of the start of construction or the continuance of construction following a pause in work.

### EXISTING UTILITIES AND DRAINAGE STRUCTURE LOCATIONS

The Contractor shall make his own investigation to verify or determine the existence, nature and location of all utilities on the site that may interfere with construction before starting his operations. Care should be taken while working near these utilities to prevent damage. The Contractor shall televise or cause to have televised the existing sanitary sewer between RRWRD Manhole 034-108 and Manhole 034-135. This work shall be done prior to the commencement of construction and again following the completion of construction. The cost of this work shall be incidental to the contract and shall be done under the supervision of the RRWRD. One copy of the record shall be retained by the RRWRD, one shall be maintained as a permanent job record, and one copy shall be the property of the Contractor.

### REQUIREMENTS FOR UNSCHEDULED (EMERGENCY) WATER MAIN VALVE SHUT OFF

- a) In the event the Contractor must perform an unscheduled water main shut off; the Contractor shall notify the Water Division Operations Center Operator (815 987-5712) as soon as possible.
- b) The Contractor shall notify all water customers affected by the water main valve shut off and the need to boil water as soon as possible by using forms supplied by the Water Division.
- c) The Contractor shall provide the following information (pursuant to Illinois Municipal Code 65 ILCS 5/11-20-10.5);

PART 1 - STREETS AND BOUNDARIES OF SHUT DOWN  
PART 2 - TIME OF SHUT DOWN  
PART 3 - APPROXIMATE DURATION OF SHUT DOWN  
PART 4 - NUMBER OF CUSTOMERS AFFECTED  
PART 5 - IF NON-RESIDENTIAL CUSTOMERS (HOSPITALS, NURSING HOMES, RESTAURANTS, ETC.) ARE AFFECTED, A COUNT OF HOW MANY INDIVIDUALS AFFECTED WILL BE PROVIDED.

- d) If the Contractor is involved with repairs, the Contractor shall notify the Water Division Operations Center Operator upon completion of repairs when water service has been restored.

## SITE ACCESS AND SECURITY

The Contractor shall access the site from North Main Street at a Construction Entrance at Station 25+00 and shall confine his operations to the areas marked "Construction Limits" or "Temporary Easement" on the plans. Access to the site through the parking lot for Burpee Museum may be granted on a limited basis by the Burpee Museum Director. A Permit will be issued to the City by IDOT for construction access. The conditions of the Permit must be complied with by the Contractor.

The Contractor shall provide security fencing for the construction zone with Cautionary signing to the satisfaction of the Engineer. In complying with this provision, the Contractor shall recognize that hundreds of children visit the museums annually and must provide an appropriate means of protecting the construction zone from curious visitors. The Contractor must also recognize that both Museums are fully operational during the period of this contract and shall attempt to minimize conflicts between operations of the Contractor and the Museums.

A bi-weekly meeting on site to review operational and construction schedules will be conducted by the Resident Engineer for the City. The Contractor will be required to have a representative who is capable of discussing scheduling and operations at that meeting. The cost of site security shall be incidental to the contract and no further compensation will be allowed.

## SAW CUTS

Saw cutting will be paid at the contract unit price for the locations shown on the schedules for SAW CUTS. Additional saw cutting necessary for any reason shall be considered incidental to the item being saw cut. Saw cutting shall be performed to such a depth that when the item is removed, a clean neat edge will result with no spalling of the remaining item.

### **Method of Measurement:**

Payment will be made for this item in Feet where saw cutting is indicated on the plans and included in the schedule. Saw cutting made for the convenience of the Contractor or because of damage to adjacent pavement by the contractor which requires re-cutting will not be measured for payment.

### **Basis of Payment:**

This item will be paid at the contract unit price per Foot for SAW CUTS.

## TREE REMOVAL (6 TO 15 UNITS DIAMETER) TREE REMOVAL (OVER 15 UNITS DIAMETER)

This work shall be in accordance with Section 201 of the Standard Specifications for Road and Bridge Construction except that stumps and roots may be left in place in select areas. Areas along the bank of the River which do not interfere with other work may have the stumps and root structure left in place at the direction of the Engineer for erosion protection.

Trees which the Engineer has directed the Contractor to leave the stumps will be considered "removed" for payment when the branches and stem have been satisfactorily removed and only 6" or less of the stump (measured on the downhill side) are remaining.

**Method of Measurement:**

This item will be measured in units which are calculated by measuring the circumference of the tree in inches at 4.5' above the ground and dividing by 3.1416.

**Basis of Payment:**

Tree removal will be paid at the contract unit price per Unit for TREE REMOVAL (6 TO 15 UNITS DIAMETER) AND TREE REMOVAL (OVER 15 UNITS DIAMETER).

**CHANNEL EXCAVATION**

This item shall consist of the removal of materials including mud, weathered rock, and debris along the river shore for the placement of Riprap. The material excavated from this location is not considered acceptable fill and, if not needed for river bottom restoration, must be removed from the site and disposed of at an approved site at the contractor's expense. Excavation may require de-watering to place bedding and filter fabric. De-watering if necessary shall be considered incidental to STONE RIPRAL CLASS A5, SPECIAL.

**Method of Measurement:**

When the Contractor has completed the Structure Excavation as indicated on the cross-sections, he shall inform the Engineer who shall cause cross-sections to be made before the excavation and shall cross-section the area again after the excavation is complete. The difference between the two sets of cross-sections shall be used to calculate the pay quantity for this item.

**Basis of Payment:**

Payment for this item will be made in Cubic Yards for excavation below the area paid as Structure Excavation or for excavation for riprap below the Normal Water Line of 702.6. Payment will be made at the contract unit price per Cubic Yard for CHANNEL EXCAVATION.

**FURNISHED EXCAVATION**

This item shall conform to Article 204 of the Standard Specifications with the following exceptions. Furnished Excavation will be measured and paid for in place regardless of the shrinkage factor. When the area to be filled is ready for the placement of furnished excavation, the Engineer shall cross-section the area and this shall become the basis of existing ground. When the Contractor has furnished a select grade of fill material and compacted it to optimal density as determined by the Engineer, he will again cross-section the embankment and the difference between the volumes will be the pay quantity for furnished excavation. Embankment will not be paid under this or Earth Excavation pay items.

Material which is excavated between station 205+86 and station 208+05 will be paid as Earth Excavation. If, in the opinion of the Engineer, it is acceptable for backfill material it may be used for fill in the embankment. Furnished Excavation is intended for building embankments behind retaining walls where "benching" is required and a select grade of fill is required and Porous Granular Embankment is not specified. Certain retaining walls may require tie-backs or geogrid for stability depending on manufacturer's recommendations and approved shop drawings. Furnished Excavation may be used to backfill and anchor the wall anchorage systems.

**Method of Measurement:**

This item will be measured in Cubic Yards compacted in place. Volumes computed from Before and After cross-sections will be the basis for measured quantities.

**Basis of Payment:**

This item will be paid at the contract unit price per Cubic Yard for FURNISHED EXCAVATION.

### **GRANULAR EMBANKMENT, SPECIAL**

This item shall consist of all labor, material, and equipment to furnish and place granular embankment behind Pre-cast Modular Block Retaining Walls. **GRANULAR EMBANKMENT, SPECIAL** shall only cover the backfilling behind the Modular Walls because of the special handling. Backfilling of Soldier Pile walls or bridge abutments will be paid as Porous Granular Embankment. Pay limits for wall excavation and **GRANULAR EMBANKMENT, SPECIAL** are shown on the plans. Any work done outside these limits, for whatever reason, will not be measured for payment without the written consent of the Engineer. Unit fill of void areas in the modular units shall be included in the contract unit price of the Modular Wall and will not be included in the measurement of **GRANULAR EMBANKMENT, SPECIAL**.

The work for this item shall conform with Section 207 of the Standard Specifications for Road and Bridge Construction. Only "walk-behind" compaction equipment will be allowed behind the Modular Walls.

#### **Method of Measurement:**

This item will be measured from the back face, or tail, of the concrete block and any mass extenders to the face of the excavation shown on the cross-sections. The height of the embankment measurement shall be from the top of the leveling base to finish grade minus an allowance for 6" minimum of Topsoil.

#### **Basis of Payment:**

This item shall be paid at the contract unit price per Cubic Yard for **GRANULAR EMBANKMENT, SPECIAL**.

### **TOPSOIL FURNISH AND PLACE 6" SOIL CONDITIONER**

This work shall consist of furnishing, transporting, preparing, conditioning, and placing topsoil imported from offsite sources. The work shall be completed in accordance with Section 211 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative.

#### **MATERIALS**

Topsoil shall be provided in accordance with Article 1081.05 of the Standard Specifications with the exception that the minimum organic content shall be 4 percent.

Import topsoil from offsite sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.

Amend topsoil for all shrub and perennial beds with One Step Soil Conditioner, available from White Premium Organics, 2560 Foxfield Road, Suite 200, St. Charles, IL 60174. Phone (866) 586-1563. Fax (630) 377-9934. [www.whitepremiumorganics.com](http://www.whitepremiumorganics.com) or equal as approved by Owners Representative.

Alternatively, prepare a mixture of Compost, Peat, Sand, and Manure as an amendment to available topsoil, in order to create a moist, well drained planting mix:

1. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve.
2. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
3. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
4. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
5. Manure: Well-rotted, unleached, stable manure or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

Amended topsoil shall be modified with a commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.

This work shall be performed in accordance with Articles 211.04 and 211.05 of the Standard Specifications except as modified herein.

Place topsoil and complete finish grading to meet grades as shown on the plans. Place topsoil to a depth of 6 inches in all seed, sod, and planting bed areas. Amend topsoil in all planting bed areas with soil conditioner to meet the requirements specified herein.

**Method of Measurement:**

The contract unit price for TOPSOIL FURNISH AND PLACE 6", shall include importing and placing topsoil to a depth of 6 inches to meet finish grades, including all materials, labor, or equipment required to complete this work.

The contract unit price for SOIL CONDITIONER shall include amending topsoil for all planting beds including all materials, labor, or equipment required to complete this work.

**Basis of Payment:**

This work shall be paid for at the contract unit price per Square Yard for TOPSOIL FURNISH AND PLACE 6", and SOIL CONDITIONER, and no additional compensation will be allowed.

**SEEDING CLASS 1**  
**SEEDING CLASS 3**

This work shall consist of furnishing, transporting, and placing seed in accordance with Section 250 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative. The work shall include preparing the seed bed, placing the seed, fertilizing, watering, weeding, reseeding when required, mowing and maintaining seeded areas until the project completion date, including all materials, labor, and equipment required to complete this work.

Materials provided for seed and seeding mixtures shall be provided in accordance with Article 250.07 and Article 1081.04 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative.



Seed for turf areas as shown on the plans shall be Class 1 Lawn Mixture 7 as identified in the Standard Specifications.

Seed for natural planting areas as shown on the plans shall be Class 3 Northern Illinois Slope Mixture 7 as identified in the Standard Specifications.

Fertilizer for seeded areas to be seed starter fertilizer, commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition: 6N, 24P2SO5, 24K2O, or similar composition as approved by Owner's Representative. Apply 15 pounds of seed starter fertilizer per 1000 square feet.

This work shall be performed in accordance with Article 250.05 and Article 250.06 of the Standard Specifications.

**Method of Measurement:**

The contract unit price for seeding shall include furnishing, transporting, preparing the seed bed, placing the seed, fertilizing, mulching, watering, mowing, and maintaining seeded areas until the project completion date, including all materials, labor, and equipment required to complete this work.

The contract unit price for erosion control blanket placed on seeded areas shall include furnishing, transporting, placing, and maintaining fabric areas until the project completion date, including all materials, labor, and equipment required to complete this work. Erosion control blanket is paid separately and is not included in this item.

**Basis of Payment:**

This work shall be paid for at the contract unit price per Acre for SEEDING CLASS 1 and no additional compensation will be allowed.

This work shall be paid for at the contract unit price per Acre for SEEDING CLASS 3 and no additional compensation will be allowed.

**SODDING**

This work shall consist of furnishing, transporting, and placing sod in accordance with Section 252 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative. The work shall include transporting, placing, fertilizing, watering, resodding when required, mowing, and maintaining sodded areas until the project completion date, including all materials, labor, and equipment required to complete this work.

**MATERIALS**

Materials provided for sodding shall be provided in accordance with Article 252.02 and Article 1081.03 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative.

Sod shall be native sod as identified in the Standard Specifications.

Fertilizer for sod areas shall be provided and applied in accordance with the standard specifications.

This work shall be performed in accordance with Section 252 of the Standard Specifications.

**Method of Measurement:**

The contract unit price for SODDING shall include furnishing, transporting, placing, fertilizing, watering, resodding when required, mowing, and maintaining sodded areas until the project completion date, including all materials, labor, and equipment required to complete this work.

**Basis of Payment:**

This work shall be paid for at the contract unit price per Square Yard for SODDING and no additional compensation will be allowed.

**PERENNIAL PLANT, ORNAMENTAL TYPE, GALLON POT**

This work shall consist of furnishing, transporting, and planting perennial plants in accordance with Section 254 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative. The work shall include preparing the planting area, planting, watering, weeding, replacement of plants when required, and maintaining perennial areas until the project completion date, including all materials, labor, and equipment required to complete this work.

**MATERIALS**

Provide perennial plants and accessories in accordance with Article 10081.02 of the Standard Specifications except as modified herein.

Provide container grown perennial plants for ornamental planting areas of the quality, size, genus, species, and variety as shown on the plans in compliance with the "American Standard for Nursery Stock" latest edition.

This work shall be performed in accordance with Section 254 of the Standard Specifications except as modified herein.

Plant perennial plants equally spaced throughout ornamental planting areas as shown on the plans.

**Method of Measurement:**

The contract unit price for PERENNIAL PLANT, ORNAMENTAL TYPE, GALLON POT shall include furnishing, transporting, preparing the planting area, planting, watering, weeding, replacement of plants when required, and maintaining perennial areas until the project completion date, including all materials, labor, and equipment required to complete this work.

**Basis of Payment:**

This work shall be paid for at the contract unit price per Unit for PERENNIAL PLANT, ORNAMENTAL TYPE, GALLON POT, and no additional compensation will be allowed.

**TEMPORARY EROSION CONTROL SEEDING**

This item shall consist of furnishing all labor, material, and equipment to provide temporary erosion control seeding in accordance with the Erosion Control Plan and the SWPPP. Seeding shall be in accordance with Class 7 seeding described in Section 280.04 (f) of the Standard Specifications for Road and Bridge Construction.

**Method of Measurement:**

This item will be measured in Acres and include areas prepared and seeded according to the Standard Specifications.

**Basis of Payment:**

This item will be paid at the contract unit price per Pound for TEMPORARY EROSION CONTROL SEEDING.

**STONE RIPRAP CLASS A5 (SPECIAL)**

This item shall conform to Section 281 of the Standard Specifications for Road and Bridge Construction. A temporary access causeway is the recommended staging platform for the construction of foundations and the erection of soldier pile walls and bridges. The temporary access causeway will be paid for at the contract unit price per lump sum for temporary access causeway which shall include installation and removal. The material used for the temporary access causeway may be reclaimed upon temporary access causeway removal and used where Stone Riprap Class A5, Special is called for on the plans. To qualify for payment, the stone must meet gradation for Class A5, be properly bedded and incorporate filter fabric as shown on the details, and be placed in accordance with the standard.

STONE RIPRAP CLASS A5 (SPECIAL) will be paid at the contract unit price per Square Yard for the material properly placed on bedding with filter fabric as shown on the plan details. The Contractor is offered the option of reclaiming the causeway material provided that it meets material specifications.

Payment will be made for temporary access causeway construction and removal per previous description. If the material is re-used as Riprap Class A-5 it will be paid under STONE RIPRAP CLASS A5 (SPECIAL) for material properly bedded and placed as riprap.

**Method of Measurement:**

This item will be paid for in square yards which shall include the stone riprap, bedding material, filter fabric, and placement to the lines and grades shown on the Plans. Excavation for riprap below the normal water line will be measured for payment as Channel Excavation.

**Basis of Payment:**

This item will be paid at the contract unit price per Square Yard for STONE RIPRAP CLASS A5 (SPECIAL) for the material placed, bedded, and positioned to the lines and grades shown on the Plans. Reclaimed materials from the causeway will be paid for under this item provided that the material meets the gradation requirements.

**PCC PAVEMENT 7 1/2"**

This item shall consist of the placement and finishing of a Portland Cement Concrete deck for two bridges. Reinforcement shall be Epoxy Coated. Reinforcement will not be paid separately but shall be included in the unit cost of PCC PAVEMENT 7 1/2". Deck forms, side dams, and scuppers are paid for separately. This item must meet the requirements of Section 503.16 for Concrete Superstructures. The final design for this item shall be provided by the Designer of the Pre-fabricated Pedestrian Bridge Superstructures. A thickness of 7 1/2" with two mats of reinforcing steel (epoxy coated) shall be considered the minimum. The Structural Engineer providing the calculations for the structure shall also be responsible for the design of the deck.

Prior to placing concrete, the Contractor shall submit a plan and sequence for pouring and finishing the deck. The loading of the concrete plus the finishing equipment must be considered in pouring a deck which will rest at the prescribed grade.

A finished gutter is included as part of the PCC Pavement 7 ½". The gutter shall be finished to a "V" shape so that the "V" falls below the wall-mounted handrail. The pavement shall be sealed around each truss member with an exterior weather resistant caulk. The minimum thickness of the pavement is 7 ½".

The entire deck shall be given a "broomed" finish transverse to the longitudinal center line.

**Method of Measurement:**

This item will be measured in Square Yards from end to end and from side dam to side dam flat horizontal measure which shall include the "V" gutter and nominal thickness of PCC Pavement 7 ½".

**Basis of Payment:**

This item shall be paid at the contract unit price per square yard for PCC PAVEMENT 7 ½" and shall include all materials and labor for furnishing, placing, finishing, joints, and sealing the nominal 7 ½" pavement. Payment shall include a pouring sequence plan.

**PCC SIDEWALK 6"**

This item shall conform with Section 424 of the Standard Specifications for Road and Bridge Construction except for finishing. Standard sidewalk shall be jointed in 5' squares with a contraction joint along the centerline except as noted. Transverse contraction joints shall be cut ½" deep perpendicular or radial to the centerline. A ½" pre-molded fiber expansion joint with three (3) ¾" x 18" smooth dowel bars shall be installed at 50' intervals. The finish shall be a standard "broom" finish except that joint tooling shall be done after brooming leaving a "Picture Frame" finish in the sidewalk.

Wherever combination concrete curb and gutter is installed adjacent to PCC Sidewalk, ½" tie bars 24" long shall be installed 30" on center. Tie bars shall be incidental to the curb and gutter being constructed. Expansion joints shall be provided between the new concrete sidewalk and existing concrete whenever sidewalk is poured against a retaining wall, coping, or structural surface. The cost of providing and installing expansion joints shall be included in the cost of PCC SIDEWALK 6".

**Method of Measurement:**

This item will be measured in square feet in place except for Detectable Warnings which are paid separately.

**Basis of Payment:**

This item shall be paid at the contract unit price per Square Foot for PCC SIDEWALK 6" which shall include tie bars as required, jointing, and finishing.

**PCC SIDEWALK 6" (SPECIAL)**

This item shall conform to Section 424 of the Standard Specifications for Road and Bridge Construction except for variations in thickness, reinforcing, and finish. An 18" thickened-edge border with a No. 4 reinforcement bar shall be poured and finished as shown on the Typical

Sections and Details. No border except brooming is required in tangent sections adjacent to parking station 200+0 to station 203+0. Inside the border at Overlooks, a 6" concrete sidewalk shall be poured with ½" scored joint separating the border and sidewalk. A welded wire fabric as shown on the details shall be placed at the midpoint thickness of the concrete.

The border of the circular overlooks shall have two ½" expansion joints to be located as directed by the Engineer and 5 equally spaced radial contraction joints to be located as directed by the Engineer. The surface shall be given a "broomed" finish and shall be scored in a 2' x 2' pattern diagonally with the centerline of the main sidewalk. The surface of the border shall be given a rubbed finish. The entire area of the circle will be included for payment for this item; including the thickened edge.

**Method of Measurement:**

This item will be measured from outside to outside diameter of circular areas. Reinforced concrete structural areas will be excluded and paid as Concrete Structures. Irregular areas attached to the border and designated for benches, etc. will not be included, but will be paid as PCC Sidewalk 6". Areas outside the circumference of the circle and designated PCC Sidewalk 6" and used for benches, bicycle racks, etc. will not be paid under this item. The border ring pattern for Overlook No. 2 and Overlook No. 3 are structural slabs and not paid for under this item. The center areas of these two overlooks are designated "Temporary Concrete" on the Structural Plans and will be paid as PCC Sidewalk, 6" and will not receive reinforcing or wire mesh.

**Basis of Payment:**

This item will be paid at the contract unit price per Square Foot for PCC SIDEWALK 6" (SPECIAL) which shall include the additional thickness concrete, reinforcing, finishing and jointing.

**HOT-MIX ASPHALT SURFACE REMOVAL (SPECIAL)**

This item shall conform with Section 440 of the Standard Specifications for Road and Bridge Construction and shall consist of the removal of asphalt pavement and aggregate base where indicated on the plans. Because this item requires special care it is paid separately from general earthwork. Any aggregate that is acceptable as fill may be reused. Hot-mix asphalt that is removed shall be disposed of off site at an approved disposal site. Special care shall be taken when working around buildings and other improvements so as not to damage items not scheduled for removal. Any damage done to buildings, steps, fences, etc. which are not to be removed shall be the responsibility of the Contractor.

**Method of Measurement:**

This item will be measured in Square Yards of asphalt surface.

**Basis of Payment:**

This item will be paid at the contract unit price per Square Yard for HOT-MIX ASPHALT SURFACE REMOVAL (SPECIAL).

**CONCRETE HEADWALL REMOVAL**

This item shall consist of the removal of a concrete headwall in the River at approximately Station 212+05. The headwall appears intact but disconnected from the concrete storm sewer. The Contractor shall remove and dispose of the concrete headwall and any remaining storm sewer that may be attached to it at an approved disposal site.

**Method of Measurement:**

This item will be measured per Each for removal and disposal.

**Basis of Payment:**

This item will be paid at the contract unit price per Each for CONCRETE HEADWALL REMOVAL.

**CONCRETE RETAINING WALL REMOVAL**

This item shall conform to the requirements of Section 501 of the Standard Specifications for Road and Bridge Construction except as follows. The existing retaining wall from Station 201+37 to Station 202+94 has an unknown foundation. The intent is to remove the wall to a minimum of 18" below the proposed finish grade where indicated on the Removal Plan. Care shall be taken to preserve sidewalk, trees and shrubs, and paved areas not indicated to be removed. The Contractor shall carefully remove the wall where indicated and dispose of at an approved disposal site.

**Method of Measurement:**

This item shall be measured in lineal feet which shall included full depth saw cutting, removal to 18" minimum below grade, refinishing the sawed ends, and disposal of the concrete removed.

**Basis of Payment:**

This item will be paid at the contract unit price per Foot for CONCRETE RETAINING WALL REMOVAL.

**PIPE CULVERT REMOVAL (SPECIAL)**

This item shall conform with Section 501 of the Standard Specifications for Road and Bridge Construction, however it shall apply to all sizes and materials of pipe culverts regardless of whether they are connected to an inlet or manhole to be removed. The Contractor shall carefully remove the pipe culverts designated to be removed and dispose of them at an approved disposal site.

The Contractor shall take care to maintain drainage flows and shall consult the Erosion Control Plan and SWPP before removing any drainage structures.

**Method of Measurement:**

Culverts will be measured from end to end. Those that terminate in an inlet or manhole will be measured to the inside of the inlet or manhole.

**Basis of Payment:**

This item will be paid at the contract unit price per Foot for PIPE CULVERT REMOVAL (SPECIAL).

**STRUCTURE EXCAVATION**

This item shall include all labor, material, and equipment to excavate to the lines and grades shown on the Plans for structures. The work shall be in accordance with Section 502 of the Standard Specifications for Road and Bridge Construction with the following exceptions. Excavation at the front face of soldier pile retaining walls will be measured from the front face of

the soldier pile to the limits of existing ground without a vertical plane limitation, and will be measured from the normal water line up. Material which is acceptable fill material may, at the discretion of the Engineer, be used in fill areas if needed. Any material in excess of the needs of the job for fill material, or material that is deemed unsuitable by the Engineer shall be disposed of off site by the Contractor. Excavation below the Normal Water Line or excavation of rock will be paid separately and is not included in this item.

**Method of Measurement:**

Prior to beginning excavation, the Contractor shall notify the Engineer that the work is ready for cross-sectioning. The Engineer shall cross-section the slope prior to, and immediately after the excavation and shall compute the volume for payment based on the calculations.

**Basis of Payment:**

This item shall be paid at the contract unit price per Cubic Yard for STRUCTURE EXCAVATION.

**ROCK EXCAVATION FOR STRUCTURES (SPECIAL)**

This work shall consist of excavating rock to the lines and grades shown on the plans for footings associated with abutments and pier for two Prefabricated Pedestrian bridges, and five soldier pile retaining walls. De-watering necessary to perform this work shall be considered incidental to the excavation. The Contractor shall furnish all labor, materials and equipment to perform this work including pumps, compressors and jack-hammers, shoring or sheeting, hauling and handling equipment to safely execute this work. Rock that is removed from the structure foundation shall be disposed of by the Contractor. The excavated rock may not be used as riprap and must be hauled off site. Excavation of rock or concrete to ensure 6" to 12" embedment of precast concrete lagging into rock will be paid under this item.

Work that is not included in this item is Drilled Shaft in Rock.

**Method of Measurement:**

This item will be measured in Cubic Yards from the top of material described as "rock" in the Standard Specifications to the bottom of footing elevation as shown on the plans. A two-foot horizontal over dig allowance will be measured for payment for room to set forms, however payment will be made only for the rock excavated within these limits.

**Basis of Payment:**

This item will be paid at the contract unit price per Cubic Yard for ROCK EXCAVATION FOR STRUCTURES (SPECIAL) for material excavated and removed.

**FORM LINER TEXTURED SURFACE**

This work shall consist of designing, furnishing and installing reusable, high-strength urethane form liners for concrete walls to achieve a simulated stone masonry appearance. The work shall be completed in accordance with Section 503 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative. This item also consists of providing and applying a concrete stain to the textured concrete surface to replicate actual stone.

Form liner shall be applied on all exposed wall surfaces except as shown on the plans and shall extend to 12 inches below finish grade on specified surfaces. The form liner stone module is to be integrated into the specified surfaces such that there are no joints crossing the stone modules

except where joints are indicated on the plans. The Contractor shall pay particular attention to Maximum relief requirements of the walls.

### **MANUFACTURER REQUIREMENTS**

Manufacturer of form liner to have a minimum of five years experience creating formed concrete surfaces to match natural stone shapes, surface textures, and colors. Manufacturers listed herein have been pre-approved to provide textured surface form liners. Other manufacturer's products will be considered, provided sufficient information is submitted 30-days prior to use to allow the Owner's Representative to determine that the products proposed are equivalent to those named. All manufacturers of form liners shall adhere to the provisions listed herein and in the plans.

### **CONTRACTOR QUALIFICATIONS**

The concrete stain applicator shall have a minimum of five (5) years demonstrated experience in applying stains to simulate rock. The Contractor shall submit evidence of appropriate experience, job listings, and project photographs from previous work.

### **SUBMITTALS**

Submit shop drawings of the concrete facing patterns for each area of concrete form liner. Shop drawing submittals shall include:

1. Individual form liner pattern descriptions, dimensions, and sequencing of form liner sections. Include details showing typical cross sections, joints, corners, step footings, stone relief, stone size, pitch/working line, mortar joint and bed depths, joint locations, edge treatments, and any other special conditions.
2. Elevation views of the form liner panel layouts for the stone texture showing the full length and height of the structures including the footings with each form liner panel outlined. The arrangement of the form liner panels shall provide a continuous pattern of desired textures and colors with no interruption of the pattern made at the panel joints.

The Contractor shall provide a cast concrete mockup containing the form liner surfaces. The form liner manufacturer's technical representative shall be on-site for technical supervision during the installation and removal operations. The purpose of the mockup is to select and verify the masonry pattern to be used.

1. The contractor shall furnish the mockup of each type of Form Liner a minimum of 30 days prior to the need to order form liner materials. This will provide curing time necessary to apply stain samples.
2. Locate mockup on site as directed by the Owner's Representative.
3. The mockup shall be a minimum 10 ft x 10 ft x 8 in. thick. Size shall be varied as required to demonstrate patterning.
4. Include examples of each condition required for construction i.e. liner joints, construction joints, expansion joints, steps, corners, and special conditions due to topography or man made elements, etc.
5. Upon receipt of comments from inspection of the mockup, adjustments or corrections shall be made to the molds where imperfections are found. If required, additional mockups shall be prepared when the initial mockup is found to be unsatisfactory.
6. General application to actual surfaces on the retaining wall shall not proceed until jobsite mockup has been approved in writing by the Owner's Representative.
7. The approved mockup shall serve as a standard of comparison with respect to color and overall appearance.



## MATERIALS

Form liners shall be of high quality, highly reusable and capable of withstanding anticipated concrete pour pressures without causing leakage or causing physical defects. Form liners shall attach easily to pour-in-place forms and be removable without causing concrete surface damage or weakness in the substrate. Liners used for the texture shall be made from high-strength elastomeric urethane material which shall not compress more than 0.02 feet when poured at a rate of 10 vertical feet per hour. Form release agents shall be non-staining, non-residual, non-reactive and shall not contribute to the degradation of the form liner material. Forms for smooth faced surfaces shall be plastic coated or metal to provide a smooth surface free of any impression or pattern.

If the contractor elects to use form ties for concrete forming, only fiberglass form ties will be permitted. Use of removable metallic form ties will not be allowed.

Deliver materials in original and sealed containers, clearly marked with the manufacturer's name, brand name, type of material, batch number, and date of manufacture.

### **Form liner Type A – Large Cut Stone pattern:**

Form liner shall provide a finish that mimics a large cut limestone pattern with approximate stone sizes of 24" to 30", and an average relief of 3 ½" and maximum relief of 4 ½". The following products are pre-approved:

1. Custom Rock International, Pattern #11016 Random Cut Stone, 2020 West 7th Street, St. Paul, MN 55116 (Jim Rogers; 800-637-2447) [www.custom-rock.com](http://www.custom-rock.com)
2. Milestones Incorporated, Pattern MS-1011 24" Weathered Limestone, 235 Monroe Street, Hudson, WI 54016 (Paul Nasvik; 715-381-9660) [www.milestones-online.com](http://www.milestones-online.com)
3. Scott System, Pattern #166B Chiseled Limestone, 10777 East 45<sup>th</sup> Avenue, Denver, CO 80239 (303-373-2500) [www.scottsystem.com](http://www.scottsystem.com).

### **Form liner Type B – Drystack Stone pattern:**

Form liner shall provide a finish that mimics a drystack stone pattern with approximate stone sizes of 3" to 30", and an average relief of ¾" and maximum relief of 1.5". The following products are pre-approved:

1. Custom Rock International, Pattern #12005 Bearpath Coursed Stone, 2020 West 7th Street, St. Paul, MN 55116 (Jim Rogers; 800-637-2447) [www.custom-rock.com](http://www.custom-rock.com)
2. Milestones Incorporated, Pattern MS-1003 English Drystack, 235 Monroe Street, Hudson, WI 54016 (Paul Nasvik; 715-381-9660) [www.milestones-online.com](http://www.milestones-online.com)
3. Scott System, Pattern #189 Teton Drystack, 10777 East 45<sup>th</sup> Avenue, Denver, CO 80239 (303-373-2500) [www.scottsystem.com](http://www.scottsystem.com)

### **Form liner Type C – Rustic Ashler pattern:**

Form Liner shall provide a finish that mimics an ashler stone pattern with approximate stone sizes of 6" to 24" and an average relief of ¾" and a maximum relief of 1". The following products are pre-approved:

1. Custom Rock International, Pattern No. 11003 Rustic Ashler, 2020 West 7th Street, St. Paul, MN 55116 (Jim Rogers; 800-637-2447) [www.custom-rock.com](http://www.custom-rock.com)
2. Milestones Incorporated, Pattern MS1019 Low relief Ashler, 235 Monroe Street, Hudson, WI 54016 (Paul Nasvik; 715-381-9660) [www.milestones-online.com](http://www.milestones-online.com)
3. Scott System, Pattern No. 167B Ashler, 10777 East 45<sup>th</sup> Avenue, Denver, CO 80239 (303-373-2500) [www.scottssystem.com](http://www.scottssystem.com)

Form liners shall be installed in accordance with the manufacturers' recommendations. Form liners shall withstand concrete placement pressures without leakage causing physical or visual defects. A form release agent shall be applied to all surfaces of the liner which will come in contact with concrete as per the manufacturer's recommendations. After each use, liners shall be cleaned and made free of build-up prior to the next placement, and visually inspected for blemishes or tears. If necessary, the form liners shall be repaired in accordance with the manufacturer's recommendations. All form liner panels that will not perform as intended or are no longer repairable shall be replaced. An on-site inventory of each panel type shall be established based on the approved form liner shop drawings and anticipated useful life for each form liner type.

The liner shall be securely attached to the forms according to the manufacturer's recommendations. Liners shall be attached to each other with flush seams and seams filled as necessary to eliminate visible evidence of seams in cast concrete. Liner butt joints shall be blended into the pattern so as to create no visible vertical or horizontal seams or conspicuous form butt joint marks. Liner joints must fall within pattern joints or reveals. Finished textures shall be continuous without visual disruption and properly aligned over adjacent and multiple liner panels. Continuous or single liner panels shall be used where liner joints may interrupt the intended pattern. Panel remnants shall not be pieced together.

The Contractor shall coordinate concrete pours to prevent visible differences between individual pours or batches. Concrete pours shall be continuous between construction or expansion joints. Cold joints shall not occur within continuous form liner pattern fields. Wall ties shall be coordinated with the liner and form to achieve the least visible result. Liners shall be stripped between 12 and 24 hours as recommended by the manufacturer. Curing methods shall be compatible with the desired aesthetic result. Use of curing compounds will not be allowed. Concrete slump requirements shall meet the form liner manufacturers' recommendations for optimizing the concrete finish, as well as IDOT's material specifications and special provisions. With the use of standard Portland cement concrete mixtures, the Contractor shall employ proper consolidation methods to ensure the highest quality finish. Internal vibration shall be achieved with a vibrator of appropriate size, the highest frequency and low to moderate amplitude. Concrete placement shall be in lifts not to exceed 1.5 feet. Internal vibrator operation shall be at appropriate intervals and depths and withdrawn slowly enough to assure a minimal amount of surface air voids and the best possible finish without causing segregation. External form vibrators may be required to assure the proper results. Any use of external form vibrators must be approved by the form liner manufacturer and the Engineer. The use of internal or external vibratory action shall not be allowed with the use of self consolidating concrete mixtures. It is the intention of this specification that no rubbing of flat areas or other repairs shall be required after form removal. The finished exposed formed concrete surfaces shall be free of visible vertical seams, horizontal seams, and butt joint marks. Grinding and chipping of finished formed surfaces shall be avoided.

**Method of Measurement:**

The contract unit price for concrete form liner work for types A, B, and C shall include submittals, preparation of shop drawings, mock-ups, and all work necessary for fabrication and placement of FORM LINER TEXTURED SURFACE including all materials, labor, and equipment required to complete this work. Staining will be paid separately.

**Basis of Payment:**

Concrete form liner work for types A, B, and C shall be paid for at the contract unit price per Square Foot for FORM LINER TEXTURED SURFACE and no additional compensation will be allowed.

**WELDED WIRE FABRIC 6" X 6"**

This item shall consist of furnishing all labor and material to install reinforcing fabric in PCC Sidewalk 6" (Special) and PCC Driveway Pavement 8" as shown on the Plans. The material shall conform to Section 1006.10 of the Standard Specifications for Road and Bridge Construction. The fabric shall be placed or supported at the midpoint of the concrete pavement. Pushing or pulling the wire into place after the concrete is placed will not be permitted. The wire mesh shall be gapped through expansion joints or as directed by the Engineer.

**Method of Measurement:**

This item will be measured at the full width or diameter of the concrete being reinforced. The item will be measured in Square Yards.

**Basis of Payment:**

This item will be paid at the contract unit price per Square Yard for WELDED WIRE FABRIC 6" X 6".

**PEDESTRIAN RAIL (SPECIAL)**  
**GATE (SPECIAL)**

This work shall consist of preparing submittals, fabricating, furnishing, transporting, and installing metal railings and gates as specified herein, as shown on the plans, and as directed by the Owner's Representative. Work shall include preparation of shop drawings, all anchoring hardware, mortar, caulk, and cleanup necessary for fabrication and placement of the metal railings.

Refer to electrical plans and special provisions for additional information related to lighted handrails.

**SUBMITTALS**

Prior to fabrication, prepare and submit shop drawings for all metal railings and gates based on field measurements. Shop drawing submittals shall include individual descriptions, dimensions and materials for each railing. Include details showing typical cross sections, elevations, corners, steps, connections, and any other special conditions. Provide elevation views for each individual railing, gate, and guardrail.

Submit manufacturer's literature, certificates and color samples of finish material to the Owner's Representative for review and approval prior to fabrication.

All materials to be schedule 40 steel tube unless otherwise indicated on the plans. Custom fabricate railings, gates, and guardrails to the dimensions indicated on the plans.

#### **FINISHES**

**Surface Preparation:** Clean surfaces according to SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning." After cleaning, apply a conversion coating suited to the organic coating to be applied over it.

**Powder Coating:** A 2-coat finish, consisting of epoxy primer and TGIC polyester topcoat, with a minimum total dry film thickness of not less than 8 mils.

**Color:** Silver to match Federal Standard FS17178 as approved by Owner's Representative. Submit color sample to owner for approval before ordering.

**Grout:** Epoxy Grout as approved by Owner's Representative.

Fabricate metal railings per the approved shop drawings. All connections to be welded unless otherwise indicated on the plans. Set railings accurately in location, alignment, and elevation as shown on the plans. For sloping areas, cant fence sections so vertical members are aligned plumb with grade. Set posts plumb within a tolerance of 1/16 inch in 3 feet. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet. Review layout with Owner's Representative prior to final installation.

Anchor posts to concrete mechanically with fasteners appropriately sized to secure in place.

Anchor railing ends with round flanges, connected to railing ends and anchored to basin railing with appropriately sized anchors and bolts.

#### **Method of Measurement:**

The contract unit price for **PEDESTRIAN RAIL (SPECIAL)**, and **GATE (SPECIAL)**, shall include preparation of shop drawings, fabricating, furnishing, transporting, preparing, painting, placing and attaching the railings including all materials, labor, and equipment required to complete this work.

#### **Basis of Payment:**

This work shall be paid for at the contract unit price per Foot for **PEDESTRIAN RAIL (SPECIAL)** and per Each for **GATE (SPECIAL)** and no additional compensation will be allowed.

#### **FURNISHING SOLDIER PILE (W SECTION)**

This item shall consist of all labor, material, and equipment to furnish W section pile in the length and size shown on the Bill of Materials on the Plans. The pile shall be delivered to the job site relatively rust free and in good condition according to Section 512 of the Standard Specifications for Road and Bridge Construction. The pile will not be allowed to be offloaded onto the ground but must be placed on dunnage. Pile shall be sorted according to size and weight per foot.

#### **Method of Measurement:**

This item shall be measured along the center of the pile from tip to tip. The Contractor will not be paid for furnishing pile in excess of the length shown on the plans without the written direction of the Engineer. The furnished length shall be paid at the same unit price regardless of the size of the pile. HP pile for the bridge abutments will be paid separately and are not included in this item.

**Basis of Payment:**

This item shall be paid at the contract unit price per Foot for FURNISHING SOLDIER PILE (W SECTION).

**NAME PLATES (SPECIAL)**

This item shall include all labor and materials to furnish and install a Name Plate for the cable-stayed structure and pedestrian truss structure.

Rather than the customary abutment mounting, the Name Plate shall be permanently affixed to the Northwest bridge column approximately 4'- 0" above the height of the sidewalk.

**Method of Measurement:**

This item will be measured per Each for 100% completion of the item in accordance with Section 515 of the Standard Specifications for Road and Bridge Construction.

**Basis of Payment:**

This item will be paid at the contract unit price Each for NAME PLATES (SPECIAL).

**RESTRICTED DEPTH MANHOLE, 4' DIA., WITH TYPE 1 FRAME AND CLOSED LID**

This item shall include furnishing all labor, material and equipment to install the item as shown on the Plans. This item shall conform with Section 602 of the Standard Specifications for Road and Bridge Construction. The Manhole shall be provided with an offset hole top, and steps.

**Method of Measurement:**

This item shall be measured for payment as Each which shall include the bottom, top, and barrel sections complete with inverting with concrete, and a Type 1 frame and lid and adjustment to finish grade.

**Basis of Payment:**

This item will be paid at the contract unit price Each for RESTRICTED DEPTH MANHOLE, 4' DIA., WITH TYPE 1 FRAME AND CLOSED LID.

**INLETS, SPECIAL, No.1**

This item shall consist of all labor and material to construct Inlets, Type 700 according to the City of Rockford details shown on the Plans. Work shall be in accordance with Section 602 of the Standard Specifications for Road and Bridge Construction. Final payment for this item shall include setting the frame and grate to finish grade, inverting the bottom with Class Sl concrete, and cleaning the inlet of any silt or debris.

**Method of Measurement:**

Payment for this item will be made for each unit 100% complete.

**Basis of Payment:**

Payment for this item will be made at the contract unit price per Each for INLETS, SPECIAL, No.

1

### INLET SPECIAL No. 2

This item shall conform with Section 602 of the Standard Specifications for Road and Bridge Construction and the City of Rockford details shown on the Plans. Inlets which are deeper than 6 feet shall include steps and be pre-cast concrete except for the final 1 foot in height, may be adjusting rings or brick. Final payment for this item shall include setting the top to finish grade, inverting the bottom with Class SI concrete, and cleaning the inlet of any silt or debris.

**Method of Measurement:**

Payment for this item will be made for each unit 100% complete.

**Basis of Payment:**

Payment for this item will be made at the contract unit price per Each for INLET SPECIAL No. 2.

### INLET BOX, SPECIAL, No. 1

This Item shall consist of furnishing all labor and material to construct INLET BOX, SPECIAL, No. 1 as shown on the plans and details, and shall conform with Section 602 of the Standard Specifications for Road and Bridge Construction. The inlet shall be constructed of pre-cast concrete units with overlapping joints except for the final one foot in height which may be brick or adjusting rings. No steps are required because of the inlet size. The inlet shall be furnished with a frame and grate equal to a Neenah R3348. Reinforcing bars shall be placed at expansion joints on both sides of the inlet as shown on the Detail. Final payment for this item shall include furnishing and installing a reinforced concrete bottom and pre-cast box, frame and grate, sealing the joints between sections, reinforcement bars as shown, pipe connections, and adjusting to final grade as shown on the plans. Steps are not required.

**Method of Measurement:**

This item will be measured per Each for the installation of this item 100% complete.

**Basis of Payment:**

Payment for this item will be made at the contract unit price per Each for INLET BOX, SPECIAL, No. 1.

### SANITARY MANHOLE TO BE RECONSTRUCTED

This item shall consist of all labor and material to bring the sanitary manholes to the new grades shown on the Plans in accordance with Section 602 of the Standard Specifications for Road and Bridge Construction and in accordance with the Standards and requirements of the Rock River Water Reclamation District. If the casting is not a standard Neenah R-1670 or East Jordan E 1117, the District Supporting Services Department shall be contacted prior to adjusting the manhole for a replacement casting. The Contractor shall be responsible for bringing the old frame and cover and delivering it to the Offices of the Rock River Water Reclamation District Supporting Services North Facility at 4850 Torque Road in Loves Park, IL. The North Facility is open from 7:00 A.M. to 3:30 P.M. Monday through Friday. The Contractor shall coordinate with the District Inspector or contact Terry Stoll at (815) 543-7983 a minimum of 1 hour prior to pick-up or delivery to ensure that access to the facility is available. District Staff will be required to fill out the District's Manhole Casting Drop off/pick up sign-in sheet. The old frame and lid shall become the property of the RRWRD.

The Contractor shall notify the Rock River Water Reclamation District a minimum of 48 hours prior to commencing work.

**Method of Measurement:**

Payment will be made under this item for changing the grade of any sanitary manhole which requires the rebuilding of 2' or more of the manhole or the addition of steps.

**Basis of Payment:**

This item will be paid at the contract unit price per Each for SANITARY MANHOLE TO BE RECONSTRUCTED.

**COMBINATION CURB AND GUTTER, TYPE M- 6.18 (MODIFIED)**

This item shall conform with Section 606 of the Standard Specifications for Road and Bridge Construction and the City of Rockford details shown on the Plans. A one inch (1") Ceramer expansion joint or an Engineer-approved equal shall be installed at 100' intervals, at all radius points, and 5' on each side of inlets when not at radii. Each expansion joint shall be furnished with an Engineer-approved caulking material that fills the void between the Ceramer expansion joint material and the curb. Aggregate required under the curb shall be the thickness shown on the Plans and will be paid for as Aggregate Base Course, Type B.

Contraction joints shall be tooled in the curb and gutter at 10' intervals where curb is adjacent to flexible pavement. Where curb is adjacent to PCC Sidewalk 6", contraction joints shall be cut at 5' intervals on the extension of the sidewalk joint. The City of Rockford Standard Details shall govern the construction of this item in the event of a conflict. Where tie bars are indicated on the plans, they shall be incidental to the unit price of the curb & gutter.

**Method of Measurement:**

Measurement of this item will be made in Feet along the flow line of the gutter.

**Basis of Payment:**

This item will be paid at the contract unit price per Foot for COMBINATION CURB AND GUTTER, TYPE M- 6.18 (MODIFIED).

**STEEL PLATE BEAM GUARDRAIL, SPECIAL**

This item shall include all labor, material, and equipment to erect a guardrail along the edge of the parking lot as shown on the Plans. The work shall be in accordance with Section 630 of the Standard Specifications for Road and Bridge Construction with the following exception. Because of the unique location, the need to protect Riverwalk from potential vehicle encroachment, and the need to blend into the park like environment, the guardrail shall be factory painted a neutral brown color. Color samples shall be provided for owner approval prior to ordering the guardrail. The Contractor shall supply a small quantity of touch-up paint for areas that are scratched during handling and for covering bolts and hardware. Terminal end sections shall be similarly painted.

**Method of Measurement:**

This item will be measured in place from end to end of the rail in Feet. Terminal ends will not be paid for separately but shall be included in this item.

**Basis of Payment:**

This item shall be paid at the contract unit price per Foot for STEEL PLATE BEAM GUARDRAIL, SPECIAL which shall be complete payment for furnishing, installing, painting, and terminal ends as shown on the Plans.

## TRAFFIC CONTROL AND PROTECTION

Traffic control shall be according to the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the Uniform Manual on Traffic Control Devices, these Special Provisions, and the Highway Traffic Control Standards contained herein.

Special attention is called to Articles 107.09 and 107.14 of the Standard Specifications for Road and Bridge Construction and the following Highway Standards relating to traffic control.

Standards: 701101 701106 701301 701421 701442 701601 701701 701801  
701901 720011 728001 729001

**Details:** 41.1

### **GENERAL**

All regulatory signs shall be maintained at a minimum of 7' in height to the bottom of the sign in pedestrian areas.

#### **Signs:**

No bracing will be allowed on post-mounted signs.

Post-mounted signs shall be installed using Standard 720011, 728001, and 729001 on 4" X 4" wood posts, or on any other "break away" connection if accepted by the FHWA and corresponding letter is provided to the Resident Engineer.

The "WORKERS" (W21-1a(O)-48) signs shall be replaced with symbol "Right or Left Lane Closed Ahead" (W4-2R or L(O)-48) signs on multi-lane roadways.

"BUMP" (W8-11(O)-48) signs shall be installed as directed by the Engineer.

When covering existing Department signs, no tape shall be used on the reflective portion of the sign. Contact the District 2 sign shop for covering techniques.

#### **Devices:**

Vertical barricades shall not be used in weaves.

#### **Lights:**

Steady burn mono-directional lights are required on devices delineating a widening trench.

#### **Flaggers:**

Flaggers shall comply with all requirements contained in the Department's "Flagger Handbook" with the following exception: The ANSI Class 2 vest will not be supplied by the Department.

#### **Maintenance of Traffic:**

Traffic shall be maintained when working along North Main Street (IL 2) using Standards 701101 and 701601. Traffic shall be maintained when working at the intersection of North Main Street and Whitman Street using Standards 701701, and 701801.

The Contractor shall be required to notify the City of Rockford Public Works, emergency response agencies (i.e. fire, 911, police), RMTD, and school bus companies, and the Department of Transportation (Bureau of Project Implementation) regarding any changes in traffic control.



The Contractor shall be required to notify the City of Rockford Public Works for any side road closure or opening. In addition, the Contractor shall be required to contact the owner of the Skyrise Apartment complex with any anticipated changes in traffic pattern to the frontage road entrance.

The Contractor shall submit a Maintenance of Local Traffic Plan to the Engineer at the pre-construction meeting showing how local access will be maintained to the Museums and frontage road. This traffic plan will need to be approved by the Engineer before the start of construction.

The Contractor shall be responsible for providing anticipated changes in traffic control a minimum of one week in advance to the Public Works Department for publication in the Rockford Register Star and local television stations, describing the work being performed and the stages being closed to traffic.

All lanes shall be open for holiday periods as defined in Article 107.09 of the Standard Specifications. The Lane Closure on IL 2 may be in place for a maximum of 15 Working Days without prior approval of the State.

The Standards contained herein shall be considered to be the minimum protection necessary to complete this item. If in the opinion of the Engineer, additional traffic control is necessary for the protection of the public, it shall be provided at no additional cost within 24 hours of the request. Emergency requests shall be provided immediately upon direction of the Engineer.

**Basis of Payment:**

This work will be paid at the contract Lump Sum price for TRAFFIC CONTROL AND PROTECTION which price shall be payment for all labor, materials, transportation, handling, and incidental work necessary to furnish, install, maintain, and remove all traffic control devices as indicated in these Special Provisions and as directed by the Engineer.

**ELECTRIC SERVICE INSTALLATION, SPECIAL**

This item shall include all labor, materials and equipment to furnish 240 volt service to the Lighting Controller. This work shall be in accordance with Section 804 of the Standard Specifications for Road and Bridge Construction. Power from the source for this item must be underground in conduit in accordance with Commonwealth Edison requirements, and shall terminate in either a handhole or a transformer next to the Lighting Controller. If a transformer is required, this item shall also include a concrete base set to Commonwealth Edison requirements.

Contractor shall coordinate service installation with Utility. Provide concrete utility transformer pad in accordance with ComEd requirements. Utility company will furnish all primary cabling and associated trenching. All fees associated with this item shall be included in the unit cost.

**Method of Measurement:**

This item shall be measured per Each as described in the Standard Specifications.

**Basis of Payment:**

This item will be paid at the contract unit price per Each for ELECTRIC SERVICE INSTALLATION, SPECIAL.

**CONTROLLER, SPECIAL**

This item shall include all labor, equipment and material to furnish, install and test a Lighting Controller as shown on the Plans. Electrical service shall be furnished as depicted on the drawings, and described in the Special Provisions, and shall be fully compliant with NEC 2008 requirements. Refer to Detail 1 - Enclosure Detail on Drawing 44 for additional information. The work shall conform to Section 804 and 825 of the Standard Specifications for Road and Bridge Construction.

The enclosure shall be free-standing, stainless steel, NEMA 4x rated, with lockable handle. The cabinet shall have a locking mechanism keyed to the City of Rockford keying system for Electric Cabinets. Part number WS626318SS, is manufactured by Hoffman Enclosures, Inc, or approved equal. Meters shall comply with Com Ed standards and be easily readable without opening the cabinet. Panelboards shall be NEMA 1 enclosure rated, panelboard construction, with bolt-on circuit breakers. Bussing shall be copper, 100% Neutral bus. AIC bracing shall be fully rated. Panelboard shall be NQOD series as manufactured by Square D, or approved equal by Siemens, GE, or Cutler Hammer.

Lighting Contactors shall be electrically held, 12-pole units, with replaceable contacts and holding coils. Contactors shall be Class 8903 as manufactured by Square D, or approved equal by Siemens, GE, or Cutler Hammer.

The Timeclock shall be configured as Photocell ON, timeclock Off. Timeclock shall be 24 hour, electronic, with up to 8 events per day. Unit shall include alkaline battery backup for automatic carry-over. Timeclock shall be a series ET100C, as manufactured by Intermatic, or approved equal by Tork, or Paragon.

**Method of Measurement:**

This item shall be measured per Each for furnishing, installing and connecting this item. Measurement shall include cabinet and concrete pad, panel boards, timers and photo cells, locking mechanism, and all components listed on the plans for a fully functioning lighting Controller.

**Basis of Payment:**

This item will be paid at the contract unit price per Each for **CONTROLLER, SPECIAL**

- LIGHT FIXTURE ASSEMBLY, TYPE A**
- LIGHT FIXTURE ASSEMBLY, TYPE B**
- LIGHT FIXTURE ASSEMBLY, TYPE C**
- LIGHT FIXTURE ASSEMBLY, TYPE D**
- LIGHT FIXTURE ASSEMBLY, TYPE E**
- LIGHT FIXTURE ASSEMBLY, TYPE F**
- LIGHT FIXTURE ASSEMBLY, TYPE G**

This work shall include all labor, materials, and equipment to furnish, install, connect, and test the light fixtures as they are intended and described on the plans. The fixtures shall be securely mounted in accordance with the manufacturer's recommendation for the type of fixture called for on the plans. Payment for this item shall include the fixture, lamp, all mounting hardware for the type of attachment required, aiming directional lights, and connection and wiring. Pole mounted luminaires shall include luminaire, pole, banner arms, and decorative base.

The fixtures shall be as follows:

1. Light Fixture assembly, Type A – Pole mounted site light by Architectural Area Lighting or Equal
2. Light Fixture Assembly Type B – In-grade accent light by KIM Lighting or Equal
3. Light Fixture Assembly Type C – Step light, louvered, flush mounted by BEGA or Equal
4. Light Fixture Assembly Type D – LED Accent lighting mounted in Columns by Hess Lighting or Equal
5. Light Fixture Assembly Type E – Spot light, bracket mounted by Hydrel Lighting or Equal
6. Light Fixture Assembly Type F - Flood light, bracket mounted by Hydrel Lighting or Equal
7. Light Fixture Assembly Type G – Lighted Bollard by Hydrel Lighting or Equal

Refer to the plan drawings for specific model numbers, size, and electrical requirements for the fixtures given. All lamps shall be manufactured in the United States by GE, Phillips, or Sylvania

**Method of Measurement:**

These items will be measured per Each fixture including hardware and lamp.

**Basis of Payment:**

Fixtures will be paid at the contract unit price per Each for LIGHT FIXTURE ASSEMBLY, TYPE A, LIGHT FIXTURE ASSEMBLY, TYPE B, LIGHT FIXTURE ASSEMBLY, TYPE C, LIGHT FIXTURE ASSEMBLY, TYPE D, LIGHT FIXTURE ASSEMBLY, TYPE E, LIGHT FIXTURE ASSEMBLY, TYPE F, AND LIGHT FIXTURE ASSEMBLY, TYPE G.

**LIGHT POLE FOUNDATION, SPECIAL**

This work shall conform to Section 836 of the Standard Specifications for Road and Bridge Construction. The "pole" shall also consider ground fixtures, canisters, and bollards. The top of concrete shall project a minimum of 1" and a maximum of 3" above the finished ground line and shall be slightly crowned to allow for rain runoff. The foundations may be cast either round or square, but must be 24" deep. All mounting hardware, grounding rods, conduit, and finishing and backfilling shall be included in this item. Items imbedded in structural concrete will not be paid under this item.

**Method of Measurement:**

This item will be measured in Feet from bottom of the formed hole to the top of concrete.

**Basis of Payment:**

This item will be paid at the contract unit price per Foot for LIGHT POLE FOUNDATION, SPECIAL.

**PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER**

This work shall consist of furnishing and installing a pedestrian signal head with the number of faces indicated on the plans in accordance with Sections 881 and 1078.02 of the Standard Specifications.

The equipment meeting this specification shall be produced by the manufacturer "Dialight" – product #430-6479-001, GE Lumination Model Nos. PS6-CFL1-26A and PS6-PFD1-26A or approved equal. The pedestrian signal head housing shall be Polycarbonate. The module shall operate in the *Clearance Cycle Countdown Mode Only*. The module shall start counting when the flashing clearance signal turns on and will countdown to "0" and turn off when the steady "Don't Walk" signal turns on. All Walk and Don't Walk indications in conventional pedestrian signal heads shall be illuminated with light emitting diode (LED) modules. The LED modules shall display a Portland orange filled hand and a lunar white filled walking person.

This item will be paid for at the contract unit price EACH for PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER.

### REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

This work shall consist of removing existing traffic signal equipment as shown in the Plans. These items include existing pedestrian signal heads, and they shall remain the property of the City of Rockford. This work shall meet the requirements of Section 895 of the Standard Specifications.

#### **Method of Measurement:**

This item will be measured as a Lump Sum for the work of removing and salvaging the existing pedestrian traffic signal heads.

#### **Basis of Payment:**

This item will be paid for at the contract Lump Sum price for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.

### PLANTING WOODY PLANTS SHREDDED BARK MULCH 3"

This work shall consist of furnishing, transporting, and planting trees and shrubs in accordance with Section 253 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative. The work shall include all mulching, bracing, wrapping, watering, weeding, replacement of plants when required, and all work described.

#### **MATERIALS**

Provide trees, shrubs, and accessories in accordance with Section 253 and Article 1081.01 of the Standard Specifications except as modified herein.

Provide quality, size, genus, species, and variety of trees and shrubs as shown on the plans in compliance with the "American Standard for Nursery Stock" latest edition.

All trees are to be provided balled and burlapped. All shrubs to be provided either balled and burlapped or container grown.

Mulch shall be six-month old, well rotted, shredded, native hardwood bark mulch, not larger than 4 inches in length and ½ inches in width, free of wood chips and sawdust.

This work shall be performed in accordance with Article 253 of the Standard Specifications.

### **GUARANTEE OF TREES, SHRUBS AND GROUNDCOVER**

The Contractor shall guarantee trees, shrubs and groundcover for a period of one year from the date of Substantial Completion to be in good, healthy and flourishing condition.

The Contractor shall make as many periodic inspections as necessary, at no extra cost to the Owner, during the guarantee period to determine the changes, if any, should be made to the Owner's maintenance program. Submit in writing, to the Owner and Engineer, any recommended changes.

At the end of the guarantee period, the Engineer shall inspect all guaranteed work for Final Acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date for Final Inspection.

Upon final inspection and reinspection of all replacements or repairs necessary in the judgment of the Engineer at that time, the Engineer shall certify in writing to the Owner as to the Final Acceptance of the plantings.

#### **Method of Measurement:**

The contract unit price for **TREES** and **SHRUBS** shall include furnishing, transporting, and planting trees and shrubs including mulching, bracing, wrapping, watering, weeding, replacement of plants when required and all materials, labor, or equipment required to complete this work.

The contract unit price for **SHREDDED BARK MULCH 3"** shall include furnishing, transporting, and placing mulch around tree and shrub plantings as shown on the plans, including all materials, labor, or equipment required to complete this work.

#### **Basis of Payment:**

This work shall be paid for at the contract unit price per Each for **TREES (INDIVIDUAL PAY ITEMS PER SPECIES AS INDICATED)** and **SHRUBS (INDIVIDUAL PAY ITEMS PER SPECIES AS INDICATED)**, and no additional compensation will be allowed. **SHREDDED BARK MULCH 3"** shall be paid for at the contract unit price per Square Yard and no additional compensation will be allowed.

### **PRE-CAST MODULAR BLOCK WALL**

This work shall consist of preparing the design, furnishing the materials, and constructing the precast modular retaining walls to the lines, grades and dimensions shown in the contract plans and as directed by the Engineer.

#### **GENERAL**

The precast modular wall shall consist of precast concrete modules, select fill and a leveling pad. The precast concrete modules shall be sized to have sufficient external stability resistance at each module course to satisfy the design criteria. The material, fabrication and construction shall comply with this Special Provision and the requirements specified by the supplier of the wall system selected by the Contractor for use on the project.

The precast modular retaining wall shall be one of the following pre-approved wall systems:

T-Wall                      The Neel Company

<u>Stepwall</u>	<u>Prestress Engineering Corporation</u>
<u>Doublewall</u>	<u>Doublewall Corporation</u>
<u>Stresswall</u>	<u>Stresswall International, Inc.</u>
<u>Stone Strong</u>	<u>Egyptian Concrete Co.</u>
<u>Recon Wall System</u>	<u>Darnall Concrete Products Co.</u>

## SUBMITTALS

The wall system supplier shall submit complete design calculations and shop drawings to the Engineer for review and approval no later than 90 days prior to beginning construction of the wall. All submittals shall be sealed by an Illinois Licensed Structural Engineer and shall include all details, dimensions, quantities and cross sections necessary to construct the wall and shall include, but not be limited to, the following items:

- (a) Plan, elevation and cross section sheet(s) for each wall showing the following:
  - 1) A plan view of the wall indicating the offsets from the construction centerline to the face of the wall at all changes in horizontal alignment. The plan view shall show the limits of precast modules and stations where changes in length and/or size of modules occur.
  - 2) An elevation view of the wall indicating the elevations of the top of the modules. These elevations shall be at or above the top of exposed module line shown on the contract plans. This view shall show the elevations at the top of the leveling pads, all steps in the leveling pads and the finished grade line shown in the contract plans. Each module type, size and embedded length shall be designated.
  - 3) A listing of the summary of quantities shall be provided on the elevation sheet of each wall.
  - 4) Typical cross section(s) showing the precast modules, select fill within the modules, porous granular backfill, leveling pad, right-of-way limits, including excavation cut slopes and elevation relationship between existing ground conditions and the finished grade line.
  - 5) All general notes required for constructing the wall as well as the locations of lifting devices and/or support points in the precast modules shall be indicated.
- (b) The concrete leveling pads may be precast or cast in place. All details for the concrete leveling pads, including the steps, shall be shown. The top of the leveling pad shall be located at or below the theoretical top of the leveling pad line shown on the contract plans. The theoretical top of the leveling pad line shall be 3.0 ft. below finished grade line at the front face of the wall, unless otherwise shown on the contract plans.
- (c) Where concrete coping or barrier is specified, the modules shall extend up into the coping or barrier a minimum of 2" (50 mm). The top of the modules may be level or sloped to satisfy the top of the module line shown on the contract plans. Cast-in-place concrete will not be an acceptable replacement for module areas below the top of module line. Precast coping may be substituted for the CIP coping if approved by the Engineer.
- (d) All module types shall be detailed. The details shall show all dimensions necessary to cast and construct each type of module, all reinforcing steel in the module, and the location of any shear key or connection devices.
- (e) All details of the wall module placement around all appurtenances located behind, on top of, or passing through the wall modules and select fill such as traffic barriers, coping foundations, and utilities, etc. shall be clearly indicated. Any modifications to the design of these appurtenances to accommodate a particular system shall also be submitted.

- (f) When specified on the contract plans, all details of architectural treatment for the exposed surfaces of the module, including color, texture and form liners shall be shown.
- (g) The details of bearing pads, joint filler or other materials used to prevent concrete to concrete contact on the front face as well as any pins, grove or other alignment mechanisms shall be indicated.

The initial submittal shall include three (3) sets of shop drawings and one set of calculations. One set of drawings will be returned to the Contractor with any corrections indicated. After approval, the Contractor shall furnish the Engineer with eight (8) sets of corrected prints and one mylar set for distribution by the City. No work or ordering of materials for the structure shall be done until the submittal has been approved by the Engineer.

## MATERIALS

The precast modular block walls shall conform to the supplier's standards as previously approved by the Department, AASHTO Specifications for prefabricated modular walls and the following:

- (a) Steel connection hardware shall be galvanized according to AASHTO M232 or AASHTO M 111 as applicable.
- (b) Concrete for the precast modules shall be Class PC according to Section 1042.03 of the Standard Specifications. The precast units shall be produced according to the latest Department's Policy Memorandum for "Quality Control/Quality Assurance Program for Precast Concrete Products."
- (c) Reinforcing steel shall be according to Article 1006.10(a). Welded steel wire fabric for concrete reinforcement shall be according to Article 1006.10(b).
- (d) The select fill, defined as the material within the precast modules, shall be according to the following:

Gradation:

COARSE AGGREGATE

CA 6 THRU CA 16

FINE AGGREGATE

FA 1, FA 2, OR FA 20

Internal Friction Angle (AASHTO T236) 34° min.

Sodium Sulfate Soundness Loss

20% after five cycles (C Quality)

In addition to the above gradations, other aggregate may be used provided the following: the maximum aggregate size does not exceed 1 ½ inches (38 mm), the material passing the #200 (75 micron) sieve does not exceed 15 percent, and the material passing the #40 (425 micron) sieve does not exceed 60 percent.

- (e) The granular embankment, special, behind the precast modules, shall be according to Section 207 of the Standard Specifications.
- (f) The geotextile filter material used across the module joints shall be either a non-woven needle punch polyester or polypropylene or a woven monofilament polypropylene.
- (g) The bearing pads shall be rubber, neoprene, polyvinyl chloride, or polyethylene material of the type and grade as recommended by the wall supplier. Other material recommended by the wall supplier may be used if approved by the Engineer.

## FABRICATION

All precast units shall be manufactured according to Section 1042 of the Standard Specifications and the following requirements:

- (a) The minimum module thickness shall be 3 ½ in. (140 mm).
- (b) The minimum reinforcement bar cover shall be 1 ½ in. (38 mm).
- (c) The precast module reinforcement shall be epoxy coated.
- (d) All dimensions shall be within 3/16 in. (5 mm).

- (e) Angular distortion with regard to the height of the module shall not exceed 0.2 in. (5 mm) in 5 ft. (1.5 m).
- (f) Surface defects on formed surfaces measured on a length of 5 ft. (1.5 m) shall not be more than 0.1 in. (2.5 mm).

Concrete Surfaces exposed to view in the completed wall shall be finished according to Article 503.15(a) of the Standard Specifications.

## DESIGN CRITERIA

The design shall be according to the ASHTO Design Specifications for Prefabricated Modular Walls except as modified herein. The wall supplier shall be responsible for all external stability aspects of the wall design (including sliding, overturning, bearing pressure and stability of temporary construction slopes). The analyses of settlement and overall slope stability will be the responsibility of the Engineer.

Typical design procedures and details, once accepted by the Engineer, shall be followed. All wall system changes shall be submitted in advance to the Engineer for approval.

External loads, such as those applied through structure foundations, from traffic or railroad, slope surcharge etc., shall be accounted for in the external stability design. The presence of all appurtenances behind, in front of, mounted on, or passing through the wall volume such as drainage structures, utilities, structure foundation elements or other items shall be accounted for in the external stability design of the wall.

Coulomb's lateral earth pressure theory shall be used to calculate the vertical and horizontal forces acting on the rear face of the precast modules. A maximum wall friction angle used in these calculations shall be 33 percent of the friction angle ( $\phi$ ) for the backfill material placed behind the precast modules.

The overturning calculations shall assume no more than 80 percent of the soil dead within the precast modules available to resist overturning forces. Sliding calculations may use 100 percent of the sliding resistance of the foundation soils and shall be the lesser of the cohesion multiplied by the wall base width or the vertical resultant force multiplied by 0.45. The factors of safety against sliding and overturning must be no less than 1.5 and 2.0, respectively, and the computations shall confirm these factors of safety occur at each module level.

The maximum applied equivalent uniform bearing pressure under each module width shall be clearly indicated on the shop drawings submitted and shall be less than the allowable bearing pressure of the soil shown on the contract plans. Footings or other treatments to satisfy the bearing pressure requirements will be designed by the wall supplier and included in the wall bid price.

If the wall supplier needs additional information to complete the design, the Contractor shall be responsible for obtaining the information at no additional cost to the City.

## CONSTRUCTION REQUIREMENTS

The Contractor shall obtain technical assistance from the supplier during wall erection to demonstrate proper construction procedures and shall include any costs related to this technical assistance in the unit price bid for this item.



The foundation soils for the structure shall be graded for a width equal to or exceeding the module width. Prior to wall construction, the foundation shall be compacted with a smooth wheel vibratory roller. Any foundation soils found to be unsuitable shall be removed and replaced, as directed by the Engineer, and shall be paid for separately according to Section 202 of the Standard Specifications.

The modules may not be loaded or shipped to the project site until they have obtained a minimum compressive strength of 3500 psi (24 MPa) and no sooner than seven days after casting. Precast modules shall be lifted and supported at the points indicated on the shop plans. They shall be stored off the ground. Stacked modules shall be separated by battens across the full width of each bearing point as recommended by the supplier to prevent concrete to concrete contact.

The first course of modules must be erected with particular care and adjustment as required to in correct the vertical, horizontal and transverse alignment. Poor alignment of the base course will magnify tolerance problems in upper modules and require dismantling and re-erection of the wall. A ¼ in. (6 mm) minimum and ¾ in. (18 mm) maximum joint separation shall be provided between adjacent modules at the face to prevent direct concrete to concrete contact. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾ in. (19 mm) when measured along a 10 ft. (3 m) straight edge. The overall vertical tolerance of the wall, (plumbness from top to bottom) shall not exceed ½ in. per 10 ft. (13 mm per 3 m) of wall height.

The rear face of all vertical and horizontal module joints shall be covered by a geotextile filter fabric, attached to the modules with suitable adhesive. No adhesive will be allowed on this material directly over the joints to maintain fabric permeability. The minimum fabric width shall be 12 in. (300 mm) and where laps must be used, a non-sewn lap of 6 in. (150 mm) shall be used as a minimum.

The select fill and porous granular embankment placement shall closely follow the erection of each lift of modules. The maximum lift thickness shall be placed according to the supplier's recommended procedures except, the lifts shall not exceed 10 in. (255 mm) loose measurements or as approved by the Engineer.

At the end of each day's operations, the Contractor shall shape the last level of select fill to permit runoff of rainwater away from the wall face. Select fill shall be compacted according to the project specifications for embankment except the minimum required compaction shall be 95 percent of maximum density as determined by ASHTO T-99.

**Method of Measurement:**

**PRE-CAST MODULAR BLOCK WALL** will be measured for payment in square feet. The retaining wall will be measured from the "top of exposed module line" to the theoretical top of leveling pad line for the length of the wall as shown on the contract plans. Unit fill of the Blocks, tail extenders or mass extenders, tie-backs or geogrid, geotextile filter fabric, leveling base, and grouting or epoxy attachment of the cap block shall all be included in the square foot price of the Pre-cast Modular Block Wall. Where "Double Face" blocks or "Corner Blocks" are specified, both exposed faces will be measured for payment. Cap Block will be measured along one edge only for payment.

Granular Embankment (Special) placed outside of the select fill volume shown Pay Limits on the Typical Sections and cross-sections will not be measured for payment. Concrete coping when specified on the contract plans will not be included for payment in this work but shall be included for payment as specified elsewhere in this contract.

**Basis of Payment:**

This work, including furnishing and placement of the precast modules, select fill, joint separation material, geotextile and other accessories will be paid for at the contract unit price per Square Foot for PRE-CAST MODULAR BLOCK WALL.

**TEMPORARY ACCESS CAUSEWAY**

A causeway is the recommended method of staging construction of the foundations from the river. A permit application has been submitted for the work as shown on the plans. A two-way causeway as shown on the cross-sections must be constructed from clean uniformly graded stone in the 100-150 pound range (RR5). The causeway may be capped with a fine well graded stone by placing a filter fabric between the causeway stone and the working surface. The stone gradations may not be mixed. The ramp leading to the causeway above normal water line may be constructed of well graded coarse aggregate to within 2 feet of the normal water line.

The Engineer shall take cross-sections of the river bottom prior to placement of the causeway and after removal to ensure that the river bottom is restored to original condition. The Contractor may coffer dam and de-water, excavate, fill, or otherwise pursue the completion of the foundation work within the causeway in any manner he chooses subject to final restoration. The recommended top elevation is 704.0 (1.4 feet above normal water elevation). The Contractor should evaluate the risk of this margin of safety in terms of his approach to the project before constructing the temporary access causeway.

The causeway shall have one point of ingress/egress at the Southeast corner of the Riverfront Museum Park parking lot. No access to the river will be permitted from the Burpee Museum Campus. The temporary access causeway should therefore be constructed for two-way traffic.

The Contractor shall place and maintain a line of buoys outside the construction limits. The Contractor shall also place post mounted amber flashing lights no less than 50 feet on center along the outboard side of the causeway. A boat and life ring shall be provided by the Contractor.

Upon completion of construction staging from the river, the Contractor shall remove the causeway. Where Riprap Class A5 is specified on the plans, the material used for the causeway may be placed along the shore line as shown on the plans and details. The remaining material must be removed from the site. Final cross-sections will be taken by the Engineer to ensure that the riverbed has been restored to the original contours.

**Method of Measurement:**

The temporary access causeway as detailed in the plans and specifications shall be paid for at the contract unit price per Lump Sum for Temporary Access Causeway and shall include placement and removal, siltation protection, warning lights and buoys, boat and life ring. This item shall also include permit application and de-watering if the Contractor elects an alternate method.

If the Contractor elects to provide an alternate staging method he shall submit shop drawings and sketches showing the method and construction schedule, for consideration by the City. If approved, the Contractor shall secure any necessary permits required by the alternate method.

**Basis of Payment:**

This item will be paid at the Contract unit price per Lump Sum for TEMPORARY ACCESS CAUSEWAY. Fifty percent (50%) will be paid upon successful installation and the remaining fifty

percent (50%) will be paid upon successful removal. Final payment for this item will be made when final cross-sections show that the river bottom has been restored to the original contours.

### **PRECAST CONCRETE LAGGING**

This item shall include all labor, material, and equipment to furnish and install precast concrete lagging as shown on the plan details. Precast Concrete Lagging, when required by the plans, shall be set to a minimum of 6" and a maximum of 12" below the level of the rock at the face of the lagging. Rock excavation (or concrete removal) will be paid at the contract unit price for Rock Excavation for Structures, Special.

This item shall conform with Section 1042 of the Standard Specifications for Road and Bridge Construction regarding Precast Concrete Products, except the 28 day strength shall be 5000 psi. Reinforcing shall conform to Section 1006.10 regarding Reinforcement Bars. Quantities of concrete and reinforcement are shown on the plan details for the convenience of the Precast manufacturer. Concrete and reinforcement will not be paid separately but shall be included in the contract unit price per Square Foot for **PRECAST CONCRETE LAGGING**. The manufacturer shall also at the time of casting clearly mark the front (river side) or back (embankment side) of each panel because the steel reinforcing is in the front face only.

Lifting imbedments, hooks, or devices are left to the means and methods of the Contractor and precast manufacturer. Panels shall be cast no less than 28 days prior to installation by a supplier approved by the Illinois Department of Transportation. Panels shall conform with the dimensions shown on the plans within 1/2" in horizontal and vertical dimension and 1/4" in thickness. Non-conforming panels may be rejected by the Engineer.

**Method of Measurement:** Lagging will be measured as the nominal width of the lagging, and the measured height from the bottom of the lowest panel to the top of the highest panel in each bay.

**Basis of Payment:** This item will be paid at the contract unit price per Square Foot for **PRECAST CONCRETE LAGGING**

### **PIPE HANDRAIL**

This work shall consist of preparing submittals, fabricating, furnishing, transporting, and installing metal railings as specified herein, as shown on the plans, and as directed by the Owner's Representative. Work shall include preparation of shop drawings, all anchoring hardware, mortar, caulk, and cleanup necessary for fabrication and placement of the metal handrail.

This work shall include handrail on stairs at Station 208+17.7 (both sides), Station 213+10 (both sides- one horizontal and one vertical mount), the river side of both pedestrian bridges, and tops of both cast-in-place Amphitheater walls.

### **SUBMITTALS**

Prior to fabrication, prepare and submit shop drawings for all metal handrail based on field measurements. Shop drawing submittals shall include individual descriptions, dimensions and materials for each railing. Include details showing typical cross sections, elevations, corners, steps, connections, and any other special conditions. Provide elevation views for each individual rail.

Submit manufacturer's literature, certificates and color samples of finish material to the Owner's Representative for review and approval prior to fabrication.

## **MATERIALS**

All materials to be schedule 40 steel tube unless otherwise indicated on the plans. Custom fabricate railings to the dimensions indicated on the plans.

## **FINISHES**

Surface Preparation: Clean surfaces according to SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning." After cleaning, apply a conversion coating suited to the organic coating to be applied over it.

Powder Coating: 2-coat finish consisting of epoxy primer and TGIC polyester topcoat, with a minimum total dry film thickness of not less than 8 mils.

Color: Silver to match Federal Standard FS17178 as approved by Owner's Representative.

Grout: Epoxy Grout as approved by Owner's Representative.

Fabricate metal railings per the approved shop drawings. All connections to be welded unless otherwise indicated on the plans. Set railings accurately in location, alignment, and elevation as shown on the plans. For sloping areas, cant so vertical members are aligned plumb with grade. Set posts plumb within a tolerance of 1/16 inch in 3 feet. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed ¼ inch in 12 feet. Review layout with Owner's Representative prior to final installation.

Anchor posts to concrete mechanically with fasteners appropriately sized to secure in place.

Anchor railing end with round flanges, connected to railing ends and anchored to basin railing with appropriately sized anchors and bolts.

### **Method of Measurement:**

The contract unit price for PIPE HANDRAIL shall include preparation of shop drawings, fabricating, furnishing, transporting, preparing, painting, placing and attaching the railings including all materials, labor, and equipment required to complete this work. Measurement will be made from end to end along the top rail.

### **Basis of Payment:**

This item shall be paid at the contract unit price per Foot for PIPE HANDRAIL which shall include payment for furnishing and installing handrail as shown above.

## **SANITARY MANHOLES TO BE ADJUSTED**

This item shall consist of all labor and material needed to bring the sanitary manholes to the new elevations shown on the Plans in accordance with Section 602 of the Standard Specifications for Road and Bridge Construction and in accordance with the Standards and requirements of the Rock River Water Reclamation District. If the casting is not a standard Neenah R-1670 or East Jordan E 1117, the District Supporting Services Department shall be contacted prior to adjusting

the manhole for a replacement casting. The Contractor shall be responsible for bringing the old frame and cover and delivering it to the Offices of the Rock River Water Reclamation District Supporting Services North Facility at 4850 Torque Road in Loves Park, IL. The North Facility is open from 7:00 A.M. to 3:30 P.M. Monday through Friday. The Contractor shall coordinate with the District Inspector or contact Terry Stoll at (815) 543-7983 a minimum of 1 hour prior to pick-up or delivery to ensure that access to the facility is available. District Staff will be required to fill out the District's Manhole Casting Drop off/pick up sign-in sheet. The old frame and lid shall become the property of RRWRD.

The Contractor shall notify the Rock River Water Reclamation District a minimum of 48 hours prior to commencing work.

**Method of Measurement:**

Payment will be made under this item for changing the grade of any sanitary manhole which requires the rebuilding of less than 2 feet of the manhole and does not require the addition of steps.

**Basis of Payment:**

This item will be paid at the contract unit price per Each for SANITARY MANHOLES TO BE ADJUSTED.

**REMOVE CONCRETE FLARED END SECTION**

This work shall consist of the removal and disposal of a concrete flared end section as shown on the Removal Plan. The Contractor shall take care to leave the existing storm sewer in good condition following removal of the end section. The end section shall be disposed of by the Contractor. Drainage flows must be maintained.

**Method of Measurement:**

This item shall be measured as Each for the successful removal and disposal of this item.

**Basis of Payment:**

This item will be paid at the contract unit price Each for REMOVE CONCRETE FLARED END SECTION.

**SEGMENTAL CONCRETE BLOCK WALL. (SPECIAL)**

This item shall include all labor, material and equipment to furnish and install a segmental concrete block retaining wall. The work shall conform to the Guide Bridge Special Provision for Segmental Concrete Block Walls.

The Contractor shall furnish and install a retaining wall as shown on the plans and details. The wall shall be constructed from interlocking units and have the appearance and general characteristics of a Rockwood Classic 6" block. The color shall be a Buff color similar to the Burpee Museum building. Color samples shall be submitted before ordering the block. The wall shall have a cap block which is attached with an adhesive based on manufacturer's recommendations.

**Method of Measurement:**

Segmental Concrete Block Wall will be measured by the square foot of wall face from the top of block line to the theoretical top of the leveling pad for the length of the wall in a vertical plane, as shown on the contract plans.

**Basis of Payment:**

This work will be paid for at the contract unit price per Square Foot for **SEGMENTAL CONCRETE BLOCK WALL, (SPECIAL)**

**DRILLING AND SETTING SOLDIER PILES IN SOIL AND IN ROCK**

This work shall consist of providing all labor, materials, and equipment necessary to fabricate and furnish soldier piles, create and maintain the shaft excavations, set and brace the soldier piles into position, encase, furnish and install lagging, install shear studs, and form and pour reinforced concrete face with form liner pattern. Also included in this work is the backfilling of the remainder of the shaft with Controlled Low-Strength Material. The final concrete face shall be stained in accordance with this specification and coated with an anti-graffiti coating. All work shall be in accordance with the Standard Specifications for Road and Bridge Construction and as herein amended.

The City shall retain the services of a qualified Geotechnical Engineer experienced with rock excavation to monitor the drilling procedure. The Geotechnical Engineer will be responsible for ruling on the quality or competency of the rock as drilling progresses, and shall be the governing authority on when soil drilling ends and when rock drilling begins.

**MATERIALS**

- a) The materials for the soldier piles, lagging, and fascia shall satisfy the following requirements:

The structural steel components for the soldier piles shall conform to the requirements of AASHTO M270, Grade 50, unless otherwise designated on the plans.

- b) The soldier pile encasement concrete shall be Class DS concrete according to Section 1020 of the Standard Specifications except the mix design shall be as follows:
1. The cement shall be increased 60 lb./cu. yd. if the concrete is to be placed under water.
  2. If concrete is placed to displace fluid or against temporary casing, the slump shall be  $8 \pm$  inch at the point of placement.
- c) Temporary casing, if necessary, shall be produced by electric seam, butt, or spiral welding to produce a smooth wall surface, fabricated from steel satisfying ASTM A252 Grade 2. The minimum wall thickness shall be as required to resist the anticipated installation and de-watering stresses, as determined by the Contractor, but in no case less than  $\frac{1}{4}$  inch.
- d) Drilling slurry shall consist of a polymer or mineral based material. Mineral slurry shall have both a mineral grain size that will remain in suspension with sufficient viscosity and gel characteristics to transport the excavated material to a suitable screening system. The percentage and specific gravity of the material used to make the suspension shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement. For polymer slurry, the calcium hardness of the mixing water shall not exceed 100 mg/L.

- e) Precast concrete lagging shall be cast from Class PC concrete in accordance with the details shown on the plans. The tolerance from the dimensions shown on the plans is ½ inch in vertical and horizontal dimension and ¼ inch in thickness. Reinforcement bars shall be ASTM A706 Grade 60 (non-coated). The fabricator shall permanently mark either the front or back face at the time of casting.
- f) The Controlled Low Strength Material used for back-filling excavations above the soldier pile encasement concrete to the existing ground surface shall be according to Section 1019 of the Standard Specifications.
- g) The minimum tabulated unit stress in bending used for the design of timber lagging shall be 1000 psi unless otherwise specified on the plans.
- h) The materials for the soldier piles, lagging, and fascia shall satisfy the following requirements:

The structural steel components for the soldier piles shall conform to the requirements of AASHTO M270, Grade 50, unless otherwise designated on the plans.

#### EQUIPMENT

Drilling equipment shall have adequate capacity, including power, torque, and down thrust, to create a shaft excavation of the maximum diameter specified to a depth of 20% beyond the depths shown on the plans. Concrete equipment shall be according to Section 1020 of the Standard Specifications.

#### CONSTRUCTION

The shaft excavation for each soldier pile shall extend to the embedment depth in competent rock as indicated on the plans. The geotechnical engineer on site will determine when this requirement is met. The Contractor shall satisfy the following requirements:

- a) **Drilling Methods:** The soldier pile installation shall be according to Section 516.06 (a), (b), or (c) of the Standard Specifications for Road and Bridge Construction. No shaft excavation shall be made adjacent to a soldier pile with encasement concrete that has a compressive strength less than 1500 psi, nor adjacent to secant lagging until the CLSM has reached sufficient strength to maintain its position and shape, unless otherwise approved by the Engineer. Materials removed or generated from the shaft excavations shall be disposed of by the Contractor according to Section 202 of the Standard Specifications.
- b) **Drilling Slurry:** During construction, the level of the slurry shall be maintained at a height sufficient to prevent caving of the hole. In the event of a sudden or significant loss of slurry to the hole, the construction of that shaft shall be stopped and the shaft excavation backfilled or supported by temporary casing until a method to stop slurry loss, or an alternate construction procedure, has been developed and approved by the Engineer.
- c) **Obstructions:** Obstructions shall be defined as any object (such as but not limited to boulders, logs, foundations, etc.) that cannot be removed with normal earth drilling procedures, but requires special augers, tooling, core barrels or rock augers to remove the obstruction. Lost tools or equipment in the excavation, as a result of the Contractor's operation shall not be considered an obstruction and shall be removed at the Contractor's expense.

- d) **Top of Rock:** The top of rock will be considered as the point where rock, defined as bedded deposits and conglomerate deposits exhibiting the physical characteristics and difficulty of rock removal as determined by the Geotechnical Engineer, is encountered which cannot be drilled with earth augers and/or underreaming tools configured to be effective in the soils indicated in the contract documents, and requires the use of special rock augers, core barrels, air tools, or other method of hand excavation.
- e) **Soldier Pile Fabrication and Placement:** The soldier pile is defined as the structural steel section(s) shown on the plans as well as any connecting plates used to join multiple sections. The soldier pile shall be shop fabricated such that no field welding is required. The Contractor shall attach suitable bracing or support to maintain the position of the soldier pile within the shaft excavation such that the final location will satisfy the Construction Tolerances portion of this Special Provision. The bracing or supports shall remain in place until the concrete for encasement has reached a minimum compressive strength of 1500 psi.

When embedment in rock is indicated on the plans, modification to the length of a soldier pile may be required to satisfy the required embedment. The modification shall be made to the top of the soldier pile unless otherwise approved by the Engineer. When the top of rock is encountered above the estimated elevation indicated on the plans, the soldier piles shall be cut to the required length. If the top of rock encountered is below that estimated on the plans, the Contractor shall either furnish longer soldier piles or splice an additional length of soldier pile in accordance with Section 512.05 (a) of the Standard Specifications to satisfy the required embedment in rock. In order to avoid delays, the Contractor may have additional soldier pile sections fabricated as necessary to make the required adjustments. Additional soldier pile quantities, above those shown on the plans, shall not be paid without prior written approval of the Engineer.

- f) **Concrete Placement:** Concrete work shall be performed according to Sections 516.12 of the Standard Specifications and as specified herein.

The soldier pile encasement concrete pour shall be made in a continuous manner from the bottom of the shaft excavation to the elevation indicated on the plans. Concrete shall be placed as soon as possible after the excavation is completed and the soldier pile is secured in the proper position. Uneven placement of concrete in front, behind, and on the sides of the soldier pile shall be minimized to avoid pile movement, and to ensure complete encasement.

Following the soldier pile encasement concrete pour, the remaining portion of the shaft excavation shall be backfilled with CLSM according to Section 593 of the Standard Specifications.

- g) **Construction Tolerances:** The soldier piles shall be drilled and located within the excavation to satisfy the following tolerances:
1. The center of the soldier pile shall be within 1 ½ inches of plan station and ½ inch offset at the top of the shaft.
  2. The soldier pile shall be plumb within 1 inch per 10 feet of length.
  3. The top of the soldier pile shall be within ± 1 inch of the plan elevation.



- h) **Timber Lagging:** Timber lagging, when required by the plans, installed below the original ground surface, shall be placed from the top down as the excavation proceeds. Lagging shown above grade shall be installed and backfilled against prior to installing any permanent facing to minimize post construction deflections. Over-excavation required to place the timber lagging behind the flanges of the soldier piles shall be the minimum necessary to install the lagging. Any voids produced behind the lagging shall be filled with porous granular embankment at the Contractors expense. When the plans require the Contractor to design the timber lagging, the design shall be based on established practices published in FHWA and AASHTO documents considering earth pressure, construction loading, traffic surcharges, and the lagging span length(s). The nominal thickness of the lagging selected shall not be less than 3 inches and shall satisfy the minimum tabulated unit stress in bending stated in Item (g) under Materials. The Contractor shall be responsible for the successful performance of the lagging system until the concrete facing system is installed. Timber lagging shall meet the requirements of Section 1007.03 of the Standard Specifications.
- i) **Structure Excavation:** When structure excavation is necessary to place a concrete facing, it shall be performed and paid for in accordance with Section 502 of the Standard Specifications. The depth shall be from the finish grade at the front face of the wall to 1 foot below the bottom of the concrete wall.
- j) **Concrete Lagging:** Pre-cast reinforced concrete lagging, where indicated on the plans, shall meet the requirements of Section 1042.03 of the Standard Specifications. Panels shall be provided by a supplier approved by the Illinois Department of Transportation and shall be cast no less than 28 days prior to installation. Panels shall conform to the dimensions shown on the plans within ½ inch in horizontal and vertical dimension and ¼ inch in thickness. Non-conforming panels may be rejected by the Engineer.
- k) **Geocomposite Wall Drain:** When required by the plans, the geocomposite wall drain shall be installed according to Section 591 of the Standard Specifications except that the geocomposite wall drain shall be installed on the concrete facing side of the lagging i.e. between the lagging and the concrete face. The pervious (fabric) side of the wall drain shall be installed facing the lagging. Drainage aggregate and geotechnical fabric for French Drains shall be provided, but in lieu of 4" Perforated Drain Pipe, weep holes shall be installed above NWL.

**Method of Measurement:**

The furnishing of Soldier Pile will be measured for payment along the centerline of the soldier pile for each of the types specified. The length shall be determined as the length of pile from tip to tip furnished to the job site in good condition at the nominal length shown on the plans or as directed by the Engineer.

The drilling and setting of soldier piles in soil and rock will be measured for payment and the volumes computed in Cubic Feet for the shaft excavation required to set the soldier piles according to the plans and specifications, and accepted by the Engineer.

These volumes shall be the theoretical volumes computed using the diameters of the shafts shown on the plans and the depth of the excavation in soil or rock as appropriate. The depth in soil will be defined as the difference in elevation between the ground surface at the time of concrete placement and the bottom of the shaft excavation or the top of the rock when present, whichever is encountered first. The depth in rock will be defined as the difference in elevation between the measured top of rock elevation and the bottom of the shaft excavation.

Timber Lagging and Reinforced Concrete Lagging shall be measured for payment in Square Feet for lagging installed to the limits shown on the plans. The quantity shall be calculated using the minimum lagging length required on the plans multiplied by the as-installed height of the lagging for each bay of lagging spanning between the soldier piles.

**Basis of Payment:**

The furnishing of soldier piles will be paid at the contract unit price per Foot for **FURNISHING SOLDIER PILES, (W SECTION)** of the type specified, and delivered to the job site in good condition at the nominal length specified on the plans.

The drilling and setting of soldier piles will be paid at the contract unit price per Cubic Foot for **DRILLING AND SETTING SOLDIER PILES IN SOIL** and **DRILLING AND SETTING SOLDIER PILE IN ROCK**. Temporary casing or drilling slurry to maintain shaft excavation, soldier pile encasement concrete, and CLSM backfill around each soldier pile will not be paid for separately, but shall be included in this item. The cost of any field splices required due to changes in top of rock elevation will be paid for according to Article 109.04 of the Standard Specifications.

Timber Lagging and Pre-cast Concrete Lagging will be paid at the contract unit price per Square Foot for **UNTREATED TIMBER LAGGING** and **PRECAST CONCRETE LAGGING** as detailed on the plans.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

No additional compensation, other than that noted above, will be allowed for removing and disposing of excavated materials, for furnishing and placing concrete, CLSM, bracing, lining, temporary casings placed and removed or left in place, or for any excavation made or concrete placed outside of the plan diameters of the shafts specified.

**PREFABRICATED PEDESTRIAN TRUSS SUPERSTRUCTURE**

This item shall conform with the Guide Bridge Special Provision for Pedestrian Truss Superstructure with the following exceptions.

The bridge shall be fabricated from AASHTO M270 Grade 50 steel suitable for painting. A pipe handrail as shown on the plans shall be substituted for the rub rail.

**Method of Measurement:**

This item will be measured in Square Feet as specified in GBSP33 PEDESTRIAN TRUSS SUPERSTRUCTURE.

**Basis of Payment:**

This item will be paid at the contract unit price per Square Foot as stated in the Guide Bridge Special Provision for **PEDESTRIAN TRUSS SUPERSTRUCTURE**.

**PEDESTRIAN TRUSS SUPERSTRUCTURE, PREFABRICATED CABLE-STAYED**

**DESCRIPTION**

These specifications are for a fully designed and fabricated cable-stayed, single tower, fan cable design, truss bridge of steel construction and shall be regarded as minimum standards for design and construction. The bridge shall be designed in accordance with AASHTO "Guide

Specifications for Design of Pedestrian Bridges" and ASCE "Guidelines for the Design of Cable-Stayed Bridges" except as modified in these specifications.

The work shall include the design, fabrication, storage, delivery, erection and adjustment of a welded steel pedestrian superstructure.

**Supplier:**

Each bidder is required to identify their bridge supplier as part of the bid submittal. GBSP 33 shall be the basis for identifying suppliers pre-approved by the Illinois Department of Transportation. In addition to pre-qualification in the manufacture of "Pedestrian Truss Superstructures", the supplier shall provide information, including references, to the satisfaction of the Engineer, demonstrating that it has provided bridges of similar scope and complexity for a minimum of 4 projects, at least one of which is a cable-stayed bridge. Suppliers not pre-qualified under GBSP 33 must be pre-approved by the Bureau of Bridges and Structures prior to the award of a contract or they will be disqualified as a supplier under this contract.

**DESIGN CRITERIA**

**Span:**

The total length of the bridge shall be 234'-10" (horizontal measurement) from end to end of the bridge structure. It shall consist of two symmetric spans and one intermediate pier located in the center of the structure supporting the tower and cables.

**Width:**

The width shall be 11'-0" as measured between the inside faces of the structural elements at deck level.

**Height:**

The height of the truss structure shall be 7'-10" maximum as measured vertically from the outside faces of the structural chord elements.

The height of the tower shall be 80'-0" from the top of the bearing seats on the pier to the top of the structural column (not including ornamental feature). The tower shall consist of two symmetric columns connected by 3 plenum beams and shall be designed as a vierendeel truss.

**Truss Elements:**

The bridge girder shall be designed as a Half-Through H-section system that has one diagonal per panel. End and intermediate vertical members shall be plumb. Bridges which are to be painted shall be fabricated using steel shapes and elements according to AASHTO guidelines for painted steel, AASHTO M 270 Grade 50. The deck shall have a corrugated galvanized steel deck pan and steel edge dam channels. The deck shall be cambered such that it will come to rest at a uniform grade of 3.078 % accounting for the dead load deflection of the structure and concrete deck. Floor beams shall be provided to meet the deflection requirements contained herein. Structural Steel shall conform to the requirements of Section 1006 of the Standard Specifications for Road and Bridge Construction, ASTM A707 for cold formed welded square and rectangular tubing and ASTM 709 for wide flange sections, as applicable, unless otherwise shown on the plans or approved by the Engineer. All structural steel field connections shall be bolted with high strength bolts. High strength bolts including suitable nuts and plain hardened washers, shall conform to the requirements of Article 1006.08 of the Standard Specifications.

**Cable-Stays:**

The Stay cables shall be parallel stranded cable (ASTM A416) supplied by the bridge manufacturer. The cables shall be designed to support the entire bridge structure except for the girder bearings at each abutment. The girder shall not be vertically supported at the Tower by

direct bearing on the pier except during construction. The strand shall be weldless, low-relaxation grade galvanized steel cable. The cable-stays shall be dead-ended at the top of the Tower forming a "fan" style cable design. The lower ends shall be attached to independent cross-members supporting the bridge girder.

**Cable Anchorage:**

The bridge manufacturer shall provide all cable, cable anchorages and attachments as well as any temporary cables which may be required to erect the structure. Cables shall be provided in bulk quantities. The Contractor shall be responsible for obtaining jacking equipment, providing temporary shoring if required, and any other incidental items required for erection and installation of the bridge and cable system.

NOTE: The cable anchors utilized in this structure may be seated only once. Moving and re-seating the anchors shall not be allowed.

Installation of cables shall be performed by qualified personnel with previous experience in the installation of coated cables. An erection plan, including cable seating and tensioning requirements, shall be provided by the bridge manufacturer and followed by the erector.

**Cable Replacement and Cable Loss:**

The design of cable-stayed structures shall provide for the replacement of any individual cable with a reduction of the live load in the area of the cable under exchange. Design of all cable-stayed bridges shall also be capable of withstanding the loss of any one cable without the occurrence of structural instability.

During any cable exchange an increase in allowable stresses to 125 percent of design values is suggested with controlled reduction of design live load. In event of the loss of one cable, an allowable stress of 133 percent of design values is suggested with no reduction in design live load.

**Bearings:**

The bearing shall be designed and detailed by the Bridge Manufacturer. Bridge shall consist of a steel setting or slide plate placed on the abutment or grout pad. The bridge bearing plate which is welded to the bridge structure shall bear on this setting plate. The abutment concrete shall achieved a minimum compressive strength of 3,500 PSI or have cured for 28-days prior to setting the bridge. The bearing seat shall be a minimum of 16" wide. The step height (from bottom of bearing to top of deck) shall be determined by the bridge manufacturer.

Bridges in excess of 100 feet in length or bridges with dead load reactions of 15,000 pounds or more (at each bearing location) shall have Teflon on Teflon or stainless steel on Teflon slide bearings placed between the bridge bearing plate and the setting plate. The top slide plate shall be large enough to cover the lower Teflon slide surface at both temperature extremes.

**Attachments:**

Ornamental attachments, clips for electrical conduit, lighting, and decorative panels shall be factory fabricated. Field welding will not be allowed. Vertical safety fencing shall be factory fabricated from 1/4" aluminum plate and fastened between vertical truss members.

**Safety Rails:**

The railing shall consist of a 1/4" aluminum plate cut with a decorative pattern as shown on the plans. The safety rail panels shall have a center post also made of aluminum which is capable of supporting the lighting rail and which shall be mounted top and bottom to the bridge members and shall serve as a divider between safety panels.

The railings shall be a 1 ½" round handrail with a simple pipe handrail on the river side and a lighted handrail on the embankment side. The lighted handrail on the bridge shall be a 1 ½" round tubular satin finish aluminum rail with downward oriented LED lighting. The handrail shall be wall mounted on the vertical truss or stiffener members 5'-0" maximum on center. The top height of the rail shall be 36" above the surface of the deck. The lighting unit shall be VRail by Intense Lighting, Model IVR 2 WW 36 HO 40 60S or approved equal. The bridge supplier shall consider mounting of the lighting handrail to the verticals during design of the superstructure. One side (river side) shall be a standard pipe hand rail without lighting of the same diameter as the lighted rail.

## GOVERNING DESIGN CODES/REFERENCES

Structural members shall be designed in accordance with recognized engineering practices and principles as follows:

- A. **Guidelines for the Design of Cable-Stayed Bridges (ASCE):**  
As amended herein. The bridge structure shall be designed in accordance with those sections of the "Guidelines for the Design of Cable-Stayed Bridges" not superseded by these special specifications. Chapter 5: "Special Considerations for Railroads" is omitted.
- B. **AASHTO Guide Specifications for Pedestrian Bridges:**
- C. **AASHTO Standard Specifications for Highway Bridges:**
- D. **Structural Steel Allowable Stresses:**  
American Association of State Highway and Transportation Officials (AASHTO). Allowable Design Stresses shall be in accordance with the "Standard Specifications for Highway Bridges" latest edition (AASHTO).
- E. **Recommendations for Stay Cable Design, Testing and Installation (PTI):**  
Design of the stay-cable strands shall be in accordance with Section 4.7 and 5.0 of the "Recommendations for Stay-Cable Design, Testing and Installation", published by the Post-Tensioning Institute (PTI), August 1993. Fatigue on pedestrian live loads need not be considered. Anchorages or cable end connections shall be capable of developing 95% of the actual ultimate tensile strength (AUTS) of the cable.

Stay cable testing shall be in conformance with the Recommendations for Stay Cable Design, Testing and Installation but may be omitted if the manufacturer guarantees and warrants the performance of the components. Test data and material certifications for cable strands shall be submitted to the owner's engineer prior to installation.

Refer to the plans for minimum sizes of stay cables.

- F. **Welded Tubular Connections:**  
American National Standards Institute / American Welding Society (ANSI/AWS)  
and the Canada Institute of Steel Construction (CISC).

## ENGINEERING

Structural design of the bridge shall be performed by or under the direct supervision of a Licensed Structural Engineer and done in accordance with recognized engineering practices and principles. Design of the bridge system shall be in accordance with the Governing Design Codes and References stated previously except as modified in these specifications.

## SUBMITTALS

Prior to beginning construction or fabrication, the Contractor shall submit design calculations and six sets of shop drawings for each pedestrian bridge to the Engineer for review and approval. The shop drawings shall include all support reactions for each load type. A list of the submittal requirements is included below. The following certification shall be placed on the first sheet of the bridge shop plans adjacent to the seal and signature of the Structural Engineer:

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans and complies with the requirements of the Contract and the current 'AASHTO Guide Specifications for Design of Pedestrian Bridges'."

The substructure is designed per AASHTO and based on the assumed truss loads shown on the plans. If the manufacturer's design exceeds those loads and/or the substructure needs to be adjusted to accommodate the superstructure chosen, then the Contractor shall submit the redesign to the Engineer for approval prior to ordering any material or starting construction. All design calculations, shop drawings, and redesigned substructure drawings shall be sealed by a Structural Engineer licensed in the State of Illinois.

## SUBMITTAL DRAWINGS

Shop drawings and diagrams shall be submitted to the Owner for their review after receipt of order. Submittal drawings shall be unique drawings, prepared to illustrate the specific portion of the work to be done. All relative design information such as member sizes, bridge reactions, and general notes shall be clearly specified on the drawings. Drawings shall have cross referenced details and sheet numbers. **All drawings shall be signed and sealed by an Illinois Structural Engineer who is qualified for "complex" structures by the Illinois Department of Transportation Bureau of Bridges and Structures.**

## STRUCTURAL CALCULATIONS

Structural calculations for the bridge girder, tower and cable system shall be submitted by the bridge manufacturer and reviewed by the approving engineer. **All calculations shall be signed and sealed by an Illinois Structural Engineer who is qualified for "complex" structures by the Illinois Department of Transportation Bureau of Bridges and Structures.** The calculations shall include all design information necessary to determine the structural adequacy of the bridge. The calculations shall include the following:

- All AASHTO allowable stress checks for axial, bending and shear forces in the critical member of each girder member type (i.e. top chord, bottom chord, floor beam, vertical, etc.) and tower member.
- Checks for the critical connection failure modes for each girder member type (i.e. vertical, floor beam, etc.). Special attention shall be given to all welded tube on tube connections
- Cable stresses for in-place and erection conditions.

- All bolted splice connections.
- Deflection checks.
- U-Frame stiffness checks (used to determine K factors for out-of-plane buckling of the top chord) for half through girders.
- Deck design.
- Anchor bolt design

NOTE: The analysis and design shall account for moments induced in members due to joint fixity where applicable. Moments due to both truss deflection and joint eccentricity must be considered.

## FABRICATION

### GENERAL REQUIREMENTS

The main bridge girder shall be fabricated and pre-assembled in the shop to the grade shown on the plans. All bolt holes for field splices shall be match drilled to insure proper bearing and alignment. Bridge(s) shall be fabricated by a fabricator who is currently certified by the American Institute of Steel Construction to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for the category "Major Steel Bridges" as set forth in the AISC Certification Program. Quality control shall be in accordance with procedures outlined for AISC certification.

### PAINTING

A. All exposed steel surfaces shall receive shop applied primer and finish coats. The paint system shall consist of the following or Equal:

1. Sherwin Williams Paint System:
  - a. One (1) coat Zinc Clad 2B69V3/B69D11 (Shop Primer and Faying Surface) or Organic Zinc Primer: Zinc Clad IV B69A8/B69V8 (Field Primer).
  - b. One (1) Polyurethane Finish Coat: Hi-Solids Polyurethane B65W300/B60V30.

The primer and top coat shall be applied in accordance with and to the minimum dry film thickness listed in the paint manufacturer's recommendations. The top coat paint color shall be FS 17178 (Silver). A color sample shall be supplied to the City of Rockford prior to painting.

Note: Unless specified otherwise, connection faying surfaces and the interior surfaces of all structural tubing shall not be coated.

#### Touch-Up Paint:

A nominal quantity of touch-up paint will be provided to repair marred surfaces. Touch-up painting includes any and all painting required after the structure reaches the site, and is the responsibility of the Contractor. This painting shall include, but not be limited to, the following areas:

- a. Any areas damaged due to shipping, handling, and erection of the bridge and components.

- b. Bolt heads and exposed area of bolts and nuts, as applicable.
- c. Non-galvanized attachments or anchor bolts if not made of corrosion resistant steel.
- d. If applicable, small area (0" to 2" each side) around bolted field splices, designed as "slip critical", where one or all paint coats may be required to be left off the faying surfaces.

## **DELIVERY AND ERECTION**

Delivery shall be made to a location nearest the site which is easily accessible to normal over-the-road tractor/trailer equipment. All trucks delivering bridge materials will need to be unloaded at the time of arrival.

The manufacturer shall provide detailed, written instruction in the proper lifting procedures and splicing procedures (if required). The method and sequence of erection shall be the responsibility of the Contractor.

The bridge manufacturer shall provide written inspection and maintenance procedures to be followed by the bridge owner.

## **FOUNDATIONS**

The bridge manufacturer shall determine the number, diameter, minimum grade and finish of all anchor bolts. The anchor bolts shall be designed to resist all horizontal and uplift forces to be transferred by the superstructure to the supporting foundations. Engineering design of the bridge supporting foundations (abutment, pier, bracket and/or footings), shall be the responsibility of the foundation engineer. The contractor shall provide all materials for (including anchor bolts) and construction of the bridge supporting foundations. The contractor shall install the anchor bolts in accordance with the manufacturer's anchor bolt spacing dimensions.

Information as to bridge support reactions and anchor bolt locations will be furnished by the bridge manufacturer after receipt of order and after the bridge design is complete.

## **APPROVAL CHECKLIST**

The following checklist will be used in the evaluation of all submittals to assure compliance with the Specifications for the Prefabricated Cable-Stayed Truss Bridge. This checklist is considered the minimum acceptable requirements for compliance with these specifications. Any deviation from this checklist shall be considered grounds for rejection of the submittal. Any costs associated with delays caused by the rejection of the submittal, due to non-compliance with this checklist, shall be fully borne by the contractor and bridge supplier.

## **SUBMITTAL DRAWINGS**

*Data Required to be Shown:*



Bridge Elevation including cable locations  
Bridge Cross Section  
All Member Sizes  
    All Vertical Truss Members are Square Tubing  
Bridge Reactions  
General Notes Indicating  
    AASHTO Stress Conformance  
    Material Specifications to be Followed  
    Design Live Load  
    Design Vehicle Load  
    Design Wind Load  
    Other Specified Design Loads  
    Welding Process  
    Blast Cleaning  
    Paint System to be Used  
Paint Color Chart  
Detailed Bolted Splices  
Bolted Splice Location

Signature and Seal of Structural Engineer, licensed and certified for "complex"  
bridge design in Illinois  
Weld Failure Checks (Ultimate)  
Local Buckling of the Main Member Face Checks  
Main Member Yielding Failure Checks  
Main Member Crippling Failure Checks  
Main Member Buckling Failure Checks  
Main Member Shear Failure Checks  
    All Bolted Splice Checks  
    Deflection Checks  
    Decking Material Checks  
    "U-Frame" Stiffness Checks  
    Determination of Top Chord K Factor Based on "U-Frame" Stiffness  
Consideration of Individual Member Moments Due to Truss Deflection, Joint  
    Fixity and Joint Eccentricity  
Cable Design  
Deck Design and pouring sequence

#### **FABRICATION SUBMITTALS**

*Data Required to be Shown:*

Written Installation Instructions  
Written Splicing Instructions  
Written Maintenance & Inspection Instructions  
Welder Certifications  
Welding Procedures

#### **DESIGN CALCULATIONS**

*Data Required to be Shown:*

Data Input for 3-D Analysis of Bridge Girder  
Joint Coordinates & Member Incidences  
Joint and Member Loads  
Member Properties  
Load Combinations

AISC Member Stress Checks for Each Member Type  
Critical Connection Failure Mode Checks for Each Member Type  
Chord Face Plastification Checks  
Punching Shear Checks  
Material Failure Checks (Truss Webs)  
Weld Failure Checks (Effective Length)

\*\*Quality Control Section of AISC Certification Manual  
\*\*Painter Certifications  
Weld Testing Reports

\*\*NOTE: These items are required to be submitted along with Submittal Drawings and Design Calculations. Those Fabrication Submittal Items not marked are to be submitted prior to shipment of the bridge.

**Method of Measurement:**

This item will be measured in Square Feet of concrete deck as specified in GBSP33, for PEDESTRIAN TRUSS SUPERSTRUCTURE, from end to end and side to side of paved deck.

**Basis of Payment:**

This item will be paid at the contract unit price per Square Foot for PEDESTRIAN TRUSS SUPERSTRUCTURE, PREFABRICATED CABLE-STAYED

**BICYCLE RACKS**

This work shall consist of furnishing, transporting, assembling, and placing bicycle racks as specified herein, as shown on the plans, and as directed by the Owner's Representative.

**MATERIALS**

**Bicycle Racks:**

Model: Ring, 1.5" x 25" x 27"  
Manufacturer: Landscape Forms  
431 Lawndale Ave., Kalamazoo, MI 49048  
800-521-2546  
[www.landscapeforms.com](http://www.landscapeforms.com)  
Color/Finish: Stainless Steel

Assemble and install bike racks at locations as shown on the plans. Bicycle racks to be embedded in concrete pavement.

**Method of Measurement:**

The contract unit price for BICYCLE RACKS shall include assembly and all hardware necessary to attach the bench as recommended by the manufacturer and as shown on the plans, including all materials, labor, and equipment required to complete this work.

**Basis of Payment:**

This work shall be paid for at the contract unit price per Each for BICYCLE RACKS, and no additional compensation will be allowed.

## **IRRIGATION SYSTEM**

This work includes installation of the irrigation system as indicated on the drawings and as specified herein.

Contractor shall submit required shop drawings for approval by the Engineer and the Owner prior to commencement of any work on this item.

This work shall include all labor, material, equipment, tools, transportation, permits, and services to construct the irrigation system as designed and per approved shop drawings, in accordance with sections 561, 562, 563, and 565 of the Standard Specification for Road and Bridge Construction and the Standard Construction Details, except as herein modified.

Sprinkler lines shown on the drawings are essentially diagrammatic. Spacing of the sprinkler heads or quick coupling valves are shown on the drawings and shall be exceeded only with the permission of the Owner's authorized representative.

The irrigation system shall include a controlled valve distribution system. Contractor shall furnish and install equipment as common in the industry, associated piping and incidentals as shown and specified.

The system shall be designed such that water shall at no time run off or spray onto the pavement. Contractor is responsible for field adjustments and final spray head nozzles selections.

This work shall include monitoring and adjusting the completed system to assure healthy plant development.

## **WATER SERVICES**

Work described in the items WATER TAP, WATER VALVE ASSEMBLY, WATER METER IN VAULT, BACKFLOW PREVENTER (R.P.Z.), and WATER SERVICE LINE will collectively be described as Water Service Components within this specification. The water tap, water valve assembly and water service line will be provided by, and installed by others from the Burpee Museum building. A 2" line will be brought to the exterior of the building. All other components should be included in the unit price for the irrigation system.

Water Service Components must be installed prior to the installation of the irrigation system, unless otherwise approved by the Engineer.

The Water Service Components to be provided by others as shown in the plans. The number of water services and sizes shown in the plans have been designed to provide an adequate amount of water supply to service the areas to be irrigated (based on City of Rockford's average water main pressure). If it is determined the Irrigation System requires a greater water supply to conform with the requirements of this specification the Contractor must notify the Engineer immediately. Contractor is to verify existing water pressure at the main and notify the Engineer in writing.

The locations of Water Service Components are shown on the plans schematically. The location of the Water Service Components will need to be verified in the field.

## **ELECTRICAL SERVICES**

The electric service will be provided by others located in the Burpee Museum building. A 120v power wire will be provided. Coordinate with the field engineer for exact locations of service tap at the controller location. The irrigation contractor will be responsible to make the connections from the controller to the wire source provided by others.

### **CODES AND STANDARDS**

Codes: All plumbing work shall be installed within applicable provisions of the City of Rockford building codes.

All devices and their installation must be in accordance with the City of Rockford Plumbing Code which incorporates Illinois Plumbing Code 2004 and Chicago Plumbing Code 2003.

#### **Standards:**

Items listed to conform to ASTM, ANSI, or manufactures recommendations, for installation.

Any permits for the installation or construction of the work included under this contract which are required by any of the legally constituted authorities having jurisdiction, shall be obtained and paid for by the Contractor, each at the proper time. He shall also arrange for and pay all costs concerning any inspections and examinations required by these authorities.

In all cases where inspection of the sprinkler system work is required and/or where portions of the work are specified to be performed under the direction and/inspection of the Owner's authorized representative, the Contractor shall notify the Owner's authorized representative at least 48 hours in advance of the time and such inspection and/or direction is required.

Any necessary re-excavation or alterations to the system needed because of failure of the Contractor to have the required inspections, in the opinion of the Engineer, shall be performed at the "Contractor's" own expense.

### **SUBMITTALS**

Any required shop drawings shall be prepared by the Contractor. Submit samples unless directed otherwise by the Engineer.

Material Sample List: Include backflow device, valves, sprinklers, controller, wire, wire connectors, pipe, fittings, valve boxes, swing joints and quick couplers to be used on the project prior to purchasing materials. Quantities of material need not be included.

Manufacturer's Data: Submit manufacturer's catalog cuts, specifications, and operating instructions for the equipment mentioned above and equipment shown on the materials list.

#### **Project Record (As-Built) Drawings:**

The Contractor is to provide the Owner a scaled drawing of the completed field "As-Built" of the system.

All components of the system are to be drawn and referenced to a fixed location on the site.

Components of the system include but are not limited to, sprinkler heads, electric valves, isolation valves, all PVC piping, quick couplers, PVC pipe sizing, grounding, power wire routes and size and 24v wire routes or decoder routes from the controller to the electric valves including common runs.

All PVC piping shall be referenced in the trench for lengths of run, change in direction and distance and locations of all components referenced in feet from a known point.

Two final hard copies of the overall drawings with dimension and notes are to be provided to the Owner and one copy of the As-Built in AutoCad 2007 digital format at the same scale drawing as provided to the Contractor. The Contractor is to provide individual controller sequencing sheets in a 24" x 36" size and 8 1/2" x 11" format. Both submittals shall be laminated and placed as directed by Owner.

## **RULES AND REGULATIONS**

Work and materials shall be in accordance with the latest edition of the National Electric Code, the Uniform Plumbing Code, and applicable laws and regulations of the governing authorities.

When the contract documents call for materials or construction of a better quality or larger size than required by the above-mentioned rules and regulations, provide the quality and size required by the contract documents.

## **QUALITY ASSURANCE**

The Contractor shall maintain continuously a competent superintendent, satisfactory to the Owner, with authority to act for him in all matters pertaining to the work. The Contractor shall coordinate his work with the other trades.

The Contractor shall confine his operations to the area to be improved and to the areas allotted him by the Owner's representative for material and equipment storage.

The Contractor shall have a minimum of 5 years experience installing irrigation systems of comparable size and complexity.

## **DELIVERY, STORAGE AND HANDLING**

Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.

Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends either threaded or plain. Store and handle materials to prevent damage and deterioration.

Provide secure, locked storage for valves, sprinkler heads and similar components that cannot be immediately replaced, to prevent installation delays.

## **MATERIALS**

### **Manufacturers and Minimum Requirements:**

Use materials that are new and without flaws or defects of any type, and which are the best of their class and kind. All material overages at the completion of the installation are the property of the Contractor and are to be removed from the site.

Each major component of equipment shall have manufacturer's name, address, catalog and serial number permanently attached in a conspicuous place.

The same brand or manufacturer shall be used for each specific application of valves, fittings, controls, and other equipment.

All materials shall be new and of the quality specified.

All equipment shall be listed, approved or rated by a nationally recognized testing and rating bureau of recognized manufacturer's association responsible for setting industry standards. All electrical equipment and apparatus shall be U.L. listed.

Acceptable irrigation manufacturers – Hunter, RainBird or approved equal, but must be approved as equal to that product shown on the plans and in the specifications prior to bidding.

It is the intent of this specification to establish a uniform equipment pallet for this and phases of the project. Substitutions will only be allowed if in the opinion of the Engineer it is deemed to be equal or an upgrade and offers the same features that were originally specified.

**PVC or Polyethylene Piping & Fittings:**

PVC Mainline Piping and Sleeving: Use rigid, unplasticized polyvinyl chloride (PVC) 1120, 1220 National Sanitation Foundation (NSF) approved pipe, extruded from material meeting the requirements of Cell Classification 12454-A or 12454-B, ASTM Standard D1784, with an integral belled end. Use Class 160, SDR-26, conforming to the dimensions and tolerances established by ASTM Standard D2241 for all main lines and sleeving.

Use solvent weld pipe for mainline pipe with a nominal diameter 2 1/2" inches and less or where a pipe connection occurs in a sleeve. Use Schedule 40, Type 1, PVC solvent weld fittings conforming to ASTM Standard D2466 and D1784. Use primer approved by the pipe manufacturer. Solvent cement to conform to ASTM Standard D2564.

Provide pipe homogeneous throughout and free from visible cracks, holes, foreign materials, blisters, wrinkles and dents.

Provide pipe continuously and permanently marked with manufacturer's name and trademark, size schedule and type of pipe working pressure at 73 degrees F. and (NSF) approval.

Pipe sizes referenced in the construction documents are minimum sizes, and may be increased at the option of the Contractor at no cost to the Owner.

All pipes damaged or rejected because of defects shall be removed from the site at the time of said rejection.

Polyethylene Pipe-PE Lateral Lines: All polyethylene (PE) pipe shall be virgin, high impact, polyethylene pipe, having minimum 100 PSI working pressure rating. All polyethylene pipe shall be continuously and permanently marked with manufacturer's name, material, size, and schedule of type.

Pipe shall conform to U.S. Department of Commerce Commercial Standard CS207-60, at latest revision. Material shall conform to all requirements of Commercial Standard (CS256-63), at latest revision.

Polyethylene insert pipe fittings shall be constructed of Schedule 80 and shall conform to ASTM D2466. Polyethylene pipe shall be secured to fitting by means of two(2) stainless steel hose clamps for fittings of 1.5" and 2". Fittings 1" and smaller shall use one (1) stainless steel clamp or approved methods.

If conditions are appropriate and rock free for vibratory plowing, the contractor may plow lateral piping, but must get Engineer's approval prior to installation.

**Specialized Pipe and Fittings:**

All above grade pipe shall be copper pipe: Use Type "M" rigid conforming to ASTM Standard B88. Use wrought copper or cast bronze fitting, soldered or threaded per the installation details. Use 95% tin and 5% antimony solder.

Galvanized steel pipe: Use Schedule 40 conforming to ASTM Standard A120. Use galvanized, threaded, standard weight malleable iron fittings.

S-80 PVC fittings may be used and may be threaded or solvent weld. S-80 TOE nipples with S-80 couplings for plastic to metal connections. S-80 nipples cut in half will not be allowed.

Ductile iron pipe: Use Class 50 conforming to ANSI A21.51. Use a minimum of Class 53 thickness pipe for flanged piping. Use mechanical joints conforming to ANSI A21.10 and ANSI A21.11 (AWWA C111) or flanged fittings conforming to ANSI/AWWA C110 and ANSI B16.1 (125#).

Low-Density Polyethylene Hose: Use pipe specifically intended for use as a flexible swing joint, such as Funny Pipe or Swing Joint. Color: Black.

Use spiral barb fittings supplied by the same manufacturer as the hose.

Assemblies calling for threaded pipe connections shall use PVC Schedule 80 nipples and PVC Schedule 40 threaded fittings.

Use only Teflon-type tape on plastic threads.

**Irrigation Controller:**

Controller – Hunter I-Core Controller

Hunter I-Core Series controller with a locking metal cabinet or approved equal. The controller shall be mounted as directed by the Engineer. See plans for controller size.

Timing shall be accomplished by solid-state means. Controller expansion shall be by module expansion units.

Controller is to be installed and grounded per manufacture recommendations. Power to the controllers will be provided by other to a tap location at the controller. The contractor will be responsible for making the connection from the power drop to the controller. The controller will be mounted as directed by the Owner.

Provide an ICR-Kit with the controller.

Provide a Hunter Rain CliK module sensor at the controller location. Provide a Hunter ICR kit with the controller.

The controller shall be mounted on the exterior building wall of the Burpee Museum.

**Electric Control Valves:**

All valves shall be of globe or globe/angle configuration with a female pipe thread inlet and outlet connections. Diaphragm assembly shall be sonically welded to form a solid-piece component. The diaphragm shall be of rubber construction to retain flexibility and provide maximum sealing throughout it's area.

Electric valves shall be 1" & 1.5" Hunter PGV Globe series electric valve series or approved equal. The valve shall have a manual flow control with a hand-operated, rising-type flow control stem with control wheel/handle and an internal manual bleed assembly. Size per plan.

All parts shall be serviceable without removing valve from line. Valve may be installed at any angle without affecting valve operation.

22" solenoid lead wires shall be attached to a 24 VAC solenoid with waterproof molded coil capable of being removed by turning coil. Valve shall be held normally closed by internal water pressure with manual bleed screw.

The legend and flow arrow shall be applied at all valve locations. Valve numbering shall be located so as to be conspicuous and legible. The controller and valve numbering can be engraved in black on a yellow plastic tag, by Christy's Enterprise or equal. The tag size shall be standard size of 2.25" x 2.66".

**Heads, Spray, Swing Joints:**

The spray head sprinklers shall be a 12" Hunter Institutional Series INST-12-CV series or equal for spray heads in planting areas. Sprinkler shall be mounted flush with final finish grade.

The spray head sprinklers shall be a 4" Hunter Institutional Series INST-4-CV series or equal for spray heads in turf areas. Sprinkler shall be mounted flush with final finish grade.

Retraction shall be achieved by a heavy-duty stainless steel retraction spring. Sprinkler shall have a riser seal and a wiper. Sprinkler housing shall be of high impact molded plastic. Sprinkler shall have a large strainer so as to prevent nozzle clogging. Sprinkler shall be constructed such that it is serviceable from top in that drive assembly, screen, and all internal components are accessible throughout top of sprinkler without disturbing case installation. The sprinkler shall have a built-in pressure regulation device to regulate nozzle pressure regardless of the inlet pressure. The sprinkler shall have a drain check valve for up to 10 feet of elevation change.

Type and location of nozzles shall be Hunter Pro-Spray series nozzles or equal. Nozzles vary.

Sprinkler Heads – Gear Drives Hunter I-20 or equal.

The small diameter gear drive sprinklers shall be a 4" Hunter I-20 w/check Series pop up sprinkler or approved equal. Sprinkler shall be mounted flush with final grade. Use Ultra Blue standard nozzles, 2.0 for ¼ radius, 4.0 for ½ radius and 8.0 or approved equal for full circle radius.

Retraction shall be achieved by a heavy-duty steel retraction spring. Sprinkler shall have a rubber cover. Sprinkler housing shall be of high impact molded plastic. Sprinkler shall have a large strainer so as to prevent nozzle clogging. Sprinkler shall be constructed such that it is serviceable from top in that drive assembly, screen, and all internal components are accessible throughout top of sprinkler without disturbing case installation. The sprinkler shall be capable of stopping water flow through the head without turning off the entire zone. The drive shall be water lubricated and have a drain check valve for up to 7 feet. Radius reductions shall be adjustable by up to 25% by means of adjustment screws accessible from top of cap when sprinkler is properly installed.

Sprinkler heads shall be mounted on funny pipe, swing pipe or a pre-assembled flexible swing joint. Riser length of pipe to be 18". Appropriate saddles may be used on lateral piping.



**Quick Couple Valves:**

Valves shall be 1" Hunter HQ-44RC series valves or approved equal. The quick coupling shall have a yellow vinyl cover. The matching Key shall be Hunter HK44 and HS-1. The quick coupler is to have stabilizer wings.

Quick coupler valves are to be mounted on a Spears swing joint with brass female threads and placed in a 10" round valve box. The valve box is to be filled with 3/8" clear pea gravel as detailed. Ensure proper height when backfilling.

**Solvent Weld Fittings:**

Solvent weld PVC fittings shall be Schedule 40, ASTM D-2466 and ASTM D-1784. PVC Schedule-40 fittings shall be produced from PVC Type 1, Cell Classification 1245B. Fittings shall be manufactured by Spears or approved equal. All solvents and cements shall be that recommended by the manufacturer.

S-80 PVC fittings may be used and may be threaded or solvent weld. S-80 TOE Nipples with S-80 couplings for plastic to metal connections. (S-80 nipples cut in half will not be allowed)

**Gate Valves:**

Isolation valves 3" and smaller shall be bronze gate valves. The gate valve shall be 200lb rated WOG non-shock, solid disc, non-rising stem with threaded ends. Valves shall have a bronze cross handle. Valve sizes shall be as shown on plan. Connections to the piping shall be made with a S-80 TOE nipple and a S-80 Coupling. Valves shall be Nibco 200 psi CWP T-113-K or approved equal.

**Control Wiring:**

Use American Wire Gage #16 AWG standard direct burial wire. All signal wire shall include a solid copper conductor and polyethylene (PE) or PVC insulation. It shall be rated for 600 volts and manufactured by Paige or approved equal. All common wires shall be #14 AWG

Color: Wire color shall be continuous over its entire length. See drawing for color coding of control wire.

Splices: Use 3M DBY, 3M DBR or BVS-1 and BVS-2 connectors by Blazing with waterproof sealant or approved equal. Wire connector to be of plastic construction.

Wire markers: pre-numbered or labeled with indelible non-fading ink, made of permanent, non-fading material.

All wiring to be installed following existing local and state codes

**Valve Boxes:**

Valve boxes shall be manufactured by Armor, Carson or approved equal and shall be rectangular, 12" /w 6" extension or 6" and 10" round and have "T" lid tops.

Valve box shall be of a size that provides adequate space for valve repairs. For decoder systems, one valve per 12" rectangular box, for 24v systems, a maximum of 2 electric valves per 12" rectangular valve box. A 10" round valve box may be used for isolation valves, quick couplers and wire drops only.

The valve box cover shall have the component markings engraved or heat stamped into the cover. Use the following symbols for corresponding components in the valve box.

GV – for Gate Valves  
EV – for Electric Valves  
WS – for Wire Splice  
QC – for Quick Coupler  
EW – for Extra Wire Drop  
GR - for Grounding

The lids and boxes will be green.

#### **OTHER COMPONENTS**

Tools and Extra Equipment: The Contractor is to provide to the Owner, two (2) sets of tools to repair and work on all equipment specified in this irrigation section.

The Contractor is to provide the Owner with two (2) sprinkler heads of each type specified, (1) electric valve of each size used.

The Contractor shall provide to the Owner, one (1) key and hose swivel matching the quick coupling valve installed.

**Other Materials:** Provide imported fill material as required to complete this work at the Contractor's cost. Provide other materials or equipment shown on the drawings or installation details, which are part of the irrigation system, although such items may not have been referenced in these specifications.

#### **Construction Inspection and Reviews:**

Site Inspections: The bidder acknowledges that he has examined the site, plans and specifications, and the submission of a proposal shall be considered evidence that examination has been made.

Verify construction site conditions and note irregularities affecting work of this section. It shall be the contracting installer's responsibility to report to the Owner's authorized representative any deviations between drawings, specifications and the site. Failure to do so before the installing of equipment and resulting in replacing and/or relocation of equipment shall be done at the Contractor's expense.

Examine final grades and installation conditions. Do not start irrigation system work until unsatisfactory conditions are corrected.

Beginning work of this section implies acceptance of existing conditions.

Utility Locations: The exact location of all existing utilities and structures and underground utilities are not indicated on the drawings; their locations shall be determined by the Contractor, and he shall conduct his work so as to prevent interruption of service or damage to them.

Arrange for and coordinate with local authorities the location of all underground utilities. Repair any underground utilities damaged during construction. Make repairs at no additional cost above the contract price.

The Contractor shall protect existing structures and utility services and be responsible for their replacement if damaged by him.

#### **Excavation, Trenching and Backfilling:**

Excavating shall be considered unclassified and shall include all materials encountered, except materials that cannot be excavated by normal mechanical means.

Excavate to permit the pipes to be laid at the intended elevations and to permit work space for installing connections and fittings.

Minimum cover (distance from top of pipe or control wire to finish grade):

12-inch over mainline pipe.

6-inch over control wire, follow local and state requirements if they dictate a deeper bury depth.

12-inch over lateral pipe to sprinklers with PE piping.

PVC mainlines or PVC, PE lateral pipes 2 1/2" and smaller may be pulled into the soil using a vibratory plow device specifically manufactured for pipe pulling, if in the opinion of the Owner's Representative that conditions are suitable. Minimum burial depths equals minimum cover listed above provided soil moisture content and other conditions are suitable to allow for full depth of the right to determine suitability or conditions.

Backfill only after lines have been reviewed and tested.

Excavated material is generally satisfactory for backfill. Backfill shall be free from rubbish, vegetable matter, and stones larger than 2 inches in maximum dimension. Remove material not suitable for backfill. Backfill placed next to pipe shall be free of sharp objects, which may damage the pipe.

Backfill unsleeved pipe by depositing the backfill material equally on both sides of the pipe in 6-inch layers and compacting each layer to 95% Standard Proctor Density, ASTM D698-78. Use of water for compaction, "puddling," will not be permitted.

Enclose pipe and wiring beneath roadways, walks, curbs, etc., in sleeves. Minimum compaction of backfill for sleeves shall be 95% Standard Proctor Density. ASTM D698-78. Use of water for compaction around sleeve, "puddling," will not be permitted.

Dress backfilled areas to original grade. Incorporate excess backfill into existing site grades.

Where utilities conflict with irrigation trenching and pipe work, contact the Engineer for trench depth adjustments.

Provide approved fine grained earth fill or sand to point 4" above the top of pipe where soil conditions are rocky or otherwise objectionable.

Excavate trenches and install piping and backfill during the same working day. Do not leave open trenches or partially-filled trenches open overnight.

The Contractor will be responsible for all finish and fine grading of trenches, disturbed areas around sprinkler heads, electric valves and any other excavated or disturbed areas by the Contractor. Contractor will also be responsible for all trench settling throughout the project during the one-year warranty period. If settling occurs, the contractor will repair and bring back to originally set grade.

When additional backfill material is needed to replace the unsuitable materials, it will be the Contractor's responsibility and expense to supply such material. It will also be the Contractor's responsibility to dispose of the unsuitable material.

**Assembling pipe and Fittings:**

General: Keep pipe free from dirt and pipe scale. Cut pipe ends square and debur. Clean pipe ends. Keep ends of assembled pipe capped. Remove caps only when necessary to continue assembly.

All mainline and continuously pressurized pipe is to be installed using open trenches. Lateral pipe may be installed by "Plowing" if soil conditions permit, and soils do not contain gravel, rock, construction debris, or other potential damaging material.

Trenches may be curved to change direction or avoid obstructions within the limits of the curvature of the pipe.

Mainline and Fittings: Use only strap-type friction wrenches for threaded plastic pipe.

PVC Solvent Weld Pipe: Use a primer and solvent cement. Join pipe in a manner recommended by the manufacturer and in accordance with accepted industry practices.

Cure for 30 minutes before handling and 24 hours before allowing water in pipe. Snake pipe from side to side within the trench.

Fittings: The uses of cross type fittings are not permitted.

Lateral Pipe and Fittings: Use only strap-type friction wrenches for threaded plastic pipe.

PVC Pipe: Join pipe in the manner recommended by manufacturer and in accordance with accepted industry practice. Snake pipe from side to side within the trench.

**Installation of Sprinkler and Irrigation Components:**

Remote Control Valve (RCV) Assembly: Flush mainline before installation of RCV assembly.

Install where indicated on the drawing. Wire connectors and waterproof sealant shall be used to connect control wires to remote control valve wire. Install connectors and sealant per the manufacturer's recommendations.

Install only one RCV to a valve box. Locate valve box at least 12 inches from and align with nearby walls and edges of paved areas. Group RCV assemblies together where practical. Arrange grouped valve boxes in rectangular patterns. Allow at least 12 inches between valve boxes.

Adjust RCV to regulate the downstream operating pressure. Attach ID tag with controller station number to control wiring.

Sprinkler Assembly: Flush lateral pipe before installing sprinkler assembly. Install per the installation details at locations shown on the drawings.

Locate rotor sprinklers 6 inches from adjacent walls, fences or edges of paved areas. Locate spray sprinklers 3 inches from adjacent walls, fences or edges of paved areas. Install sprinklers perpendicular to the finish grade.

Supply appropriate nozzle or adjust arc of coverage of each sprinkler for best performance. Adjust the radius of throw of each sprinkler for best performance.

**Installation of Control System Components:**

**Irrigation Controller Unit:** The location of the controller unit as depicted on the drawings is approximate. The Engineer will determine the exact site location during sprinkler layout review.

Attach wire markers to the ends of control wires inside the controller unit housing. Label wires with the identification numbers (see drawings) of the remote control valve to which the control wire is connected. Connect control wires to the corresponding controller terminal.

**Control Wire:** For 24 v systems, bundle control wires where two or more are in the same trench. Bundle with pipe wrapping tape at 15-foot intervals.

Control wiring may be chiseled into the soil using a vibratory plow device specifically manufactured for pipe pulling and wire installation. Appropriate chisel must be used so that wire is fed into a chute on the chisel, and wire is not subject to pulling tension. Minimum burial depth must equal minimum cover previously listed.

Provide a 24-inch excess length of wire in an 8-inch diameter loop at each 90-degree change of direction, at both ends of sleeves and at 100-foot intervals along continuous runs of wiring. Do not tie wiring loop.

Coil 24-inch length of wire within each remote control valve box.

For 24 v systems, install common ground wire and one control wire for each remote control valve. Multiple valves on a single control wire are not permitted.

If a control wire must be spliced, make splice with wire connectors and waterproof sealant, installed per the manufacturer's instructions. Locate splice in a valve box that contains an irrigation valve assembly, or in a separate 10-inch round valve box.

Use same procedure for connection to valves as for in-line splices.

Protect wire not installed with PVC mainline pipe with a continuous run of warning tape placed in the backfill six inches above the wiring.

**Installation of Other Components:**

**Tools and Spare Parts:** Prior to the review at completion of construction, supply to the owner operating keys, servicing tools, spare parts, test equipment and any other items indicated in general notes on the drawings.

**Other Materials:** Install other materials or equipment shown on the drawings or installation details which are part of the irrigation system, even though such items may not have been referenced in these specifications.

**Balancing and Adjusting:**

The Contractor will be responsible for the balancing and adjustments of the various components of the system so the overall operation of the system is the most efficient. Including, but not limited to, the synchronization of the controllers, valves and sprinkler adjustments. Coordinate controller setup with Engineer.

**Requirements for Substantial Completion:**

**Cleaning Equipment and Premises:** Thoroughly clean all parts of the piping, valves and equipment. Remove all construction debris, excess materials and equipment.

Operating and Maintenance Manuals: Contractor shall furnish to Owner, two operating manuals for furnished equipment. Information sheets shall be bound in standard three-ring binders labeled to show Contractor's name, address, regular business phone number, emergency phone number and date. Operating manuals shall be submitted prior to completion of work to allow time for review. Manual shall contain following information:

List (keyed with identification numbers used) each item of equipment which requires service, giving the name of the item, model number, manufacturer's name and address, and providing the name, address and phone number of the nearest representative of authorized service organization.

Cut sheets to be included for the following, but not limited to: electric valves, isolation valves, swing joints, valve boxes, controllers and sprinkler heads.

A copy of the shop drawing for each item.

A complete operating and maintenance manual, parts list, wiring diagrams, lubrication requirements, and service instructions for each major item.

Complete control diagrams with description of all operation sequences and control devices.

Properly executed registrations and registered manufacturer's warranties.

After completion of work and when Owner has had sufficient time to examine operating manuals and become somewhat familiar with operation of equipment, a meeting will be arranged by the Contractor with the Owner for purpose of instructing Owner in proper maintenance of system and to answer questions he/she may have regarding it's operation. Prior to this meeting, contractor shall have programmed a base program for all stations and run times.

**Acceptance:**

Instruct the Owner's designated personnel in the operation of the system, including adjustment of sprinklers, controller(s), valves, pump controls and moisture sensing controls, etc.... Once contractor has trained the owner's representative, the system is fully operational and has completed the punch list, the project will be accepted. A written acceptance and date will be provided, which will begin the warranty and maintenance periods.

**Hydrostatic Testing:**

Notify the Owner's Representative three days in advance of testing.

Pipelines jointed with rubber gaskets or threaded connections may be subjected to a pressure test at any time after partial completion of backfill. Pipelines jointed with solvent-welded PVC joints shall be allowed to cure at least 24 hours before testing.

Subsections of mainline pipe may be tested independently, subject to the review of the engineer/landscape architect/owner's representative.

Furnish clean, clear water, pumps, labor, fittings, and equipment necessary to conduct test or retests.

Cap riser of mainline components for volumetric pressure tests. Backfill to prevent pipe from moving under pressure. Expose coupling and fitting. Purge all air from the pipeline before test.

Subject mainline pipe to the anticipated operating pressure for two hours. Maintain constant pressure. Test complete system under full line pressure. Pressure must be maintained with less than 2lbs loss in the system for 4 hours. If the system does not hold pressure, repair leaks and retest system until the system maintains pressure.

All necessary testing equipment shall be furnished by CONTRACTOR. Cement or caulking to seal leaks is prohibited.

Activate each remote control valve in sequence from controller. Replace defective remote control valve, solenoid, wiring, or appurtenance to correct operational deficiencies.

Replace, adjust, or move water emission devices to correct operational or coverage deficiencies.

Repeat test(s) until each lateral passes all tests. Repeat tests, replace components, and correct deficiencies at no additional cost to the owner.

**Guarantee / Warranty and Replacement:**

It shall be the Contractor's responsibility to ensure and guarantee satisfactory operation of the entire system and the workmanship and restoration of the area. The entire system shall be guaranteed to be complete and perfect in every detail for a period of one year from the date of its acceptance and he hereby agrees to repair or replace any such defects occurring within that year, free of expense to the Owner.

Minor maintenance and adjustment shall be by the Owner.

Make repairs within seven (7) days of notification from the Engineer or Owner.

Contract documents govern replacements identically as with new work. Make replacements at no additional cost to the contract price.

Guarantee/warranty applies to originally installed materials, equipment, and replacements made during the guarantee/warranty period.

**Demonstration, Winterization and Spring Start-up:**

Coordinate the winterization and start-up with the Owner's landscape maintenance personnel.

Contractor shall winterize the system the first year as part of this contract, and will provide written instructions to the Owner for future service and maintenance.

Return to the site during the subsequent spring season and demonstrate to the Owner the proper procedures for the system start-up, operation and proper maintenance. Repair any damage caused in improper winterization at no additional cost to the Owner.

After completion, testing and acceptance of the system, the Contractor will instruct the Owner's personnel in the operation and maintenance of the system.

**Method of Measurement:**

The contract unit price for IRRIGATION SYSTEM shall be measured per complete system installed and tested.

**Basis of Payment:**

This work shall be paid for at the contract unit price per Lump Sum for IRRIGATION SYSTEM including all labor, material, equipment, and services necessary for providing the landscape

irrigation systems in a serviceable, fully operational manner, including, but not limited to, excavation, backfilling, sprinkler heads, solenoid control valves, isolation valves, valve boxes, automatic controls, system testing, owner personnel training, piping, equipment identification, plumbing permits, inspection fees, valve tags, charts, supports, sleeves, fittings, valves, and accessories.

## **ANTI-GRAFFITI COATING**

This work shall consist of surface preparation and application of an anti-graffiti coating system specifically formulated for concrete substrates, consisting of a water repellent, intermediate coat, and finish coat.

### **SUBMITTALS**

Submit manufacturer's literature, certificates and finish material samples to the Owner's Representative for review and approval prior to application.

### **MATERIALS**

Products are to be specifically formulated for graffiti resistance on concrete substrates. Provide a 5 year minimum warranty when applied following manufacturer's specifications.

Vandi-Guard Five System – a chemically resistant, one-part, water based, cross-linked copolymer emulsion that dries to a clear, colorless film.

Vandi-Guard Finish Coat - a non-sacrificial topcoat used in conjunction with Vandi-GuardFive, that will not increase flammability of the substrate or support the growth of mildew, bacteria or fungus.

Manufacturer - Rainguard Products Company  
12927 Sunshine Ave.  
Santa Fe Springs, CA 90670  
(888) 765-7070  
www.rainguard.com

Or equal as approved by Owner's Representative.

Install graffiti protection system per manufacturer recommendations.

Before commencing application, the contractor shall make certain that the surfaces to be coated are in proper condition. New substrates should be allowed to cure for a minimum of 30 days prior to application. Cured substrates should be allowed three to seven days drying time following rainfall prior to application. Moisture content should be no higher than 15% as registered on an electronic moisture meter. When freezing conditions exist prior to application, allow adequate time for the structure to thaw. Materials shall not be applied if substrate temperature is below 45 degrees F. or above 90 degrees F. Do not apply in direct sun.

Allow at least 24 hours between application of clear repellent and water-based paint or stain. Verify that all cracks have been filled with pointing mortar or approved caulking sealant. Verify that voids in masonry joints or joints found to be unsound or otherwise defective have been raked out and pointed with mortar to create a joint of full-face shell thickness. Do not start work until unsatisfactory conditions are corrected.



Preparation of Surfaces: Substrate surfaces shall be structurally sound and thoroughly cleaned of foreign substances, such as dust, dirt, grime, oil, silicones, curing compounds, alkali, acid residues, efflorescence, mortar spills, etc., prior to work. A "dry" cleaning method is preferred. Allow three days minimum drying time before applying material if wet cleaning method is utilized.

**Method of Measurement:**

The contract unit price for ANTI-GRAFFITI COATING shall include cleaning and preparation of surfaces and application of graffiti protection system, including all materials, labor, and equipment required to complete this work.

**Basis of Payment:**

This work shall be paid for at the contract unit price per Square Foot for ANTI-GRAFFITI COATING and no additional compensation will be allowed.

**STAINING CONCRETE STRUCTURES**

This work shall consist of preparing and applying concrete stain to form liner textured surfaces. The work shall be completed in accordance with Section 587 of the Standard Specifications except as specified herein.

Stain shall be applied on all exposed wall surfaces as shown on the plans and shall extend to 12 inches below finish grade on specified surfaces.

**MANUFACTURER REQUIREMENTS**

Manufacturer of coloring system to have a minimum of five years experience creating formed concrete surfaces to match natural stone shapes, surface textures, and colors. Manufacturers of form liner textured surface have been pre-approved to provide textured surface form liners and stain. Other manufacturer's products will be considered, provided sufficient information is submitted 30-days prior to use to allow the Owner's Representative to determine that the products proposed are equivalent to those named. All manufacturers of form liners shall adhere to the provisions listed herein and in the plans.

**CONTRACTOR QUALIFICATIONS**

The concrete stain applicator shall have a minimum of five (5) years demonstrated experience in applying stains to simulate rock. The Contractor shall submit evidence of appropriate experience, job listings, and project photographs from previous work.

**SUBMITTALS**

Submit manufacturer's literature, certificates and color samples of concrete stain to the Owner's Representative for review and approval prior to mockup.

**MOCKUP**

After concrete work on mockup is completed and cured for a minimum of 28 days, and after surface is determined to be acceptable for coloring, apply color stain system.

1. Apply the concrete stain to the front face of the mock-up wall located on the jobsite. Stain shall be of type and color which will be used on actual walls. Application procedures and

absorption rates shall be as hereinafter specified, unless otherwise recommended by the manufacturer in writing to achieve color uniformity.

2. General application to actual surfaces on the retaining wall shall not proceed until jobsite mockup has been approved in writing by the Owner's Representative.
3. The approved mockup shall serve as a standard of comparison with respect to color and overall appearance.

## **MATERIALS**

Deliver materials in original and sealed containers, clearly marked with the manufacturer's name, brand name, type of material, batch number, and date of manufacture.

The stain applicator shall be the manufacturer or manufacturer's authorized representative.

Store concrete stain materials in an area where temperatures will not be less than 50°F (10°C) or more than 100°F (38°C) and in accordance with OSHA and local Fire Code Requirements.

### **Concrete Stain:**

Special penetrating stain mix as provided by the form liner manufacturer. Form liner Type A to have one color (buff color similar to adjacent Burpee Museum stone), Form liner Type B and C to have three colors (buff, tan, brown to simulate the appearance of natural limestone masonry). Submit manufacturer's standard colors for selection by the Owner's Representative prior to completing mock-up. The Owner's Representative will make the final color selections after viewing the completed mock-up.

Stain shall create a surface finish that is breathable (allowing water vapor transmission), and that resists deterioration from water, acid, alkali, fungi, sunlight or weathering. Stain mix shall be a water borne, low V.O.C. material, less than 1.5 lbs./gal, and shall meet requirements for weathering resistance of 2000 hours accelerated exposure.

### **Applying Color Stain:**

The concrete staining work described herein shall be performed after the grading is finished. Clean surface prior to application of stain materials to assure that surface is free of latency, dirt, dust, grease, efflorescence, paint, or other foreign material, following manufacturer's instructions for surface preparation. Do not sandblast. Preferred method to remove latency is pressure washing with water, minimum 3000 psi (a rate of three to four gallons per minute), using fan nozzle perpendicular to and at a distance of one or two feet from surface. Completed surface shall be free of blemishes, discoloration, surface voids and unnatural form marks.

Surfaces to receive stain shall be structurally sound, clean, dry, fully cured, and free from dust, curing agents or form release agents, efflorescence, scale, or other foreign materials. Methods and materials used for cleaning of substrate shall be as recommended by the manufacturer of the water-repellent stain. Concrete shall be at least 30 days old prior to concrete stain application. Curing agents must be removed a minimum of 14 days prior to coating to allow the concrete to dry out.

The stain shall be thoroughly mixed in accordance with the manufacturer's directions using an air-driven or other explosion-proof power mixer. Mix all containers thoroughly prior to application. Do not thin the material.

Materials shall be applied at the rate as recommended by the manufacturer. Absorption rates could be increased or decreased depending upon surface texture and porosity of the substrate so as to achieve even staining.

Temperature and relative humidity conditions during time of concrete stain application shall be per manufacturer's application instructions. Do not apply materials under rainy conditions or within three (3) days after surfaces become wet from rainfall, pressure washing, or other moisture. Do not apply when weather is foggy or overcast. Take precaution to ensure that workmen and work areas are adequately protected from fire and health hazards resulting from handling, mixing and application of materials. Furnish all the necessary equipment to complete the work. Provide drop cloths and other forms of protection necessary to protect all adjoining work and surfaces to render them completely free of overspray and splash from the concrete stain work. Any surfaces, which have been damaged or splattered, shall be cleaned, restored, or replaced to the satisfaction of the Engineer. Avoid staining the "mortar joints" by providing suitable protection over the joints during the staining process. Sequencing: Schedule color stain application with earthwork and back-filling of any wall areas making sure that all simulated stone texture is colored to the minimum distance below grade. Delay adjacent plantings until color application is completed. Coordinate work to permit coloring applications without interference from other trades.

Where exposed soil or pavement is adjacent which may spatter dirt or soil from rainfall, or where surface may be subject to over-spray from other processes, provide temporary cover of completed work.

**Method of Measurement:**

The contract unit price for staining concrete structures for types A, B, and C shall include submittals, mock-ups, preparation, and all work necessary for application of **STAINING CONCRETE STRUCTURES** including all materials, labor, and equipment required to complete this work.

**Basis of Payment:**

Staining concrete structures for types A, B, and C shall be paid for at the contract unit price per Square Yard for **STAINING CONCRETE STRUCTURES** and no additional compensation will be allowed.

**SILT CURTAIN**

This item shall consist of installing and maintaining a silt barrier as shown on the Erosion Control Plan and Details. This item is referred to as Turbidity Barrier on the standard detail in the plans. The Contractor shall install the silt barrier downstream of the causeway or other operations at the river shoreline. The silt curtain shall be of the floating boom type and shall extend a minimum of three (3) feet below the water surface. The Contractor shall inspect the silt curtain on a weekly basis and shall remove any debris, trash or silt and report the volume to the Engineer according to the City of Rockford LR-10 General NPDES Permit.

**Method of Measurement:**

This item shall include the installation, maintenance, and removal of the barrier. This item will be measured in feet along the installed length.

**Basis of Payment:**

Fifty percent (50%) of the measured footage will be paid on installation of the silt curtain. An additional twenty-five percent (25%) will be paid after 12 months of maintenance, and the remaining twenty-five percent (25%) of the measured footage will be paid upon successful removal of the silt curtain. This item will be paid at the contract unit price per Foot for **SILT CURTAIN**.

MASONRY COLUMNS, SMALL

MASONRY COLUMNS, LARGE

This work shall consist of furnishing, transporting and placing concrete masonry units in accordance with Section 504 and Section 602.06 of the Standard Specifications except as specified herein, as shown on the plans, and as directed by the Owner's Representative. Work shall include all mortar, reinforcement, finishing, and cleanup necessary for placement of concrete masonry units.

Concrete masonry units shall be in accordance with Article 1042.15 of the Standard Specifications. Provide hollow, non-load bearing, normal weight concrete block units per dimensions as shown on the plans.

Provide Type S mortar suitable for exterior concrete masonry unit work and submit manufacturer's product data to Owner's Representative for approval prior to construction.

Provide galvanized steel reinforcement as shown on the plans.

The masonry veneer shall consist of furnishing, transporting, and placing masonry veneer as specified herein, as shown on the plans, and as directed by the Owner's Representative. Work shall include all mortar, finishing, and cleanup necessary for placement of masonry veneer.

Submit product samples representing the size, shape, and color of each unit type along with Manufacturer's product data to the Owner's Representative for approval prior to construction.

Masonry veneer shall be split face concrete masonry units and cast stone masonry units to match the adjacent Burpee Museum of Natural History building in size, shape, and color.

Provide Type S mortar suitable for exterior stone masonry work. Submit mortar manufacturer's product data to Owner's Representative for approval prior to ordering. Owner's Representative to select mortar color from manufacturer's full range of color options.

Provide corrugated metal veneer anchors as shown on the plans for attachment of veneer to concrete masonry units. Coordinate work with Concrete Masonry Units section of these Special Provisions to provide veneer anchors as appropriate for attachment to precast concrete elements.

Inspect masonry veneer units before placing and remove any units that do not comply with requirements relating to aesthetic effects, physical properties, or fabrication, or that is otherwise unsuitable for intended use. Arrange units with color and size variations uniformly dispersed for an evenly blended appearance. Perform necessary field cutting and trimming as units are set.

Arrange units in pattern as shown on the plans. Maintain uniform joint widths except for variations due to different stone sizes and where minor variations are required to maintain bond alignment if any. Maintain joints at not less than 3/8 inch at narrowest points or more than 5/8 inch at widest points.

Place weep holes where moisture may accumulate, including at base of cavity walls and above shelf angles. Use wicking material to form weep holes. Turn wicking down at lip of foundation to be as inconspicuous as possible. Space weep holes 24 inches on center.

Variation from Plumb: For vertical lines and surfaces, do not exceed 1/4 inch in 10 feet.

Variation from Level: For bed joints, do not exceed 1/4 inch in 20 feet.

Anchor stone masonry veneer to unit masonry with corrugated metal veneer anchors. Embed anchors in unit masonry mortar joints or grouted cells for distance at least one-half of unit masonry thickness.

Provide 1 inch minimum cavity between stone masonry and concrete masonry units. Keep cavity free of mortar droppings and debris. Place mortar spots in cavity at veneer anchors to maintain spacing. Slope beds toward cavity to minimize mortar protrusions into cavity.

Rake joints to depth of approximately 3/8 inch deep to uniform depths with square bottoms and clean sides unless otherwise shown on the plans.

Clean stone masonry veneer as work progresses. Remove mortar fins and smears before tooling joints.

After mortar is thoroughly set and cured, clean masonry veneer by removing large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels. Further clean by bucket and brush hand-cleaning method using job-mixed detergent solution unless otherwise approved by Owner's Representative.

Cast Stone shall consist of fabricating, furnishing, transporting, and placing cast stone as specified herein, as shown on the plans, and as directed by the Owner's Representative. Work shall include preparation of shop drawings, mortar, anchoring, caulk, and cleanup necessary for fabrication and placement of precast architectural concrete.

Prior to fabrication, prepare and submit shop drawings for each type of cast stone based on field measurements. Submit Manufacturer's product data for each type of material specified before ordering. Submit a sample of the cast stone representing the finish texture and color for review and approval by the Owner's Representative prior to fabrication.

Cast stone shall be cast concrete with limestone type finish as shown on the plans. Color to be buff, as selected by the Owner's Representative from the fabricator's full range of color options. Dimensions to be as shown on the plans.

Provide Type S mortar suitable for exterior precast architectural concrete work. Owner's Representative to select mortar color from manufacturer's full range of color options.

Provide caulk and backer rod suitable for exterior precast architectural concrete work. Owner's Representative to select caulk color from manufacturer's full range of color options.

Provide galvanized metal attachment anchors as recommended by the fabricator or as shown on the plans.

Fabricator to be a qualified company that assumes responsibility for engineering cast stone units to comply with the required performance requirements.

Fabricate cast stone units straight and true to size and shape as shown on the plans.

Provide reinforcement to resist handling, transportation, and erection stresses and cast-in anchorage hardware as required for applications as shown on the plans.

Place concrete in a continuous operation to prevent seams or planes of weakness from forming in cast stone units. Thoroughly consolidate placed concrete by internal and external vibration.

without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing, or entrapped air on surfaces.

Cure concrete by moisture retention without heat, or by accelerated heat curing using low-pressure live steam, or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.

Erect cast stone level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment as units are being permanently connected. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses. Unless otherwise indicated, provide for uniform joint widths of 3/4 inch.

Connect cast stone units in position by grouting or as otherwise indicated on shop drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.

Grout connections where required or indicated. Retain grout in place until hard enough to support itself. Pack spaces with stiff grout material, tamping until voids are completely filled. Place grout to finish smooth, level, and plumb with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Promptly remove grout material from exposed surfaces before it affects finishes or hardens.

Install backer rod and caulk joints as shown on plans.

**Method of Measurement:**

Concrete masonry unit work, including mortar, reinforcement, finishing, cleanup, materials, labor, and equipment required to complete this work, will not be measured for payment and shall be included in the pay item cost per unit for MASONRY COLUMN, LARGE, AND MASONRY COLUMN, SMALL, respectively.

**Basis of Payment:**

This work will be paid for at the contract unit price per Each for MASONRY COLUMN, LARGE, AND MASONRY COLUMN, SMALL, respectively.

**BRIDGE DRAINAGE SYSTEM**

This item shall include all labor, material, and equipment to install bridge deck drainage as shown on the Plans. The system shall include Scuppers (2 each bridge) 18" ACO Part No. 95295 or equal, to collect bridge deck drainage and pipe it below the structure as shown. The scupper grate shall be galvanized steel, and any support brackets and clamps shall be either galvanized steel or stainless steel.

**Method of Measurement:**

This item shall be measured as Each for two complete systems (one per bridge). The work shall include labor and materials to furnish, and install the system at each location. The Contractor shall supply catalog cuts or shop drawings prior to ordering materials.

**Basis of Payment:**

This item shall be paid at the contract unit price per Each for BRIDGE DRAINAGE SYSTEM.

**BUILDING REMOVAL, No. 1**  
**BUILDING REMOVAL, No. 2**

This item shall consist of the careful removal and resetting of two wooden storage sheds approximately 8' x 12'. The storage sheds shall be relocated to 6" thick concrete pads which are 6" larger than the shed in all dimensions. The location will be determined by the Rockford Park District.

Payment for this item shall include a 6" concrete pad on a minimum of 2" aggregate base and moving the wooden sheds once, regardless if the Contractors operational sequence requires moving more than once. Rockford Park District shall be responsible for removing the contents prior to building removal.

If the storage shed foundation boards are rotten such that the building is considered scrap, the Contractor shall remove the shed and dispose of it offsite at an approved disposal site. The Contractor shall in either case provide a 6" concrete pad for a new shed.

**Method of Measurement:**

This item shall be measured as Lump Sum which will include constructing new concrete pads and relocating the storage sheds on them.

**Basis of Payment:**

Payment for this item shall include the construction of new concrete pads, aggregate working surface, and relocating the storage sheds on the new pads. Payment will be made at the contract unit price per Lump Sum for **BUILDING REMOVAL, No. 1 and No. 2.**

**SEEPAGE COLLAR**

This item shall consist of all labor, material, and equipment to furnish and install seepage collars at the locations shown on the Plans. Seepage collars shall be placed at all locations where storm sewer or drainage penetrations would allow less than full strength lagging at a retaining wall. Seepage Collars shall generally be high slump concrete poured around the full diameter of the storm sewer at the back face of the retaining wall. Penetrations through reinforced panels shall be reinforced with an equal number of bars to that of the panel as shown on the Soldier Pile Wall Details.

**Method of Measurement:**

This item will be measured as Each for work completed as described above. Payment shall be inclusive of excavation, concrete collar, reinforcement, and backfilling.

**Basis of Payment:**

This item will be paid at the contract unit price per Each for **SEEPAGE COLLAR.**

**SETTING PILE IN ROCK**

This item shall include all labor, material, and equipment to set HP Pile in abutments and dead men as shown on the Plans. The work shall be in accordance with GBSP 56 and the Standard Specifications for Road and Bridge Construction. The work of drilling, bracing or supporting, pile encasement, reinforcement, and backfilling the shafts shall be included in this item. Furnishing W

Section Pile of the size indicated will be paid separately and is not included in this item.

**Method of Measurement:**

This item will be measured as Each and shall include drilling, supporting, encasement, and backfilling of the pile.

**Basis of Payment:**

This item shall be paid at the contract unit price per Each for SETTING PILE IN ROCK.

**TIMBER DECK REMOVE AND REPLACE**

This item shall consist of the careful removal of approximately 500 square feet of wooden deck adjacent to the Discovery Center to avoid construction damage. The deck shall be carefully removed and stockpiled outside the construction limits to allow for the construction of retaining walls and grading. Upon completion of construction the deck and supporting posts shall be reinstalled in their original condition. The Engineer shall make such surveys as are necessary to determine original locations and grades, and shall place stakes to re-establish the relocation work. The owner, the Engineer, and the Contractor shall inspect the deck and supporting timbers prior to removal and assess the condition, Those timbers or planks that are rotten may be replaced by the owner at the owners expense or may be replaced in their original condition. Damage done by the Contractor shall be repaired or replaced at the Contractors expense.

**Method of Measurement:**

This item will be measured as a Lump Sum item which shall include the removal, stockpiling, and re-assembly of the deck to the original lines and grades. Additional materials and labor to replace items will be paid in accordance with Section 109.04 of the Standard Specifications.

**Basis of Payment:**

This item will be paid at the contract unit price per Lump Sum for TIMBER DECK REMOVE AND REPLACE for the removal and re-installation of the wooden deck adjacent to the Discovery Center. No more of the deck will be removed than necessary to construct the adjacent Modular Retaining Walls and attendant earthwork. This item will be paid fifty percent (50%) upon removal and storage, and the remaining fifty percent (50%) upon re-installation as described above. Payment shall include labor and materials including paint, hardware, and timber to restore the deck to original or better condition.

**PANELBOARD NEMA X4, SPECIAL**

**DESCRIPTION**

Panelboard shall be NEMA X4 stainless steel enclosure, panelboard construction, with bolt-on circuit breakers. Bussing shall be copper, 100% Neutral bus. AIC bracing shall be fully rated. Panelboard shall be NQOD series as manufactured by Square D, or approved equal be Siemens, GE, or Cutler Hammer.

**Method of Measurement:**

This item will be measured per Each which shall include furnishing, installing and testing in accordance with the City of Rockford Building Department. Any Permits necessary shall be included and no additional compensation will be allowed.

**Basis of Payment:**

This item will be paid at the contract unit price per Each for PANELBOARD NEMA X4, SPECIAL.



### GFCI 20 AMP DUPLEX RECEPTACLE

#### **DESCRIPTION**

All receptacles shall be heavy duty, NEMA 5-20R, commercial rated, GFI protected type, ivory color, as manufactured by Leviton, Pass & Seymour, or Hubbell. All receptacles shall carry the following 3<sup>rd</sup> party compliance: UL498, Federal Spec WC596, Standard CSA-C22.2, No. 144. Conforms to NEMA WD-1 and WD-6.

#### **Method of Measurement:**

This item will be measured per Each which shall include furnishing, installing and testing in accordance with the City of Rockford Building Department. Any Permits necessary shall be included and no additional compensation will be allowed.

#### **Basis of Payment:**

This item will be paid at the contract unit price per Each for GFCI 20 AMP DUPLEX RECEPTACLE.

### TRENCH DRAIN

This item shall consist of all labor, material, and equipment to install the Trench Drains as shown on the Plans. The material shall be made with a drainage slot and sloped edges similar to ACO Sport System 2000 Part No. 00786 or equal with a 59.75' centerline radius. The straight line trench drain across the Amphitheater shall be a 6" sloped open top drain and shall have a stainless steel pedestrian grate similar to ACO Part No. 04035 with Part No. 96882 grate. The Contractor shall supply catalog cuts and/or shop drawings prior to ordering materials. The drains shall be set to grade prior to placing PCC Sidewalk and concrete shall be finished to the drain. Protection shall be placed over the drain to prevent excess concrete spillage to disfigure the trench drain.

#### **Method of Measurement:**

This item shall be measured along the center of the drain at pavement level in Feet. Payment for this item shall include the cost of fittings and connections to drainage systems.

#### **Basis of Payment:**

This item shall be paid at the contract unit price per Foot for TRENCH DRAIN.

### SANITARY SEWER 4"

This item shall consist of removing the existing sanitary service from Station 212+35 Lt to Station 213+0 Lt and replacing it with a new PVC service and clean-out in accordance with RRWRD standards. The existing connection and cleanout must be capped in accordance with RRWRD standards. A RRWRD Service Reconnection Permit is required for this work and must be performed by a plumber that is registered and bonded by the District. The District will waive the permit fee.

#### **Method of Measurement:**

This item will be measured along the centerline of the new service from the point of connection at the main to the point of connection of the existing service. This item will be measured in feet and shall include 4" PVC service, bends and fittings, clean-out, testing, and removal and capping the old service connection.

**Basis of Payment:**

This item shall be paid at the contract unit price per Foot for SANITARY SEWER 4".

**PAVEMENT MARKING REMOVAL**

This item shall include all labor, material and equipment to remove existing pavement marking which will be in conflict with the proposed new pavement marking. The Contractor shall install traffic control and protection prior to beginning work. The work shall be in accordance with Section 783 of the Standard Specifications for Road and Bridge Construction.

**Method of Measurement:**

This item will be measured in Square Feet for the actual length and width of the markings removed.

**Basis of Payment:**

This item will be paid at the contract unit price per Square Foot for PAVEMENT MARKING REMOVAL.

**STORM SEWER**

This item shall be in accordance with Section 550 of the Standard Specifications for Road and Bridge Construction with the following exception. For Class A pipe, only Reinforced Concrete Culvert Pipe will be allowed, and for Class B pipe, only PVC Pipe will be allowed.

**Method of Measurement:**

This item will be measured in Feet.

**Basis of Payment:**

This item will be paid at the contract unit price per Foot for STORM SEWER. Of the Class, Type and size as specified on the Plans.

**ORNAMENTAL FENCE**

This item shall include all labor, materials and equipment to construct an ornamental steel picket fence between adjacent properties on this project. The fence height shall be 4 ½ feet with posts 8'-0" on center. It shall be constructed of steel with a black powder finish coat. The style shall be similar to AMERISTAR Model AEGIS II Classic 2/3 Rail or approved Equal. Posts shall be set in concrete in accordance with the manufacturer's recommendation.

**Method of Measurement:**

This item will be measured in Feet.

**Basis of Payment:**

This item will be paid at the contract unit price per Foot for ORNAMENTAL FENCE.

## STORM WATER POLLUTION PREVENTION PLAN

This written plan and the plan sheet included in the project plan set have been prepared to comply with the provisions of the NPDES Permit Number ILR10, issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities. Storm water pollution prevention efforts for this project shall be completed in accordance with the requirements listed in the storm water pollution prevention plan, the erosion control plan sheet, the regulations of the City of Rockford, and requirements of NPDES Permit Number ILR10.

### **I. Site Description:**

The following is a description of the project location:

The project is in the City of Rockford at 711 N. Main St. where the western limits are N. Main St. and the eastern limits are the Rock River. The River Walk path will begin at the intersection Main Street and Armory Property Line, then pass along the Armory east to the river, then along the west bank of the Rock River at one point passing over the river on a bridge then back again to the west bank then to the termini behind the museum building a length of approximately 2060 feet. Another path will begin at the intersection of Main Street and the furthest northern museum entrance and follow along the entrance road to the east to a point west of the boathouse then south to the termini behind the museum building a length of approximately 640 feet.

The following is a description of the construction activity which is the subject of this plan:

The project includes demolition of existing parking lot, curb and gutter, storm sewer, driveways, and existing vegetation along Rock River. It also includes excavation for construction of approximately 2,000 L.F. of pedestrian walkway (10'wide), curb and gutter, parking lot, driveways, 4 block modular retaining walls, 3 overlooks w/foundations, 4 footings and substructures for 2 arch supported bridges, 1 pier and 2 abutments for 1 cable stayed bridge, an amphitheater, lighting, landscaping, and permanent stabilization in parkways on. BMPs will include turbidity barriers in the Rock River channel and BMPs along the banks for the construction of temporary levies for the construction of the 3 bridges.

The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

Phase 1:

1. Install stabilized construction exits.
2. Install silt fences and turbidity barriers on site. (Clear only needed areas)
3. Begin clearing and grubbing site.
4. Sawcut and start demolition of site.
5. Begin grading site and pathway.
6. Start preparing area for bridge substructure construction.

Phase 2:

1. Start Excavating and Constructing substructures for bridges and retaining walls.

2. Excavate and Install new storm sewer.
3. Install rip rap at outlet structures
4. Install curb and gutter, retaining walls.
5. Prepare site for paving.
6. Install driveways and pathway.
7. Install bridges.
8. Restore and install rip rap along riverbank.
9. Complete grading and installation of permanent stabilization.
10. Remove temporary BMPs.

The total area of the construction site is estimated to be 4 acres.

The total area of the site that is estimated will be disturbed by excavation, grading or other activities is 4 acres.

The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

- Existing conditions 0.64
- Proposed conditions 0.65

The following is a description of the soil types found at the project site followed by information regarding their erosivity:

Per Winnebago Soil Survey book, native soils are previously disturbed soils. Per Geotechnical Report prepared by Terracon, borings indicated a medium sand, clayey sandfill, and sandy clay within 5 feet of the surface.

The following is a description of potentially erosive areas associated with this project:

All areas along the bank of the Rock River will have the potential for erosion due to the construction of the bridge substructures and raised outlooks. Other areas include areas where path will be constructed.

The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

Banks of the Rock River will have exposed soils due to excavation of substructures for bridges and retaining walls. Slopes are expected to be approximately 3:1 slopes. Excavation will occur for the path and slopes will be minimal. Demolition of existing parking lot and new construction will expose soils and slopes will be around 2%. New storm sewer will also be constructed; open graded soils can silt in inlet locations.

The following is a list of receiving water and the ultimate receiving water.

Rock River-The project will directly discharge into the Rock River through existing storm sewer on site or sheet flow along the bank.

The following pollutants of concern will be associated with this construction project:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment             | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete                  | <input checked="" type="checkbox"/> Antifreeze / Coolants  |
| <input checked="" type="checkbox"/> Concrete Truck Waste      | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment               |
| <input checked="" type="checkbox"/> Concrete Curing Compounds |  |
| <input checked="" type="checkbox"/> Solid Waste Debris        |  |

**II. Controls:**

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the resident engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the resident engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the permit. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

**A. Erosion and Sediment Controls**

1. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: subsurface drains and storm drain inlet protection.

The following Structural Practices will be used for this project:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Pipe Underdrains in Landscaping beds |
| <input checked="" type="checkbox"/> Silt Fence                   | <input type="checkbox"/> Sediment Basin                       |
| <input checked="" type="checkbox"/> Turbidity Barriers           | <input type="checkbox"/> Sediment Trap                        |
| <input checked="" type="checkbox"/> Construction exit            | <input type="checkbox"/> Check Dam                            |
| <input type="checkbox"/> Diversion Ditch/Berm                    |   |

Describe how the Structural Practices listed above will be utilized:

**Silt Fence**- Silt fence will be placed downstream of the construction site and will be used for outfall of sheet flow from construction site. Install silt fence at a fairly level grade along the contour with the ends curved uphill to provide sufficient upstream storage volume for the anticipated runoff. Drainage areas shall not exceed ½ acre per 100 feet of wire-reinforced silt fence for slopes less than 2 percent. Silt Fences are designed per standards outlined in "Illinois Urban Manual".

**Storm Inlet Protection**- Inlet Protection will be placed at parking lot drains. The primary mechanism is to place controls in the path of flow sufficient to slow the sediment-laden water to allow settlement of suspended soils before discharging into the storm sewer. It is possible that as construction progresses from storm sewer installation through to paving that the inlet protection devices will change.

**Construction Exits**- All access points from the public street into the construction site shall include a construction exit composed of course stone to the dimensions shown on the detail sheet. The rough texture of the stone helps to remove clumps of soil adhering to the construction vehicle tires through the action of vibration and jarring over the rough surface and the friction of the stone matrix against soils attached to vehicle tires.

**Turbidity Barrier**- Barrier will be placed in Rock River to settle out sediment from storm water discharged from construction activities upstream.

2. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

Description of Storm Water Management Controls.

Disturbed areas will be restored with a permanent native grass and landscaping trees will be planted. Erosion control blanket will be placed on the slopes

3. **Other Controls:**

- a) Material Delivery, Storage, and Use – The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:
  - All products delivered to the project site must be properly labeled.
  - Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
  - A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to

prevent precipitation from coming in contact with the products being stored.

- Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
  - Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.
- b) Stockpile Management – BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:
- Perimeter Erosion Barrier
  - Temporary Seeding
  - Temporary Mulch
  - Temporary Ditch Checks
  - TRM

The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

- c) Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
- d) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
- e) The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

#### **4. Approved State or Local Laws**

The management practices, controls and provisions contained in this plan will be in accordance with City of Rockford specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be

authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

### III. Maintenance:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, erosion and sediment control measures and other protective measures identified in this plan. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

Straw waddles and silt filter fabric in inlets shall be cleaned weekly and after every storm event of ½" rainfall or greater and replaced if found defective. Street shall be swept as directed by the resident engineer.

### IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

- A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.
- B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.
- C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.
- D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall complete and file



an "Incidence of Noncompliance" (ION) report for the identified violation. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Attn: Compliance Assurance Section  
1021 North Grand East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

**V. Non-Storm Water Discharges:**

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

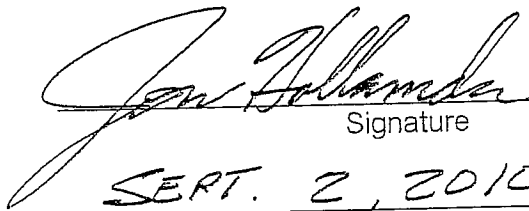
- A. Spill Prevention and Control** – BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.
- B. Concrete Residuals and Washout Wastes** – The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:
- Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
  - The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
  - All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
  - Concrete waste solids/liquids shall be disposed of properly.
- C. Litter Management** – A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.

- D. Vehicle and Equipment Cleaning – Vehicles and equipment are to be cleaned in designated areas only, preferably off site.
- E. Vehicle and Equipment Fueling – A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.).
- Below are a few examples of these BMPs:
  - Containment
  - Spill Prevention and Control
  - Use of Drip Pans and Absorbents
  - Automatic Shut-Off Nozzles
  - Topping Off Restrictions
  - Leak Inspection and Repair
- F. Vehicle and Equipment Maintenance – On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

**VI. Failure to Comply:**

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of an Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jon Hollander	
Print Name	Signature
City Engineer	SEPT. 2, 2010
Title	Date
City of Rockford	
Agency	

**SWPPP  
Contractor Certification Statement**

The Resident Engineer is to make copies of this form and every contractor and sub-contractor will be required to complete their own separate form.

This certification statement is part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

**ROCKFORD RIVERWALK MUSEUM CAMPUS**

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification. I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project. I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan and will provide timely updates to these documents as necessary.

Contractor

Sub-Contractor

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

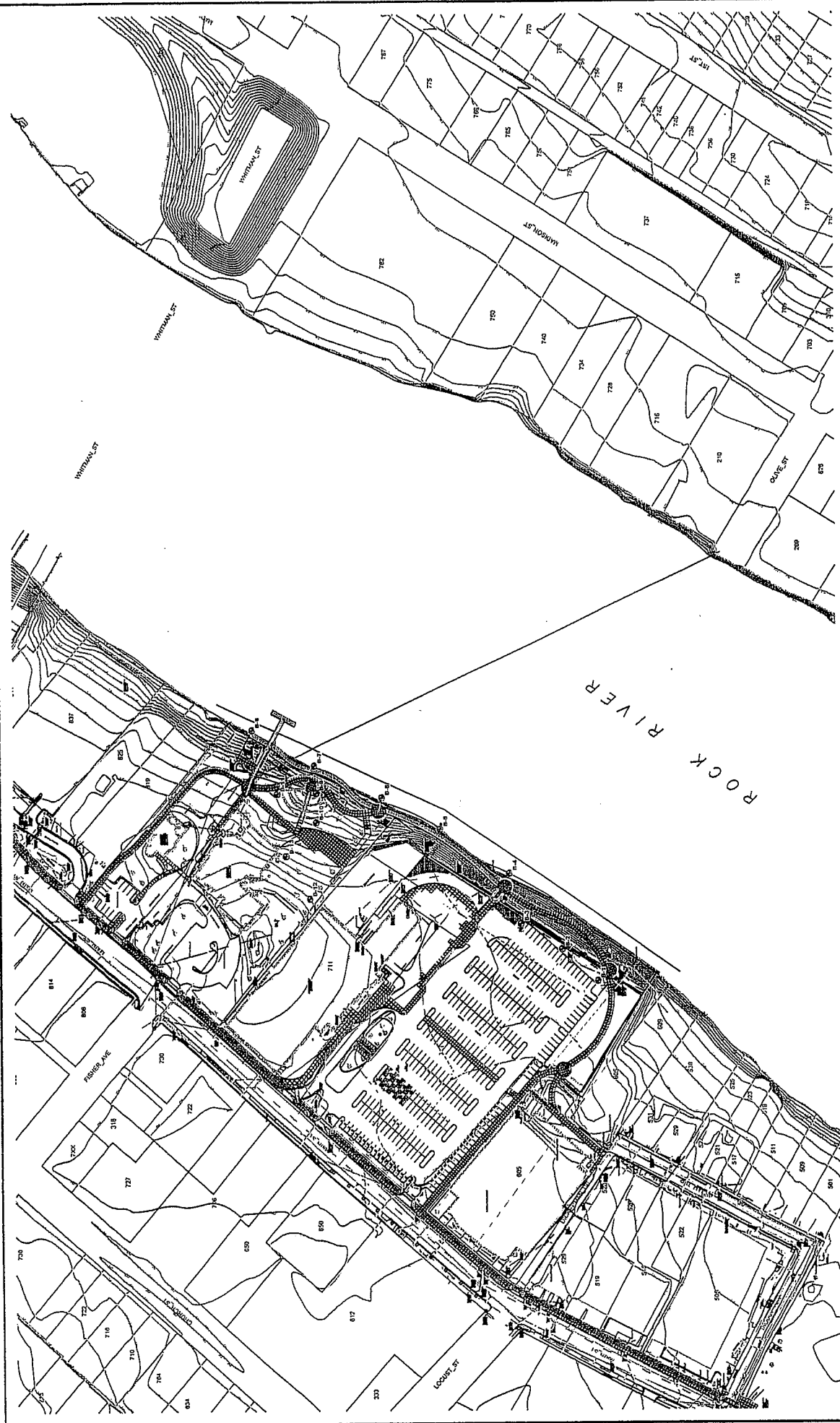
\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Telephone

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City/State/ZIP



Approximate Boring Location



FIG. No. 1

VICINITY DIAGRAM  
 PEDESTRIAN RIVERWALK  
 711-737 N. MAIN STREET  
 WINNEBAGO COUNTY, ILLINOIS

**Terracon**  
 Consulting Engineers and Scientists  
 4838 COLT ROAD  
 ROCKFORD, ILLINOIS 61109  
 PH. (815) 873-6990  
 FAX. (815) 873-6991

Project No.	19085016
Scale	AS-SHOWN
Revised By	DAC
Date	November 24, 2009

Project Mgr:	PJH
Drawn By:	EP
Checked By:	PJH
Approved By:	PJH

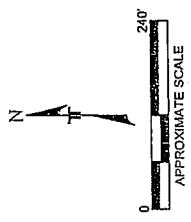
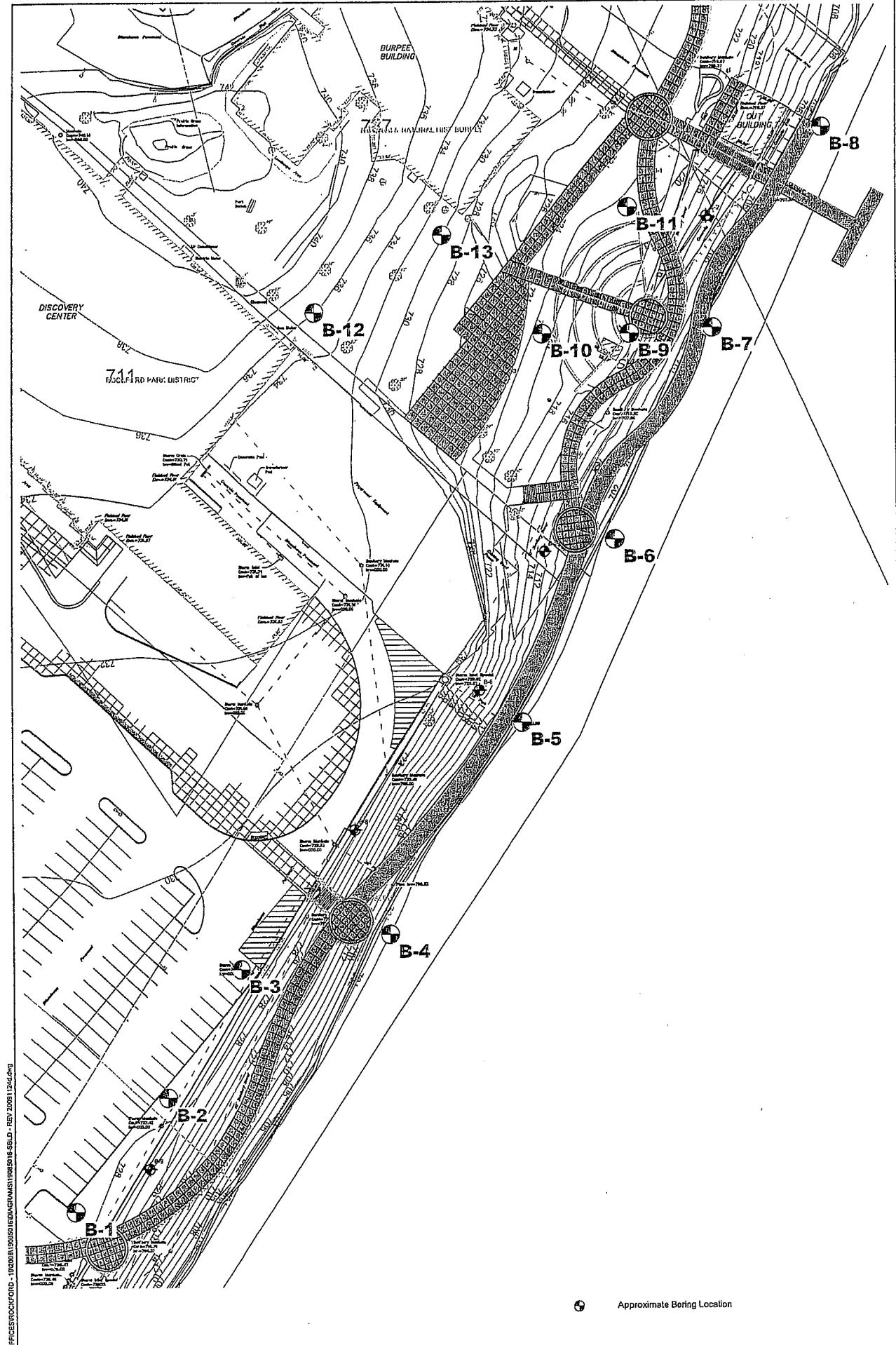
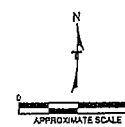


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES.



PROJECTS - OTHER OFFICES/ROCKFORD - 192008119005010EDMAGRAMS19985016-SSLD - REV 20091124.dwg



Project Wg:	PJH	Project No:	19085016
Drawn by:	EP	Scale:	AS-SHOWN
Checked by:	PJH	Reviewed by:	DAC
Approved by:	PJH	Date:	November 24, 2009

**Terracon**  
 Consulting Engineers and Scientists

4430 CO.1 RD  
 ROCKFORD, ILLINOIS 61102  
 TEL (815) 873-0999 FAX (815) 873-0991

<b>SOIL BORING LOCATION DIAGRAM</b>  <b>PEDESTRIAN RIVERWALK</b> 711-737 N. MAIN STREET WINNEBAGO COUNTY, ILLINOIS
--

<b>FIG. No.</b>  2
--------------------------

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

24

# LOG OF BORING NO. B1

CLIENT		McClure Engineering Associates, Inc.							
SITE		Section No. 06-00543-00-BT Winnebago County, Illinois							
PROJECT		Pedestrian Riverwalk Along The Rock River							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES				TESTS		
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	Approx. Surface Elev.: 728 ft								
0.2	Approx. 2 inches Asphaltic Concrete	728			HS				
0.8	Approx. 8 inches Roadstone <u>FILL: CLAYEY FINE TO MEDIUM SAND</u> , grey-brown	727		1	SS	9	11	12	
3	<u>SANDY CLAY</u> , blue-grey, very stiff	725			HS				
			CL	2	SS	7	16	10	5500*
	turning brown				HS				
			CL	3	SS	9	18	9	3500*
8	<u>FINE TO COARSE SAND</u> , brown, medium dense	720			HS				
			SP	4	SS	12	10	12	
					HS				
13	<u>LEAN CLAY</u> , mottled brown and grey, very stiff	715							
			CL	5	SS	9	11	21	5500*
15	BOTTOM OF BORING	713							

BOREZ 19085016.GPJ TERRACON.GDT 11/25/09

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	▽ N/E	WD	▽ N/E AB
WL	▽		▽
WL			



BORING STARTED		09-30-08	
BORING COMPLETED		09-30-08	
RIG	D-120	FOREMAN	JA
APPROVED	LAZ	JOB #	19085016

# LOG OF BORING NO. B2

CLIENT <b>McClure Engineering Associates, Inc.</b>		PROJECT <b>Pedestrian Riverwalk Along The Rock River</b>							
SITE <b>Section No. 06-00543-00-BT Winnebago County, Illinois</b>		PROJECT							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES				TESTS		
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	Approx. Surface Elev.: 728 ft								
0.1	Approx. 1 inch Asphaltic Concrete	728		HS					
0.9	Approx. 10 inches Roadstone <u>FILL: CLAYEY FINE TO MEDIUM SAND, brown</u>	727		1	SS	12	12	9	
3	<u>FILL: GRAVELLY FINE TO MEDIUM SAND, brown</u>	725		HS					
5	<u>FILL: FINE TO MEDIUM SAND, TRACE GRAVEL, brown</u>	723	5	3	SS	8	4	2	
				HS					
			10	4	SS	13	22	3	
				HS					
13	<u>SILTY CLAY, TRACE SAND, brown and dark brown, very stiff</u>	715		GL-ML 5	SS	13	16	18	5000*
18		710	15	HS					

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	WS	AB	
▽ 24.5	▽ 25		
WL	▽		
WL	CAVE-IN		



BORING STARTED		09-30-08	
BORING COMPLETED		09-30-08	
RIG	D-120	FOREMAN	JA
APPROVED	LAZ	JOB #	19085016

BOREZ 19085016.GPJ TERRACON.GDT 11/25/09



# LOG OF BORING NO. B2

CLIENT McClure Engineering Associates, Inc.										
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River								
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES				TESTS			
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
23	<u>GRAVELLY FINE TO MEDIUM SAND</u> , brown, very dense	20	SP	6	SS	8	50/2"	4		
23	<u>FINE TO MEDIUM SAND</u> , brown, medium dense, moist	25			HS					
23	<u>FINE TO MEDIUM SAND</u> , brown, medium dense, moist	25	SP	7	SS	16	21	19		
23	<u>FINE TO MEDIUM SAND</u> , brown, medium dense, moist	30			HS					
23	<u>FINE TO MEDIUM SAND</u> , brown, medium dense, moist	30	SP	8	SS	15	18	20		
23	<u>FINE TO MEDIUM SAND</u> , brown, medium dense, moist	35			HS					
23	<u>FINE TO MEDIUM SAND</u> , brown, medium dense, moist	35	SP	9	SS	18	19	21		
23	BOTTOM OF BORING	35								

BORE# 19085016.GPJ TERRACON.GDT 11/25/09

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			BORING STARTED 09-30-08	
WL $\nabla$ 24.5	WS $\nabla$ 25	AB	BORING COMPLETED 09-30-08	
WL $\nabla$	WS $\nabla$		RIG D-120	FOREMAN JA
WL	CAVE-IN		APPROVED LAZ	JOB # 19085016



LOG OF BORING NO. B3

CLIENT		McClure Engineering Associates, Inc.								
SITE		Section No. 06-00543-00-BT Winnebago County, Illinois								
PROJECT		Pedestrian Riverwalk Along The Rock River								
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES			TESTS			
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
	Approx. Surface Elev.: 728 ft									
0.3	Approx. 3 inches Asphaltic Concrete	727.5			HS					
1	Approx. 9 inches Roadstone <u>FILL: FINE TO MEDIUM SAND, TRACE GRAVEL</u> , brown	727		1	SS	14	12	4		
					HS					
2				2	SS	11	11	4		
5	<u>FILL: GRAVELLY FINE TO MEDIUM SAND</u> , brown	723			HS					
				3	SS	14	16	5		
					HS					
8	<u>SILTY CLAY, WITH SAND</u> , brown, stiff	720			GL-ML 4	SS	12	9	10	3500*
					HS					
13	<u>CLAYEY FINE TO MEDIUM SAND, TRACE ORGANICS</u> , dark brown, medium dense	715			SC	5	SS	7	22	12
					HS					
18		710								

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

BOREZ 19085016.GPJ TERRACON.GDT 11/25/09

WATER LEVEL OBSERVATIONS, ft		
WL	▽ N/E	WD ▽ N/E AB
WL	▽	▽
WL		



BORING STARTED	09-30-08
BORING COMPLETED	09-30-08
RIG	D-120
FOREMAN	JA
APPROVED	LAZ
JOB #	19085016

# LOG OF BORING NO. B3

CLIENT McClure Engineering Associates, Inc.									
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	<b>SLIGHTLY WEATHERED DOLOMITE</b>	20		6	SS	17	54	15	
		25		7	SS	NR	50/0"	8	
	Sample 7: No Recovery, Auger Sample Obtained								
26.5	701.5								
BOTTOM OF BORING									
*Practical Auger Refusal on Apparent Bedrock*									

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft		
WL $\nabla$ N/E	WD $\nabla$ N/E	AB
WL $\nabla$	$\nabla$	
WL		



BORING STARTED		09-30-08	
BORING COMPLETED		09-30-08	
RIG	D-120	FOREMAN	JA
APPROVED	LAZ	JOB #	19085016

BORE2-19085016.GPJ TERRACON.GDT 11/25/09

# LOG OF BORING NO. B4

CLIENT McClure Engineering Associates, Inc.									
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	Approx. Surface Elev.: 702.7 ft Approx 7.3 feet of water								
	7.3	695.5							
	<u>SILT, WITH SAND, TRACE ORGANICS,</u> dark brown, very loose		ML	1	SS	8	1 50/1"	47	
	9.3	693.5							
	<u>SLIGHTLY WEATHERED DOLOMITE</u>  Run 1 Recovery: 120/120, 100% RQD: 65/120, 54%  Drill time 12 minutes				DB				

Continued Next Page

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.




BORE2 19085016.GPJ TERRACON.GDT 11/25/09

WATER LEVEL OBSERVATIONS, ft			
WL	▽ N/A	WD	▽ N/A
		AB	
WL	▽		▽
WL	Water Depth: 7.3'		



BORING STARTED		11-05-08	
BORING COMPLETED		11-05-08	
RIG	945	FOREMAN	DB
APPROVED	LAZ	JOB #	19085016

LOG OF BORING NO. B4

CLIENT McClure Engineering Associates, Inc.		PROJECT Pedestrian Riverwalk Along The Rock River							
SITE Section No. 06-00543-00-BT Winnebago County, Illinois									
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	19.3 <u>SLIGHTLY WEATHERED DOLOMITE</u> (continued) 683.5								
	<u>HARD DOLOMITE</u>  Run 2 Recovery: 120/120, 100% RQD: 103/120, 86%  Drill time 13 minutes	20		DB					
	29.3 BOTTOM OF BORING 673.5								

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	▽ N/A	WD	▽ N/A AB
WL	▽		▽
WL	Water Depth: 7.3'		



BORING STARTED	11-05-08		
BORING COMPLETED	11-05-08		
RIG	945	FOREMAN	DB
APPROVED	LAZ	JOB #	19085016

# LOG OF BORING NO. B5

CLIENT **McClure Engineering Associates, Inc.**

SITE **Section No. 06-00543-00-BT  
Winnebago County, Illinois**

PROJECT **Pedestrian Riverwalk Along The Rock River**

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES			TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %
	Approx. Surface Elev.: 702.6 ft Approx. 9.6 feet of water	5			HS			
9.6	<b>SANDY GRAVEL</b> , brown, loose	10		GP 1	SS	6	8	
11.6	<b>HARD DOLOMITE</b>  Run 1 Recovery: 90/96, 94% RQD: 69-96, 72%  Drill time 7 minutes	15			DB		50/4"	

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	▽ N/A	WD	▽ N/A AB
WL	▽		▽
WL	Water Depth: 9.6'		



BORING STARTED		11-05-08	
BORING COMPLETED		11-05-08	
RIG	945	FOREMAN	DB
APPROVED	LAZ	JOB #	19085016

BOREZ 19085016.GPJ TERRACON.GDT 11/25/09

LOG OF BORING NO. B5

CLIENT  
McClure Engineering Associates, Inc.

SITE  
Section No. 06-00543-00-BT  
Winnebago County, Illinois

PROJECT  
Pedestrian Riverwalk Along The Rock River

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES					TESTS	
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
19.6	<u>HARD DOLOMITE</u> continued	683							
	<u>HARD DOLOMITE</u>  Run 2 Recovery: 120/120, 100% RQD: 98/120, 82%  Drill time 11 minutes	20			DB				
29.6	<u>WEATHERED DOLOMITE</u>	673							
31.6	Run 3 Recovery: 24/24, 100% RQD: 0/24, 0%  Drill time 3 minutes BOTTOM OF BORING	671			DB				

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	▽ N/A	WD	▽ N/A AB
WL	▽		▽
WL	Water Depth: 9.6'		



BORING STARTED	11-05-08		
BORING COMPLETED	11-05-08		
RIG	945	FOREMAN	DB
APPROVED	LAZ	JOB #	19085016

BORE2\_19085016.GPJ TERRACON.GDT 11/25/09

# LOG OF BORING NO. B6

CLIENT **McClure Engineering Associates, Inc.**

SITE **Section No. 06-00543-00-BT  
Winnebago County, Illinois** PROJECT **Pedestrian Riverwalk Along The Rock River**

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES			TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %
	Approx. Surface Elev.: 702.7 ft Approximately 7' water							
7	695.5							
9.5	693							
10								
15								



Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.


\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			BORING STARTED 11-04-08	
WL	∇ N/A	WD	∇ N/A	AB
WL	∇			
WL	Water Depth: 7'			
<h1 style="font-size: 2em;">Terracon</h1>			BORING COMPLETED 11-04-08	
			RIG 945	FOREMAN DB
			APPROVED LAZ	JOB # 19085016

BORE2 19085016.GPJ TERRACON.GDT 11/25/08



LOG OF BORING NO. B6

CLIENT McClure Engineering Associates, Inc.		PROJECT Pedestrian Riverwalk Along The Rock River							
SITE Section No. 06-00543-00-BT Winnebago County, Illinois									
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	<u>HARD DOLOMITE</u> continued	19.5							
	<u>HARD DOLOMITE</u> Run 2 Recovery: 120/120, 100% RQD: 104/120, 87% Drill time 9 minutes	20		DB					
		25							
		29.5							
	BOTTOM OF BORING	673							

BORE2\_19085016.GPJ TERRACON.GDT 11/25/09

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	∇ N/A	WD	∇ N/A AB
WL	∇	∇	
WL	Water Depth: 7'		



BORING STARTED	11-04-08
BORING COMPLETED	11-04-08
RIG	945 FOREMAN DB
APPROVED LAZ	JOB # 19085016

# LOG OF BORING NO. B7

CLIENT McClure Engineering Associates, Inc.										
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River								
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES			TESTS				
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
	Approx. Surface Elev.: 702.6 ft Approximately 6.3' water									
	6.3 <u>SANDY GRAVEL, WITH SILT</u> , dark brown, loose	696.5								
	8.3 <u>HARD DOLOMITE</u>	694.5								
	Run 1 Recovery: 120/120, 100% RQD: 72/120, 60%  Drill time 11 minutes									

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

WATER LEVEL OBSERVATIONS, ft			BORING STARTED 11-05-05	
WL	∇ N/A	WD	∇ N/A	AB
WL	∇			
WL				
Water Depth: 6.3'			BORING COMPLETED 11-05-08	
<h1 style="font-size: 2em;">Terracon</h1>			RIG	68 FOREMAN PR
			APPROVED LAZ	JOB # 19085016

# LOG OF BORING NO. B7

CLIENT McClure Engineering Associates, Inc.									
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES				TESTS		
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
19.3	683.5	20		DB					
29.3	673.5								
	BOTTOM OF BORING								

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			BORING STARTED		11-05-05	
WL	∇ N/A	WD	∇ N/A	AB	BORING COMPLETED	11-05-08
WL	∇		∇		RIG	68 FOREMAN PR
WL	Water Depth: 6.3'			APPROVED	LAZ	JOB # 19085016



LOG OF BORING NO. B8

CLIENT McClure Engineering Associates, Inc.		PROJECT Pedestrian Riverwalk Along The Rock River							
SITE Section No. 06-00543-00-BT Winnebago County, Illinois									
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES			TESTS		
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	Approx. Surface Elev.: 702.7 ft Approximately 5.1' water				HS				
	5.1 697.5 <u>SANDY SILT, WITH GRAVEL</u> , brown, very loose	5	SM/ML 1	SS	6	3	17		
	7.6 695 <u>SLIGHTLY WEATHERED DOLOMITE</u>			HS					
				2	SS	8	16 50/3"	15	
		10			HS				
	11.1 691.5 <u>HARD DOLOMITE</u>  Run 1 Recovery: 120/120, 100% RQD: 82/120, 68%  Drill time 9 minutes	15			DB				

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.



\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			BORING STARTED 11-04-08	
WL	∇ N/A	WD	∇ N/A	AB
WL	∇			
WL				
Water Depth: 5.1'			BORING COMPLETED 11-04-08	
			RIG 945	FOREMAN DB
			APPROVED LAZ	JOB # 19085016



BORE# 19085016.GPI TERRACON.GDT 11/25/09

LOG OF BORING NO. B8

CLIENT McClure Engineering Associates, Inc.		PROJECT Pedestrian Riverwalk Along The Rock River							
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	<u>HARD DOLOMITE</u> (continued)	20							
21.1	681.5								
	<u>HARD DOLOMITE</u> Run 2 Recovery : 120/120, 100% RQD: 102/120, 85% Drill time 8 minutes	25		DB					
31.1	671.5								
	BOTTOM OF BORING								

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer





WATER LEVEL OBSERVATIONS, ft			
WL	∇ N/A	WD	∇ N/A AB
WL	∇	∇	
WL	Water Depth: 5.1'		



BORING STARTED		11-04-08	
BORING COMPLETED		11-04-08	
RIG	945	FOREMAN	DB
APPROVED	LAZ	JOB #	19085016

BOREZ 19085016.GPJ TERRACON.LGDT 11/25/09

LOG OF BORING NO. B9

CLIENT McClure Engineering Associates, Inc.		PROJECT Pedestrian Riverwalk Along The Rock River							
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		TESTS							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	Approx. Surface Elev.: 716 ft								
	0.3 Approx. 1/4 foot Topsoil Fill FILL: CLAYEY FINE TO MEDIUM SAND, TRACE GRAVEL AND ORGANICS, dark brown	715.5		HS					
	3 FINE TO MEDIUM SAND, TRACE GRAVEL, brown, medium dense	713		HS					
	6 SLIGHTLY WEATHERED DOLOMITE	710		HS			5		
	10 Sample 4: No Recovery, Auger Sample Obtained	706		SS	4	50/5"			
	BOTTOM OF BORING								
	*Practical Auger Refusal on Apparent Weathered Dolomite								

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	∇ N/E	WD	∇ N/E AB
WL	∇		∇
WL			



BORING STARTED	10-01-08
BORING COMPLETED	10-01-08
RIG	D-120 FOREMAN JA
APPROVED	LAZ JOB # 19085016

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

LOG OF BORING NO. B10

CLIENT McClure Engineering Associates, Inc.		PROJECT Pedestrian Riverwalk Along The Rock River							
SITE Section No. 06-00543-00-BT Winnebago County, Illinois									
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	Approx. Surface Elev.: 720 ft								
	0.6 Approx. 1/2 foot Topsoil Fill <u>FILL: FINE TO MEDIUM SAND, TRACE GRAVEL AND ORGANICS</u> , brown	719.5		HS					
				1	SS	7	14	5	
					HS				
	Sample 2: No Recovery, Auger Sample Obtained			2	SS	NR	50/1"	11	
	5 <u>GRAVELLY FINE TO MEDIUM SAND</u> , brown, medium dense to very dense	715			HS				
				3	SS	13	19	4	
					HS				
	8 <u>SLIGHTLY WEATHERED DOLOMITE</u>	712							
				4	SS	2	50/2"		
	10 BOTTOM OF BORING	710							
	*Practical Auger Refusal on Apparent Weathered Dolomite*								

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	▽ N/E	WD	▽ N/E AB
WL	▽		▽
WL			



BORING STARTED	10-01-08
BORING COMPLETED	10-01-08
RIG	D-120 FOREMAN JA
APPROVED	LAZ JOB # 19085016

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

# LOG OF BORING NO. B11

CLIENT McClure Engineering Associates, Inc.			
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River	
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL
			NUMBER
	APPROX. SURFACE ELEV.: 721 ft		SAMPLES
			TESTS
0.5	Approx. 1/2 foot Topsoil Fill <u>FILL: FINE TO COARSE SAND, TRACE ORGANICS</u> , brown	720.5	HS
			1
			SS
			RECOVERY, in.
			SPT - N **
			BLOWS / ft.
			WATER CONTENT, %
			DRY UNIT WT
			pcf
			UNCONFINED STRENGTH, psf
3	<u>FILL: GRAVELLY SANDY CLAY</u> , dark brown	718	HS
			2
			SS
			NR
			10
			6
5	Sample 2: No recovery, Auger sample obtained	716	HS
	<u>FILL: GRAVELLY FINE TO MEDIUM SAND, TRACE CONCRETE CHUNKS</u> , brown		3
			SS
			5
			10
			7
8	<u>FINE TO MEDIUM SAND, TRACE GRAVEL</u> , brown, medium dense	713	HS
			SP
			4
			SS
			14
			20
			5
11	<u>SLIGHTLY WEATHERED DOLOMITE</u>	710	HS
			5
			SS
			1
			50/1"
16	BOTTOM OF BORING	705	HS
			15
			HS

\*Practical Auger Refusal on Apparent Weathered Dolomite\*

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

WATER LEVEL OBSERVATIONS, ft		
WL	▽ N/E	WD
WL	▽	AB
WL	▽	
WL		



BORING STARTED	10-01-08
BORING COMPLETED	10-01-08
RIG	D-120
FOREMAN	JA
APPROVED	LAZ
JOB #	19085016



# LOG OF BORING NO. B12

CLIENT  
McClure Engineering Associates, Inc.

SITE Section No. 06-00543-00-BT  
Winnebago County, Illinois

PROJECT  
Pedestrian Riverwalk Along The Rock River

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	Approx. Surface Elev.: 736 ft								
0.8	Approx. 3/4 foot Topsoil Fill	735			HS				
3	<u>FILL: CLAYEY FINE TO MEDIUM SAND</u> , brown	733		1	SS	13	4	12	
5	<u>FILL: FINE TO MEDIUM SAND, TRACE CLAY</u> , brown	731		2	SS	16	5	11	
8	<u>FILL: FINE TO MEDIUM SAND, TRACE SANDY CLAY LUMPS</u> , brown	728		3	SS	14	7	6	
13	<u>SANDY GRAVEL</u> , brown, very dense	723		4	GP	14	56	2	
18	<u>GRAVELLY FINE TO MEDIUM SAND</u> , brown, dense	718		5	SP	12	36	2	

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	∇ N/E	WD	∇ N/E AB
WL	∇		∇
WL			



BORING STARTED	10-01-08
BORING COMPLETED	10-01-08
RIG	D-120 FOREMAN JA
APPROVED LAZ	JOB # 19085016

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

# LOG OF BORING NO. B12

CLIENT McClure Engineering Associates, Inc.		PROJECT Pedestrian Riverwalk Along The Rock River								
SITE Section No. 06-00543-00-BT Winnebago County, Illinois										
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
22	714	20	SP	6	SS	16	20	1		
					HS					
	BOTTOM OF BORING									
	*Practical Auger Refusal on Apparent Bedrock*									

BORE2\_19085016.GPJ TERRACON.GDT 11/25/09

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			BORING STARTED 10-01-08			
WL	▽ N/E	WD	▽ N/E	AB	BORING COMPLETED 10-01-08	
WL	▽		▽		RIG	D-120 FOREMAN JA
WL					APPROVED	LAZ JOB # 19085016



LOG OF BORING NO. B13

CLIENT		McClure Engineering Associates, Inc.						
SITE		Section No. 06-00543-00-BT Winnebago County, Illinois						
PROJECT		Pedestrian Riverwalk Along The Rock River						
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES			TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %
	Approx. Surface Elev.: 730 ft							
0.5	Approx. 1/2 foot Topsoil Fill <u>FILL: CLAYEY FINE TO MEDIUM SAND, TRACE GRAVEL AND ORGANICS</u> , brown	729.5	HS					
				1	SS	15	16	7
3	<u>FILL: SILTY CLAY, TRACE SAND, BROWN</u>	727	HS					
				2	SS	16	6	15
5	<u>FILL: FINE TO MEDIUM SAND, WITH SANDY CLAY LUMPS</u> , brown	725	HS					
				3	SS	16	7	8
8	<u>SILTY CLAY, WITH SAND</u> , brown, hard	722	HS					
				GL-ML 4	SS	NR	50/2"	13
13	Sample 4: No recovery, Auger sample obtained <u>FINE TO MEDIUM SAND, TRACE GRAVEL</u> , brown, medium dense	717	HS					
				SP 5	SS	14	27	3
18		712	HS					

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	∇ N/E	WD	∇ N/E AB
WL	∇		∇
WL			



BORING STARTED	09-30-08
BORING COMPLETED	10-01-08
RIG	D-120 FOREMAN JA
APPROVED LAZ	JOB # 19085016

BOREZ 19085016.GPJ TERRACON.GDT 11/25/08

# LOG OF BORING NO. B13

CLIENT McClure Engineering Associates, Inc.									
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N ** BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
21	709	20	SP	6	SS	16	24	4	
					HS				
	BOTTOM OF BORING								
	*Practical Auger Refusal on Apparent Bedrock*								

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	▽ N/E	WD	▽ N/E AB
WL	▽		▽
WL			



BORING STARTED		09-30-08	
BORING COMPLETED		10-01-08	
RIG	D-120	FOREMAN	JA
APPROVED	LAZ	JOB #	19085016

BORE2 19085016.GPJ TERRACON.GDT 11/25/09

**LOG OF BORING NO. B14**

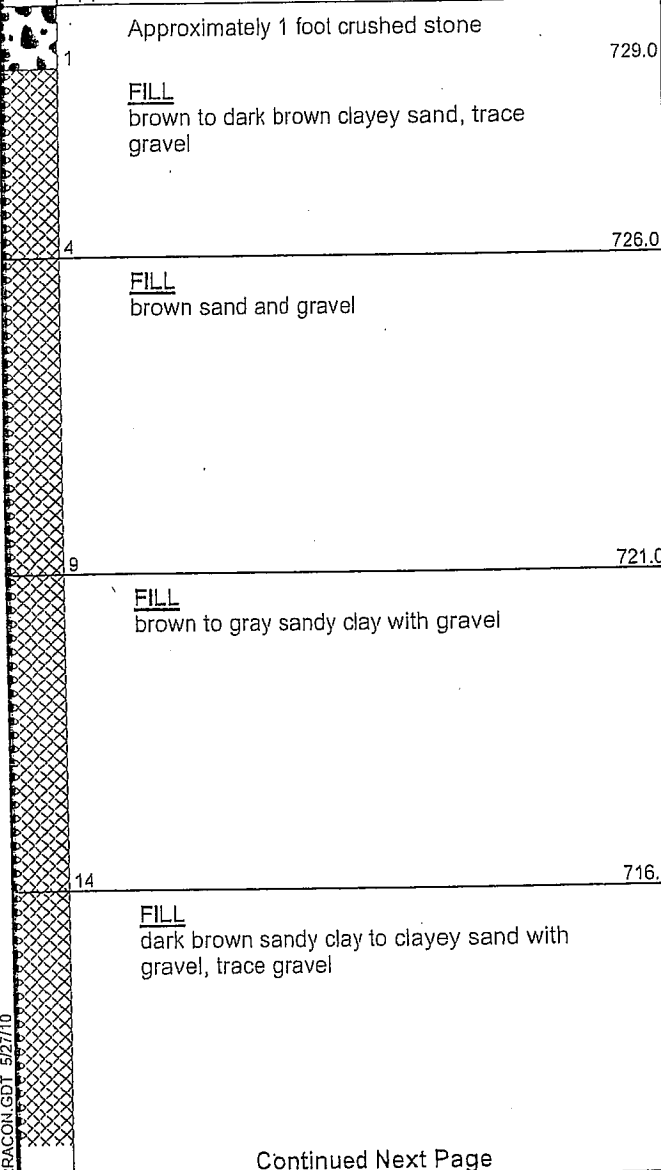
CLIENT  
 McClure Engineering Associates, Inc.

SITE  
 Section No. 06-00543-00-BT  
 Winnebago County, Illinois

PROJECT  
 Pedestrian Riverwalk Along The Rock River

Approx. Boring Location: Sta. 209+57.1, 39.5' left  
 DESCRIPTION  
 Approx. Surface Elev.: 730 ft

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT-N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
729.0			HS					
		1	SS	10	14	16		
			HS					
726.0		2	SS	7	18	8		
			HS					
		3	SS	8	15	12		
			HS					
721.0		4	SS	10	8	16		
			HS					
			HS					
		5	SS	12	11	21		
			HS					
716.0			HS					



Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*\*140 Lbs Automatic SPT Hammer  
 \*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft			
WL	∇ NONE	WD	∇ NONE AB
WL	∇		∇
WL			



BORING STARTED	5-18-10
BORING COMPLETED	5-18-10
RIG	68 FOREMAN JA
APPROVED	EDK JOB # 19085016

BOREHOLE 19085016.GPJ TERRACON.GDT 5/27/10

LOG OF BORING NO. B14

CLIENT  
McClure Engineering Associates, Inc.

SITE  
Section No. 06-00543-00-BT  
Winnebago County, Illinois

PROJECT  
Pedestrian Riverwalk Along The Rock River

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES				TESTS			
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
19	FILL (continued)	711.0		6	SS	5	30/6"	7		
	WEATHERED DOLOMITE	20			HS		50/1"			
25	WEATHERED DOLOMITE	705.0		7	SS HS	NR	50/1"			
	Run 1 Recovery 115/120, 96% RQD: 14/120, 12%	25			DB					
35		695.0			DB					

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penelrometer

WATER LEVEL OBSERVATIONS, ft			
WL	∇ NONE	WD	∇ NONE AB
WL	∇		∇
WL			



BORING STARTED	5-18-10
BORING COMPLETED	5-18-10
RIG	68 FOREMAN JA
APPROVED	EDK JOB # 19085016

SCOREHOLE 19085016.GPJ TERRACON.GDT 5/27/10



# LOG OF BORING NO. B15

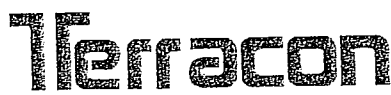
CLIENT McClure Engineering Associates, Inc.			
SITE Section No. 06-00543-00-BT Winnebago County, Illinois		PROJECT Pedestrian Riverwalk Along The Rock River	
GRAPHIC LOG	Approx. Boring Location: Sta. 208+63.3, 54.3' left	DEPTH, ft.	SAMPLES
	Approx. Surface Elev.: 730 ft		TESTS
	DESCRIPTION	USCS SYMBOL	NUMBER
		TYPE	RECOVERY, in.
		SPT - N BLOWS / ft.	WATER CONTENT, %
		DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
1	729.0		HS
1	729.0	1	SS 10 27 5
5	721.5		HS
5	721.5	2	SS 14 28 3
8.5	721.5		HS
8.5	721.5	3	SS 4 17
10	716.5		HS
10	716.5	4	SS 10 9 14
13.5	716.5		HS
13.5	716.5	5	SS 10 20 13
15	712.0		HS
15	712.0		
18	712.0		

BOREHOLE 19085016.GPJ TERRACON.GDT 5/27/10

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual. \*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft		
WL	WD	AB
NONE	NONE	NONE
WL	WD	AB
NONE	NONE	NONE
WL	WD	AB
NONE	NONE	NONE



BORING STARTED		5-18-10	
BORING COMPLETED		5-18-10	
RIG	68	FOREMAN	JA
APPROVED	EDK	JOB #	19085016




LOG OF BORING NO. B15

CLIENT  
McClure Engineering Associates, Inc.

SITE  
Section No. 06-00543-00-BT  
Winnebago County, Illinois

PROJECT  
Pedestrian Riverwalk Along The Rock River

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES				TESTS			
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
	<u>WEATHERED DOLOMITE</u>	20		6	SS HS	NR	50/0"			
		25		7	SS HS	10	25/6" 50/4"	4		
		30		8	SS HS	NR	50/0"			
	<u>WEATHERED DOLOMITE</u> Run 1 Recovery: 110/120, 92% RQD: 32/120, 27%	30			DB					
		35								

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft		
WL	∇ NONE	WD ∇ NONE AB
WL	∇	∇
WL		



BORING STARTED	5-18-10
BORING COMPLETED	5-18-10
RIG 68	FOREMAN JA
APPROVED EDK	JOB # 19085016

BOREHOLE 19085016.GPJ TERRACON.GDT 5/27/10

LOG OF BORING NO. B15

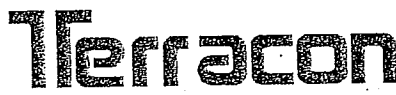
CLIENT		PROJECT				
McClure Engineering Associates, Inc.		Pedestrian Riverwalk Along The Rock River				
SITE		TESTS				
Section No. 06-00543-00-BT Winnebago County, Illinois		UNCONFINED STRENGTH, psf				
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	SAMPLES			
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.
			SPT-N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	
40	<u>WEATHERED DOLOMITE</u> (continued)	690.0				
40	<u>HARD DOLOMITE</u>  Run 2 Recovery: 120/120, 100% RQD: 86/120, 72%	45		DB		
50	<u>BOTTOM OF BORING</u>	680.0				

BOREHOLE 19085016.GPJ TERRACON.GDT 5/27/10

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

\*\*140 Lbs Automatic SPT Hammer  
\*Calibrated Hand Penetrometer

WATER LEVEL OBSERVATIONS, ft		
WL	∇ NONE	WD ∇ NONE AB
WL	∇	∇
WL		



BORING STARTED	5-18-10
BORING COMPLETED	5-18-10
RIG	68 FOREMAN JA
APPROVED	EDK JOB # 19085016

### Field Exploration Description

The boring locations were laid out on the site by McClure Engineering Associates, Inc. (McClure). Elevations indicated on the boring logs were also provide by McClure.

The borings were drilled with an all terrain-mounted rotary drill rig using continuous flight solid-stem augers to advance the boreholes. Samples of the soil encountered in the borings were obtained using the split barrel and thin-walled tube sampling procedures.

In the split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18-inch penetration by means of a 140-pound C.M.E. auto-hammer with a free fall of 30 inches, is the standard penetration resistance value (SPT-N). This value is used to estimate the in-situ relative density of cohesionless soils and consistency of cohesive soils.

A CME automatic SPT hammer was used to advance the split-barrel sampler in the borings performed on this site. A significantly greater efficiency is achieved with the automatic hammer compared to the conventional safety hammer operated with a cathead and rope. This higher efficiency has an appreciable effect on the SPT-N value. The effect of the automatic hammer's efficiency has been considered in the interpretation and analysis of the subsurface information for this report.

Five (5) of the borings extended into the dolomite bedrock formation. Samples of the rock were obtained by core drilling with an NQ-size, diamond bit core barrel. The core sample recovered with this barrel is approximately 17/8 inches in diameter. Coring of the bedrock was performed in general accordance with ASTM Standard D-2113. The length of core recovered and the RQD values (Rock Quality Designation) are shown on the logs. The RQD is a modified core recovery percentage in which all pieces of sound core over 4-inches long are summed and divided by the length of the core run. Rock quality, in terms of RQD, can be generally described as excellent (90% - 100%), good (75% - 90%), fair (50% - 75%), poor (25% - 50%) and very poor (<25%). The rock cores were transported to our laboratory for testing and classification.

A field log of each boring was prepared by the drill crew. These logs included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. Final boring logs included with this report represent the engineer's interpretation of the field logs and include modifications based on laboratory observation and tests of the samples.

**APPENDIX B**  
**LABORATORY TESTING**

### **Laboratory Testing**

Soil samples were tested in the laboratory to measure their natural water content. A calibrated hand penetrometer was used to estimate the approximate unconfined compressive strength of selected samples. The calibrated hand penetrometer has been correlated with unconfined compression tests and provides a better estimate of soil consistency than visual examination alone. The test results are provided on the boring logs included in Appendix A.

Descriptive classifications of the soils indicated on the boring logs are in accordance with the enclosed General Notes and the Unified Soil Classification System. Also shown are estimated Unified Soil Classification Symbols. A brief description of this classification system is attached to this report. All classification was by visual manual procedures.

**APPENDIX C**  
**SUPPORTING DOCUMENTS**

## GENERAL NOTES

### DRILLING & SAMPLING SYMBOLS:

SS: Split Spoon - 1- <sup>3</sup> / <sub>8</sub> " I.D., 2" O.D., unless otherwise noted	HS: Hollow Stem Auger
ST: Thin-Walled Tube - 2" O.D., unless otherwise noted	PA: Power Auger
RS: Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted	HA: Hand Auger
DB: Diamond Bit Coring - 4", N, B	RB: Rock Bit
BS: Bulk Sample or Auger Sample	WB: Wash Boring or Mud Rotary

The number of blows required to advance a standard 2-inch O.D. split-spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value".

### WATER LEVEL MEASUREMENT SYMBOLS:

WL: Water Level	WS: While Sampling	N/E: Not Encountered
WCI: Wet Cave in	WD: While Drilling	
DCI: Dry Cave in	BCR: Before Casing Removal	
AB: After Boring	ACR: After Casing Removal	

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

**DESCRIPTIVE SOIL CLASSIFICATION:** Soil classification is based on the Unified Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

### CONSISTENCY OF FINE-GRAINED SOILS

<u>Unconfined</u> <u>Compressive</u> <u>Strength, Qu, psf</u>	<u>Standard Penetration</u> <u>or N-value (SS)</u> <u>Blows/Ft.</u>	<u>Consistency</u>
< 500	0 - 1	Very Soft
500 - 1,000	2 - 4	Soft
1,001 - 2,000	4 - 8	Medium Stiff
2,001 - 4,000	8 - 15	Stiff
4,001 - 8,000	15 - 30	Very Stiff
8,000+	> 30	Hard

### RELATIVE DENSITY OF COARSE-GRAINED SOILS

<u>Standard Penetration</u> <u>or N-value (SS)</u> <u>Blows/Ft.</u>	<u>Relative Density</u>
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
> 50	Very Dense

### RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other</u> <u>Constituents</u>	<u>Percent of</u> <u>Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

### GRAIN SIZE TERMINOLOGY

<u>Major Component</u> <u>of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75 mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 Sieve (0.075mm)

### RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other</u> <u>Constituents</u>	<u>Percent of</u> <u>Dry Weight</u>
Trace	< 5
With	5 - 12
Modifiers	> 12

### PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity</u> <u>Index</u>
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

# UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>				Soil Classification		
				Group Symbol	Group Name <sup>B</sup>	
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels:	$C_u \geq 4$ and $1 \leq C_c \leq 3$ <sup>E</sup>	GW	Well-graded gravel <sup>F</sup>	
			Less than 5% fines <sup>C</sup>	GP	Poorly graded gravel <sup>F</sup>	
		Gravels with Fines: More than 12% fines <sup>C</sup>	Fines classify as ML or MH	GM	Silty gravel <sup>F,G,H</sup>	
			Fines classify as CL or CH	GC	Clayey gravel <sup>F,G,H</sup>	
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands:	$C_u \geq 6$ and $1 \leq C_c \leq 3$ <sup>E</sup>	SW	Well-graded sand <sup>I</sup>	
			Less than 5% fines <sup>D</sup>	SP	Poorly graded sand <sup>I</sup>	
		Sands with Fines: More than 12% fines <sup>D</sup>	Fines classify as ML or MH	SM	Silty sand <sup>G,H,I</sup>	
			Fines classify as CL or CH	SC	Clayey sand <sup>G,H,I</sup>	
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line <sup>J</sup>	CL	Lean clay <sup>K,L,M</sup>	
			$PI < 4$ or plots below "A" line <sup>J</sup>	ML	Silt <sup>K,L,M</sup>	
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay <sup>K,L,M,N</sup>
			Liquid limit - not dried	< 0.75	OH	Organic silt <sup>K,L,M,O</sup>
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay <sup>K,L,M</sup>	
			PI plots below "A" line	MH	Elastic Silt <sup>K,L,M</sup>	
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay <sup>K,L,M,P</sup>
			Liquid limit - not dried	< 0.75	OH	Organic silt <sup>K,L,M,Q</sup>
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat	

<sup>A</sup> Based on the material passing the 3-in. (75-mm) sieve

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E C_u = D_{60}/D_{10} \quad C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

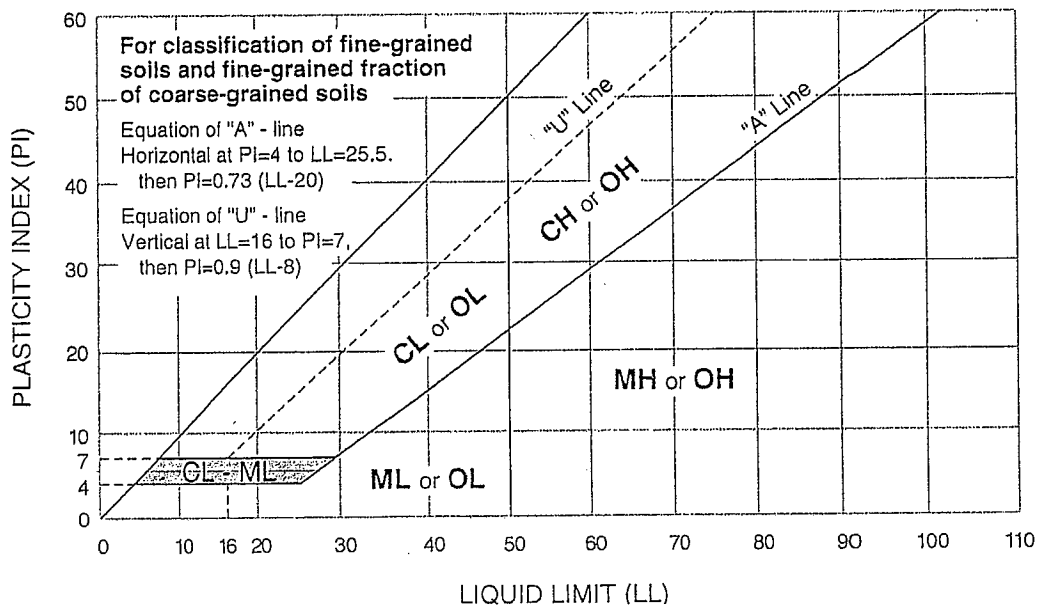
<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup> PI plots on or above "A" line.

<sup>Q</sup> PI plots below "A" line.





## GENERAL NOTES

### Description of Rock Properties

#### WEATHERING

Fresh	Rock fresh, crystals bright, few joints may show slight staining. Rock rings under hammer if crystalline.
Very slight	Rock generally fresh, joints stained, some joints may show thin clay coatings, crystals in broken face show bright. Rock rings under hammer if crystalline.
Slight	Rock generally fresh, joints stained, and discoloration extends into rock up to 1 in. Joints may contain clay. In granitoid rocks some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer.
Moderate	Significant portions of rock show discoloration and weathering effects. In granitoid rocks, most feldspars are dull and discolored; some show clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.
Moderately severe	All rock except quartz discolored or stained. In granitoid rocks, all feldspars dull and discolored and majority show kaolinization. Rock shows severe loss of strength and can be excavated with geologist's pick.
Severe	All rock except quartz discolored or stained. Rock "fabric" clear and evident, but reduced in strength to strong soil. In granitoid rocks, all feldspars kaolinized to some extent. Some fragments of strong rock usually left.
Very severe	All rock except quartz discolored or stained. Rock "fabric" discernible, but mass effectively reduced to "soil" with only fragments of strong rock remaining.
Complete	Rock reduced to "soil". Rock "fabric" not discernible or discernible only in small, scattered locations. Quartz may be present as dikes or stringers.

#### HARDNESS (for engineering description of rock – not to be confused with Moh's scale for minerals)

Very hard	Cannot be scratched with knife or sharp pick. Breaking of hand specimens requires several hard blows of geologist's pick.
Hard	Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.
Moderately hard	Can be scratched with knife or pick. Gouges or grooves to ¼ in. deep can be excavated by hard blow of point of a geologist's pick. Hand specimens can be detached by moderate blow.
Medium	Can be grooved or gouged 1/16 in. deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1-in. maximum size by hard blows of the point of a geologist's pick.
Soft	Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.
Very soft	Can be carved with knife. Can be excavated readily with point of pick. Pieces 1-in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.

#### Joint, Bedding, and Foliation Spacing in Rock <sup>a</sup>

Spacing	Joints	Bedding/Foliation
Less than 2 in.	Very close	Very thin
2 in. – 1 ft.	Close	Thin
1 ft. – 3 ft.	Moderately close	Medium
3 ft. – 10 ft.	Wide	Thick
More than 10 ft.	Very wide	Very thick

a. Spacing refers to the distance normal to the planes, of the described feature, which are parallel to each other or nearly so.

#### Rock Quality Designator (RQD) <sup>a</sup>

RQD, as a percentage	Diagnostic description
Exceeding 90	Excellent
90 – 75	Good
75 – 50	Fair
50 – 25	Poor
Less than 25	Very poor

a. RQD (given as a percentage) = length of core in pieces 4 in. and longer/length of run.

#### Joint Openness Descriptors

Openness	Descriptor
No Visible Separation	Tight
Less than 1/32 in.	Slightly Open
1/32 to 1/8 in.	Moderately Open
1/8 to 3/8 in.	Open
3/8 in. to 0.1 ft.	Moderately Wide
Greater than 0.1 ft.	Wide

References: American Society of Civil Engineers. Manuals and Reports on Engineering Practice - No. 56. Subsurface Investigation for Design and Construction of Foundations of Buildings. New York: American Society of Civil Engineers, 1976. U.S. Department of the Interior, Bureau of Reclamation, Engineering Geology Field Manual.

SPECIAL PROVISION

STATE OF ILLINOIS

Effective March 25, 2005

**Urethane Pavement Marking:**

Description: This work shall consist of furnishing and applying a reflectorized modified urethane, plural component, durable liquid pavement marking lines, sizes and colors as shown on the plans.

Materials: All materials shall meet the following specifications:

- (a) **Modified Urethane Marking:** The modified urethane pavement marking material shall consist of a homogeneous blend of modified urethane resins and pigments designed to provide a simple volumetric mixing ratio of two components (must be two volumes of Part A to one volume of Part B). No volatile solvent or fillers will be allowed.
- (b) **Pigmentation:** The pigment content by weight of Component A shall be determined by low temperature ashing according to ASTM D 3723. The pigment content shall not vary more than  $\pm$  two percent from the pigment content of the original qualified paint.

White Pigment shall be Titanium Dioxide meeting ASTM D 476 Type II, Utile.

Yellow Pigment shall be Organic Yellow and contain no heavy metals.

- (c) **Environmental:** Upon heating to application temperature, the material shall not exude fumes, which are toxic or injurious to persons or property when handled according to manufacturer specifications. The modified urethane pavement marking material compositions shall not contain free isocyanate functionality.
- (d) **Daylight Reflectance:** The daylight directional reflectance of the cured modified urethane material (without reflective media) shall be a minimum of 80 percent (white) and 50 percent (yellow) relative to magnesium oxide when tested using a color spectrophotometer with a 45 degree circumferential / zero degrees geometry, illuminant C, and two degrees observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm. In addition, the color of the yellow modified urethane shall visually match Color Number 33538 of Federal Standard 595a with chromaticity limits as follows:

x	0.490	0.475	0.485	0.539
y	0.470	0.438	0.425	0.456

- (e) **Weathering Resistance:** The modified urethane, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness to an aluminum alloy panel (Federal Test Std. No. 141, Method 2013) and allowed to cure for 72 hours at room temperature, shall be subjected to accelerated weathering for 75 hours. The accelerated weathering shall be completed by using the light and water exposure apparatus (fluorescent UV – condensation type) and tested according to ASTM G 53.

The cycle shall consist of four hours UV exposure at 50 °C (122 °F) and four hours of condensation at 40 °C (104 °F). UVB 313 bulbs shall be used. At the end of the exposure period, the material shall show no substantial change in color or gloss.

(f) **Drying Time:** The modified urethane material, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness and with the proper saturation of glass spheres, shall exhibit a no-tracking time of three minutes or less when tested according to ASTM D 711.

(g) **Adhesion:** The catalyzed modified urethane pavement marking materials when applied to a 100 x 100 x 50 mm (4 x 4 x 2 in) concrete block shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test.

The concrete block shall be brushed on one side and have a minimum strength of 24,100 kPa (3,500 psi). A 50 mm (2 in) square film of the mixed modified urethane shall be applied to the brushed surface and allowed to cure for 72 hours at room temperature. A 50 mm (2 in) square cube shall be affixed to the surface of the modified urethane by means of an epoxy glue. After the glue has cured for 24 hours, the modified urethane specimen shall be placed on a dynamic testing machine in such a fashion so that the specimen block is in a fixed position and the 50 mm (2 in) cube (glued to the modified urethane surface) is attached to the dynamometer head. Direct upward pressure shall be slowly applied until the modified urethane system fails. The location of the break and the amount of concrete failure shall be recorded.

(h) **Hardness:** The modified urethane marking materials, when tested according to ASTM D-2240, shall have a Shore D Hardness greater than 75. Films shall be cast on a rigid substrate at 0.35 to 0.41 mm (14 to 16 mils) in thickness and allowed to cure at room temperature for 72 hours before testing.

(i) **Abrasion:** The abrasion resistance shall be evaluated on a Taber Abrader with a 1,000 gram load and CS-17 wheels. The duration of test shall be 1,000 cycles. The wear index shall be calculated based on ASTM test method D-4060 and the wear index for the catalyzed material shall not be more than 80. The tests shall be run on cured samples of modified urethane material which have been applied at a film thickness of 0.35 to 0.41 (14 to 16 mils) to code S-16 stainless steel plates. The films shall be allowed to cure at room temperature for at least 72 hours and not more than 96 hours before testing.

(j) **Tensile:** When tested according to ASTM D-638, the modified urethane pavement marking materials shall have an average tensile strength of not less than 6,000 pounds per square inch. The Type IV Specimens shall be pulled at a rate of 1/4" per minute by a suitable dynamic testing machine. The samples shall be allowed to cure at 75 °F ± 2°F for a minimum of 24 hours and a maximum of 72 hours prior to performing the indicated tests.

(k) **Compressive Strength:** When tested according to ASTM D-695, the catalyzed modified urethane pavement marking materials shall have a compressive strength of not less than 12,000 pounds per square inch. The cast sample shall be conditioned at 75°F ± 2°F for a minimum of 72 hours before performing the indicated tests. The rate of compression of these samples shall be no more than 1/4" per minute.

(l) **Glass Spheres:** The glass spheres shall meet the requirements of Article 1095.04(m) and Article 1095.07 of the Standard Specifications for first drop and second drop glass beads.

- (m) The material shall be shipped to the job site in substantial containers and shall be plainly marked with the manufacturer's name and address, the name and color of the material, date of manufacture and batch number.
- (n) Prior to approval and use of the modified urethane pavement marking materials, the manufacturer shall submit a notarized certification of an independent laboratory, together with the results of all tests, stating these materials meet the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, brand name of modified urethane and date of manufacture. The certification shall be accompanied by one half-liter (one-pint) samples each of Part A and Part B. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B.

After approval by the Department, certification by the modified urethane manufacturer shall be submitted for each batch used. New independent laboratory certified test results and samples for testing by the Department shall be submitted any time the manufacturing process or paint formulation is changed. All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer.
- (o) Acceptance samples shall consist of one half-liter (one-pint) samples of Part A and Part B, of each lot of paint. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B. The samples shall be submitted to the Department for testing, together with a manufacturer's certification. The certification shall state the formulation for the lot represented is essentially identical to that used for qualification testing. All, acceptance samples shall be taken by a representative of the Illinois Department of Transportation. The modified urethane pavement marking materials shall not be used until tests are completed and they have met the requirements as set forth herein.
- (p) The manufacturer shall retain the test sample for a minimum of 18 months.

#### APPLICATION EQUIPMENT

The modified urethane pavement marking compounds shall be applied through equipment specifically designed to precisely meter the two components in the ratio of 2:1 and approved by the manufacturer of the material. This equipment shall produce the required amount of heat at the mixing head and gun tip and maintain those temperatures within the tolerances specified. This equipment shall also have as an integral part of the gun carriage, a high pressure air spray capable of cleaning the pavement immediately prior to the marking application.

The equipment shall be capable of spraying both yellow and white urethane, according to the manufacturer's recommended proportions and be mounted on a truck of sufficient size and stability with an adequate power source to produce lines of uniform dimensions and prevent application failure. The truck shall have at least two urethane tanks each of 415 L (110 gal) minimum capacity and shall be equipped with hydraulic systems. It shall be capable of placing stripes on the left and right sides and placing two lines on a three-line system simultaneously with either line in a solid or intermittent pattern, in yellow or white, and applying glass beads by the double drop pressurized bead system. The system shall apply both the first drop glass beads and the second drop glass beads at a rate of 1.2 kg per L (10 lb/gal). The equipment shall be equipped with pressure gauges for each proportioning pump. All guns shall be in full view of operators at all times. The equipment shall have a metering device to register the accumulated installed quantities for each gun, each day. Each vehicle shall include at least one operator who shall be a technical expert in equipment operations and urethane application techniques. Certification of equipment shall be provided at the preconstruction conference.

## APPLICATION

The pavement shall be cleaned by a method approved by the Engineer to remove all dirt, grease, glaze or any other material that would reduce the adhesion of the markings with minimum or no damage to the pavement. New PCC pavements shall be blast-cleaned to remove all curing compounds.

Markings shall be applied to the cleaned surfaces on the same calendar day. If this cannot be accomplished, the surface shall be re-cleaned prior to applying the markings. Existing pavement markings shall be at least 90 percent removed. No markings shall be applied until the Engineer approves the cleaning.

Widths, lengths and shapes of the cleaned surface shall be prepared wider than the modified urethane pavement marking material to be applied, such that a prepared area is on all sides of the urethane pavement marking material after application.

New asphalt concrete and seal coated surfaces shall be in place a minimum of two weeks prior to marking applications.

The cleaning operation shall be a continuous moving operation process with minimum interruption to traffic.

The pavement markings shall be applied to the cleaned road surface, during conditions of dry weather and subsequently dry pavement surfaces at a minimum uniform wet thickness of 20 mils in accordance with the manufacturer's installation instructions and at the widths and patterns shown on the contract plans. The application and combination of reflective media (glass beads and/or reflective elements) shall be applied at a rate specified by the manufacturer. At the time of installation the pavement surface temperature shall be 40 ° F and rising and the ambient temperature shall be 35° F and rising. The pavement surface temperature and the ambient temperatures shall be determined and documented before the start of each of marking operation. The pavement markings shall not be applied if the pavement shows any visible signs of moisture or it is anticipated that damage causing moisture, such as rain showers, may occur during the installation and curing periods. The Engineer shall determine the atmospheric conditions and pavement surface conditions that produce satisfactory results.

Unless directed by the Engineer, lines shall not be laid directly over a longitudinal crack or joint. The edge of the center line or lane line shall be offset a minimum distance of 50 mm (2 inches) from a longitudinal crack or joint. Edge lines shall be approximately 50 mm (2 inches) from the edge of pavement. The finished center and lane lines shall be straight, with the lateral deviation of any 3 meter (10-foot) line not to exceed 25 mm (1 inch).

### Notification:

The Contractor shall notify the Engineer 72 hours prior to the placement of the markings in order that an inspector can be present during the operation. At the time of this notification, the Contractor shall indicate the manufacturer and lot numbers of urethane and reflective media that he intends to use. The Engineer will ensure that the approved lot numbers appear on the material package. Failure to comply with this provision may be cause for rejection.

The Contractor shall provide an accurate temperature-measuring device(s) that shall be capable of measuring the pavement temperature prior to application of the material, the material temperature at the gun tip and the material temperature prior to mixing.

Inspection:

The urethane pavement markings will be inspected following installation, but no later than December 15, and inspected following a winter performance period that extends 180 days from December 15 in accordance with the provisions of Article 780.10 of the Standard Specification for Road and Bridge Construction.

Method of Measurement:

The lines will be measured for payment in feet of urethane pavement marking lines applied and accepted, measured in place. Double yellow lines will be measured as two separate lines. Words and symbols shall conform to the size and dimensions specified in the Manual on Uniform Traffic Control Devices and Standard 780001 and will be measured based on total areas indicated in table 1 or as specified in the plans.

Basis of Payment:

This work will be paid for at the contract unit prices per foot of applied line for URETHANE PAVEMENT MARKING - LINE 4, 5, 6, 8, 12, 24 inches or per square foot URETHANE PAVEMENT MARKING - LETTERS AND SYMBOLS measured as specified herein.

## CLEANING AND PAINTING NEW METAL STRUCTURES

Effective Date: September 13, 1994

Revised Date: April 30, 2010

Description. The material and construction requirements that apply to cleaning and painting new structural steel shall be according to the applicable portion of Sections 506 of the Standard Specifications except as modified herein. The three coat paint system shall be the system as specified on the plans and as defined herein. Unless stated otherwise, requirements imposed on the "Contractor" in this specification apply to both the shop painting contractor and the field painting contractor.

Materials. All materials to be used on an individual structure shall be produced by the same manufacturer. The Bureau of Materials and Physical Research has established a list of all products that have met preliminary requirements. Each batch of material must be tested and approved by that bureau before use.

The paint materials shall meet the requirements of the following articles of the Standard Specification:

<u>Item</u>	<u>Article</u>
(a) Inorganic Zinc-Rich Primer	1008.02
(b) Waterborne Acrylic	1008.04
(c) Aluminum Epoxy Mastic	1008.03
(d) Organic Zinc-Rich Primer (Note 1)	
(e) Epoxy Intermediate (Note 1)	
(f) Aliphatic Urethane (Note 1)	

Note 1: These material requirements shall be according to the Special Provision for the Organic Zinc-Rich Paint System.

Submittals. At least 30 days prior to beginning shop or field painting respectively, the Contractor shall submit for the Engineer's review and acceptance, the following applicable plans, certifications and information for completing the field work. Painting work shall not proceed until the submittals are accepted by the Engineer. Qualifications, certifications and QC plans for shop and field cleaning and painting shall be available for review by the QA Inspector.

- a) Contractor Shop Qualifications. Except for miscellaneous steel items such as bearings, side retainers, expansion joint devices, and other items allowed by the Engineer, or unless stated otherwise in the contract, the shop painting Contractors shall be certified to perform the work as follows: the shop painting Contractor shall possess AISC Sophisticated Paint Endorsement or SSPC-QP3 certification. Evidence of current qualifications shall be provided.
- b) Contractor Field Qualifications. Unless indicated otherwise on the contract plans, the field painting contractor shall possess current SSPC QP1 certification. Evidence of current qualifications shall be provided. The Contractor shall maintain certified status throughout the duration of the painting work under the contract. The Department reserves the right to

accept Contractors documented to be currently enrolled in the SSPC-QP7, Painting Contractor Introductory Program, in lieu of the QP certifications noted above.

- c) QC Personnel Qualifications. Personnel managing the shop and field Quality Control program(s) for this work shall possess a minimum classification of Society of Protective Coatings (SSPC) BCI certified, National Association of Corrosion Engineers (NACE) Coating Inspector Level 2-Certified, or shall provide evidence of successful inspection of 3 projects of similar or greater complexity and scope that have been completed in the last 2 years. Copies of the certification and/or experience shall be provided, including names, addresses and telephone numbers of contact persons employed by the bridge owner.

The personnel performing the QC tests for this work shall be trained in coatings inspection and the use of the testing instruments. Documentation of training shall be provided. The QC personnel shall not perform hands on surface preparation or paint activities unless otherwise approved by the Engineer. Painters shall perform wet film thickness measurements, with QC personnel conducting random spot checks of the wet film. The Contractor shall not replace the QC personnel assigned to the project without advance notice to the Engineer, and acceptance of the replacement(s), by the Engineer.

- d) Quality Control (QC) Program. The shop and field QC Programs shall identify the following; the instrumentation that will be used, a schedule of required measurements and observations, procedures for correcting unacceptable work, and procedures for improving surface preparation and painting quality as a result of quality control findings. The shop program shall include a copy of the quality control form(s) that will be completed daily. The field program shall incorporate the IDOT Quality Control Daily Report form, as supplied by the Engineer.
- e) Field Cleaning and Painting Inspection Access Plan. The inspection access plan for use by Contractor QC personnel for ongoing inspections and by the Engineer during Quality Assurance (QA) observations.
- f) Surface Preparation/Painting Plan. The surface preparation/painting plan shall include the methods of surface preparation and type of equipment to be utilized for solvent cleaning, abrasive blast cleaning, washing, and power tool cleaning. The plan shall include the manufacturer's names of the materials that will be used, including Product Data Sheets and Material Safety Data Sheets (MSDS).

A letter or written instructions from the coating manufacturer shall be included, indicating the required drying time for each coat at the minimum, normal, and maximum application temperatures before the coating can be exposed to temperatures or moisture conditions that are outside of the published application parameters. Application shall be performed in accordance with the coating manufacturer's instructions.

Quality Control (QC) Inspections. The Contractor shall perform first line, in process QC inspections of each phase of the work. The submitted and accepted QC Program(s) shall be used to insure that the work accomplished complies with these specifications. The shop painting Contractor shall use their forms as supplied in their submittal. These shop reports shall



be made available for review when requested by the Engineer. The field painting Contractor shall use the IDOT Quality Control Daily Report form supplied by the Engineer to record the results of quality control tests. These field reports shall be turned into the Engineer before work resumes the following day. The Engineer or designated representative will sign the report. The signature is an acknowledgment that the report has been received, but should not be construed as an agreement that any of the information documented therein is accurate.

The Contractor shall supply all necessary equipment to perform the QC inspections. Equipment shall include the following at a minimum:

- Psychrometer or comparable equipment for the measurement of dew point and relative humidity, together with all necessary weather bureau tables or psychrometric charts.
- Surface temperature thermometer.
- Bresle Cell Kits or CHLOR\*TEST kits for chloride determinations, or equivalent.(only required when erected steel is exposed through the winter prior to field painting.)
- Wet Film Thickness Gage.
- Blotter paper for compressed air cleanliness checks.
- Type 2 Magnetic Dry Film Thickness Gage per SSPC - PA2.
- Calibration standards for dry film thickness gage.
- Light meter for measuring light intensity during cleaning, painting, and inspection activities.
- All applicable ASTM and SSPC Standards used for the work.
- Commercially available putty knife of a minimum thickness of 40 mils (1 mm) and a width between 1 and 3 in. (25 and 75 mm). Note that the putty knife is only required in touch-up areas where the coating is being feathered and must be tested with a dull putty knife.

The instruments shall be calibrated by the Contractor's personnel according to the equipment manufacturer's recommendations and the Contractor's QC Program. All inspection equipment shall be made available to the Engineer for QA observations on an as needed basis.

Quality Assurance (QA) Observations. The Engineer may conduct QA observations of any or all phases of the shop or field work. The Engineer's observations in no way relieve the Contractor of the responsibility to provide all necessary daily QC inspections of his/her own and to comply with all requirements of this Specification.

Inspection Access and Lighting. The Contractor shall facilitate the Engineer's observations as required, including allowing ample time to view the work. The field Contractor shall furnish, erect and move scaffolding or other mechanical equipment to permit close observation of all surfaces to be cleaned and painted. This equipment shall be provided during all phases of the work. Examples of acceptable access structures include:

- Mechanical lifting equipment, such as, scissor trucks, hydraulic booms, etc.
- Platforms suspended from the structure comprised of trusses or other stiff supporting members and including rails and kick boards.
- Simple catenary supports are permitted only if independent life lines for attaching a fall arrest system according to Occupational Safety and Health Administration (OSHA) regulations are provided.

When the surface to be inspected is more than 6 ft. (1.8 m) above the ground or water surface, and fall prevention is not provided (e.g. guardrails) the Contractor shall provide the Engineer with a safety harness and a lifeline according to OSHA regulations. The lifeline and attachment shall not direct the fall into oncoming traffic. The Contractor shall provide a method of attaching the lifeline to the structure independent of the inspection facility or any support of the platform. When the inspection facility is more than 2 1/2 ft. (800 mm) above the ground, the Contractor shall provide an approved means of access onto the platform.

The Contractor shall provide artificial lighting both inside and outside containment where natural light is inadequate, as determined by the Engineer, to allow proper cleaning, inspection, and painting. Illumination for inspection shall be at least 30 foot candles (325 LUX). Illumination for cleaning and painting, including the working platforms, access, and entryways shall be at least 20 foot candles (215 LUX). General work area illumination outside the containment shall be employed at the discretion of the Engineer and shall be at least 5 foot candles. The exterior lighting system shall be designed and operated so as to avoid glare that interferes with traffic, workers, and inspection personnel.

**Construction Requirements for Field Painting.** The Contractor shall be responsible for any damage caused to persons, vehicles, or property, except as indemnified by the Response Action Contractor Indemnification Act. Whenever the intended purposes of the protective devices are not being accomplished, as determined by the Engineer, work shall be immediately suspended until corrections are made. Painted surfaces damaged by any Contractor's operation shall be removed and repainted, as directed by the Engineer, at the Contractor's expense.

The Contractor shall comply with the provisions of the Illinois Environmental Protection Act. Paint drips, spills, and overspray are not permitted to escape into the air or onto any other surfaces or surrounding property not intended to be painted. Containment shall be used to control paint drips, spills, and overspray, and shall be dropped and all equipment secured when sustained wind speeds of 40 mph (64 kph) or greater occur, unless the containment design necessitates action at lower wind speeds. When the containment needs to be attached to the structure, it shall be attached by clamping or similar means. Welding or drilling into the structure shall be prohibited unless otherwise approved by the Engineer in writing. The Contractor shall evaluate project-specific conditions to determine the specific type and extent of containment needed to control the paint emissions and shall submit a plan for containing or controlling paint debris (droplets, spills, overspray, etc.) to the Engineer for acceptance prior to starting the work. Acceptance by the Engineer shall not relieve the Contractor of their ultimate responsibility for controlling paint debris from escaping the work zone.

**Hold Point Notification for Field Painting.** Specific inspection items throughout this specification are designated as Hold Points. Unless other arrangements are made at the project site, the Contractor shall provide the Engineer with a minimum 4-hour notification before a Hold Point inspection will be reached. If the 4-hour notification is provided and the Work is ready for inspection at that time, the Engineer will conduct the necessary observations. If the Work is not ready at the appointed time, unless other arrangements are made, an additional 4-hour notification is required. Permission to proceed beyond a Hold Point without a QA inspection will

be granted solely at the discretion of the Engineer, and only on a case by case basis. The Engineer has the right to reject any work that was performed without adequate provision for QA observations

Field Surface Preparation (HOLD POINT). The following processes shall be used to prepare the shop-coated steel surfaces for field painting.

1. Low Pressure Water Cleaning and Solvent Cleaning. The Contractor shall notify the Engineer 24 hours in advance of beginning surface preparation operations.

Washing shall involve the use of potable water at a minimum of 1000 psi (7 MPa) and less than 5000 psi (34 MPa) according to "Low Pressure Water Cleaning" of SSPCSP12. Paint spray equipment shall not be used to perform the water cleaning. The cleaning shall be performed in such a manner as to remove dust, dirt, chalk, insect and animal nests, bird droppings, and other foreign matter prior to solvent cleaning.

If detergents or other additives are added to the water, the detergents/additives shall be included in the submittals and not used until accepted by the Engineer. When detergents or additives are used, the surface shall be rinsed with potable water before the detergent water dries.

After washing has been accepted by the Engineer, all traces of asphaltic cement, oil, grease, diesel fuel deposits, and other soluble contaminants which remain on the steel surfaces to be painted shall be removed according to SSPC – SP1 Solvent Cleaning, supplemented with scraping (e.g., to remove large deposits of asphaltic cement) as required. The solvent(s) used for cleaning shall be compatible with the primer. The Contractor shall identify the proposed solvent(s) in the submittals. If the primer is softened, wrinkled, or shows other signs of attack from the solvents, the Contractor shall immediately discontinue their use. The name and composition of replacement solvents, together with MSDS, shall be submitted for Engineer acceptance prior to use. If solvent cleaning/scraping is not successful in removing the foreign matter, the Contractor shall use other methods identified in SP1, such as steam cleaning as necessary.

2. Water Cleaning Between Coats. When foreign matter has accumulated on a newly applied coat, washing shall be performed prior to the application of subsequent coats.
3. Power Tool Cleaning of Shop-Coated Steel. Damaged and rusted areas shall be spot cleaned according Power Tool Cleaning SSPC-SP3 (Modified). The edges of the coating surrounding the spot repairs shall be feathered. A power tool cleaned surface shall be free of all loose rust, loose and peeling paint, and loose rust that is bleeding through and/or penetrating the coating. All locations of visible corrosion and rust bleed, and lifting or loose paint shall be prepared using the power tools.

Upon completion of the cleaning, rust, rust bleed, and surrounding paint are permitted to remain if they cannot be lifted using a dull putty knife.

Field Soluble Salt Remediation (HOLD POINT). If the erected steel is exposed to winter weather prior to field painting, the Contractor shall implement surface preparation procedures and processes that will remove chloride from the surfaces prior to field painting. Surfaces that may be contaminated with chloride include, but are not limited to, expansion joints and all areas that are subject to roadway splash or run off such as fascia beams and stringers.

Methods of chloride removal may include, but are not limited to, steam cleaning or pressure washing with or without the addition of a chemical soluble salt remover as approved by the coating manufacturer, and scrubbing before or after initial paint removal. The water does not need to be collected. The Contractor shall provide the proposed procedures for chloride remediation in the Surface Preparation/Painting Plan.

Upon completion of the chloride remediation steps, the Contractor shall use cell methods of field chloride extraction and test procedures (e.g., silver dichromate) accepted by the Engineer, to test representative surfaces for the presence of remaining chlorides. Remaining chloride levels shall be no greater than 7µg/sq cm as read directly from the surface without any multiplier applied to the results. The testing must be performed, and the results must be acceptable.

Surface and Weather Conditions (HOLD POINT). Surfaces to be painted after cleaning shall remain free of moisture and other contaminants. The Contractor shall control his/her operations to insure that dust, dirt, or moisture does not come in contact with surfaces cleaned or painted that day.

Prepared surfaces, shall meet the requirements of the respective degrees of cleaning immediately prior to painting, and shall be painted before rusting appears on the surface. If rust appears or bare steel remains unpainted for more than 12 hours, the affected area shall be prepared again at the expense of the Contractor.

The surface temperature shall be at least 5°F (3°C) above the dew point during final surface preparation operations. The paint manufacturers' published literature shall be followed for specific temperature, dew point, and humidity restrictions during the application of each coat, and for the minimum and maximum time between coats.

The Contractor shall monitor temperature, dew point, and humidity every 4 hours during surface preparation and coating application in the specific areas where the work is being performed. The frequency of monitoring shall increase if weather conditions are changing. The Engineer has the right to reject any work that was performed under unfavorable weather conditions. Rejected work shall be removed, and repainted at the Contractor's expense.

Seasonal Restrictions on Field Cleaning and Painting. Field cleaning and painting work shall be accomplished between April 15 and October 31 unless authorized otherwise by the Engineer in writing.

**Inorganic Zinc-rich/ Waterborne Acrylic Paint system.** This system shall be for shop and field application of the coating system. Shop application of the intermediate and top coats will not be allowed.

In the shop, all structural steel designated to be painted shall be given one coat of inorganic zinc rich primer. In the field, before the application of the intermediate coat, the prime coat and any newly installed fasteners shall be spot solvent cleaned per SSPC-SP 1 and all surfaces pressure washed as specified above. All damaged shop primed areas shall be spot cleaned per SSPC-SP3 Modified, All damaged areas and all installed fasteners shall be fully primed with aluminum epoxy mastic. The structural steel shall then receive one full intermediate coat and one full topcoat of waterborne acrylic paint.

- a) Coating Dry Film Thickness (dft), measured according to SSPC-PA2:  
Zinc Primer: 3 mils (75 microns) min., 6 mils (150 microns) max.  
Epoxy Mastic(spot coat): 5 mils (125 microns) min., 7 mils (180 microns) max.  
Intermediate Coat: 2 mils (50 microns) min., 4 mils (100 microns) max.  
Topcoat: 2 mils (50 microns) min., 4 mils (100 microns) max.

The total dry film thickness, excluding the spot areas touched up with epoxy mastic, shall be between 7 and 14 mils (180 and 355 microns).

- b) The pressure washing requirement above may be waived if the QC and QA Inspectors verify the primed surfaces have not been contaminated.
- d) Damage to the completed paint system shall be spot cleaned using SSPC-SP3 (Modified). The cleaned areas shall be spot painted with a penetrating sealer as recommended by the manufacturer, which shall overlap onto the existing topcoat. Then the aluminum epoxy mastic shall be spot applied not to go beyond the area painted with the sealer. The acrylic intermediate and topcoat shall be spot applied to the mastic with at least a 6 inch (150 mm) overlap onto the existing topcoat.

**Organic Zinc-Rich/ Epoxy/ Urethane Paint System.** This system shall be for full shop application of the coating system, or when specified on the plans, for the application of two coats in the shop with the finish coat applied in the field. All contact surfaces shall be masked off prior to shop-application of the intermediate and top coats.

In addition to the requirements of Section 3.2.9 of the AASHTO/AWS D1.5/D1.5:2002 Bridge Welding Code (breaking thermal cut corners of stress carrying members), rolled and thermal cut corners to be painted with organic zinc primer shall be broken if they are sharper than a 1/16 in. (1.5 mm) radius. Corners shall be broken by a single pass of a grinder or other suitable device at a 45 degree angle to each adjoining surface prior to final blast cleaning, so the resulting corner approximates a 1/16 in. (1.5 mm) or larger radius after blasting. Surface anomalies (burrs, fins, deformations) shall also be treated to meet this criteria before priming.

In the shop, all structural steel designated to be painted shall be given one coat of organic zinc rich primer, one coat of epoxy intermediate, and unless stated otherwise in the plans, one coat of urethane finish. Before the application of the field coats, the shop coats and any newly installed fasteners shall be spot solvent cleaned per SSPC-SP 1 and all surfaces pressure washed as specified above to remove dirt, oil, lubricants, oxidation products, and foreign substances. All damaged shop coated areas shall then be spot cleaned per SSPC-SP3

(Modified). The surrounding coating at each repair location shall be feathered for a minimum distance of 1 1/2 in. (40 mm) to achieve a smooth transition between the prepared areas and the existing coating. The existing coating in the feathered area shall be roughened to insure proper adhesion of the repair coats.

All damaged areas and all newly installed fasteners shall be fully primed with epoxy mastic. One intermediate coat of epoxy shall be applied over the epoxy mastic and on exposed shop primer. One topcoat of aliphatic urethane shall be applied to all areas where the intermediate coat is visible, whether the intermediate coat was applied in the shop or in the field. The field applied coats shall only overlap onto the existing finish coat where sanding has been performed.

When the plans require the urethane coat to be applied in the field, the maximum recoat time for the intermediate coat shall be observed. If the recoat time for the intermediate coat is exceeded, the Contractor shall remove the shop-applied system, or submit for approval by the Engineer, written recommendations from the coating manufacturer for the procedures necessary to extend that recoat window or otherwise prepare the intermediate coat to receive the finish.

- (a) Coating Dry Film Thickness (dft), measured according to SSPC-PA2:
  - Organic Zinc-Rich Primer: 3 mils (75 microns) min., 5 mils (125 microns) max.
  - Aluminum Epoxy Mastic (spot coat): 5 mils (125 microns) min., 7 mils (180 microns) max.
  - Epoxy Intermediate Coat: 3 mils (75 microns) min., 6 mils (150 microns) max.
  - Aliphatic Urethane Top Coat: 2.5 mils (65 microns) min., 4 mils (100 microns) max.
- (b) The total dry film thickness, excluding the spot areas touched up with epoxy mastic, shall be between 8.5 and 15 mils (215 and 375 microns).
- (c) All faying surfaces of field connections shall be masked off after priming and shall not receive the intermediate or top coats in the shop. The intermediate and top coats for field connections shall be applied, in the field, after erection of the structural steel is completed.

#### Special Instructions.

Painting Date/System Code. At the completion of the work, the Contractor shall stencil in contrasting color paint the date of painting the bridge, the painting Contractors name, and the paint type code from the Structure Information and Procedure Manual for the system used. The letters shall be capitals, not less than 2 in. (50 mm) and not more than 3 in. (75 mm) in height. When all coats are applied in the shop the shop Contractor shall do the stenciling. When 1 or more coats are applied in the field, the field contractor shall do the stenciling.

The stencil shall contain the following wording "PAINTED BY (insert the name of the painting Contractor)" and shall show the month and year in which the painting was completed, followed by "CODE S" for the Inorganic Zinc/ Acrylic System, "CODE X" for the Organic Zinc/ Epoxy/ Urethane System (field applied finish coats), "CODE AB" for the Organic Zinc/ Epoxy/ Urethane System (shop applied), all stenciled on successive lines. This information shall be stenciled on

the cover plate of a truss end post near the top of the railing, or on the outside face of an outside stringer near both ends of the bridge facing traffic, or at some equally visible surface designated by the Engineer.

Method of Measurement. Shop cleaning and painting new structures will not be measured for payment. Field cleaning and painting will not be measured for payment except when performed under a contract that contains a separate pay item for this work.

Basis of Payment. This work will be paid for according to Article 506.07.

## PEDESTRIAN TRUSS SUPERSTRUCTURE

Effective: January 13, 1998

Revised: March 6, 2009

**Description:** This work shall consist of the design, fabrication, storage, delivery and erection of a welded steel, pedestrian truss superstructure. Also included in this work shall be the furnishing and installation of a deck, all bearings, anchors and/or retainers, railings, fencing and miscellaneous items as indicated on the plans.

### Materials:

Truss. Structural steel shall conform to the requirements of Section 1006 of the Standard Specifications, ASTM A847 for cold formed welded square and rectangular tubing, AASHTO M270 Grade 50W (M270M 345W) for atmospheric corrosion resistant structural steel, as applicable, unless otherwise shown on the plans or approved by the Engineer. The minimum design parameters shall be according to AASHTO "Guide Specifications for Design of Pedestrian Bridges". All structural steel field connections shall be bolted with high strength bolts. High strength bolts, including suitable nuts and plain hardened washers, shall conform to the requirements of Article 1006.08 of the Standard Specifications.

Deck. The deck type shall be as specified on the plans. The materials shall comply with the applicable portions of the materials section of the Standard Specifications.

When specified for use, the concrete deck and stay-in-place forms shall be non composite. Metal Forms shall have a minimum thickness of 0.0359 in. (912 microns) or 20 Gage and shall be galvanized per ASTM A653 (A653M) with a G165 (Z350) min. coating designation.

Railing. The railing shall consist of a smooth rub rail, a toe plate and misc. elements, all located on the inside face of the truss.

Bearings. The bearing shall be designed and furnished as detailed in the plans, in the absence of details, the bearings details shall be as specified by the bridge manufacturer.

When specified for use, elastomeric bearings shall be according to Article 1083 of the Standard Specifications. Teflon surfaces shall be per Article 1083.02(b) of the Standard Specification and shall be bonded to the bearing plate.

Suppliers. The manufacturer shall be a company specializing in the design and manufacture of pedestrian bridges. The manufacturer shall be certified by AISC according to Article 106.08(b) of the Standard Specifications. The manufacturer shall provide information, to the satisfaction of the Engineer, demonstrating it has successfully provided bridges of similar scope for a minimum of 10 projects. The submittals demonstrating experience shall include names, addresses and telephone numbers of the owners of the structures. This submittal shall be made at the time of the preconstruction conference.



Potential bridge suppliers include but are not limited to:

Continental Custom Bridge Company  
8301 State Hwy 29 North  
Alexandria, Minnesota 56308  
800-328-2047, FAX 320-852-7067

Steadfast Bridges  
4021 Gault Ave South  
Fort Payne, Alabama 35967  
800-749-7515, FAX 256-845-9750

Excel Bridge Manufacturing Company  
12001 Shoemaker Avenue  
Santa Fe Springs, California 90670  
800-548-0054, FAX 562-944-4025

Wheeler Consolidated  
9330 James Avenue South  
Bloomington, MN 55431  
800-328-3986, FAX 952-929-2909

Echo Bridge/Decker, Incorporated  
123 Bob Masia Dr  
Pine City, New York 14871  
607-734-9456, FAX 607-733-4148

Anderson Bridges  
111 Willow Street  
Colfax, WI 54730  
715-962-2800, FAX 715-962-2801

The Ohio Bridge Corporation/ US Bridge  
PO Box 757  
Cambridge, OH 43725  
740-432-6334, Fax 740-439-7349

**Design:** The superstructure shall conform to the clear span, clear width, and railing configuration shown on the contract plans. The AASHTO "Guide Specifications for Design of Pedestrian Bridges" shall govern the design. The design loads shall be as specified by the AASHTO Guide Specification unless otherwise specified in the Contract plans.

The railings shall be designed per AASHTO Design Specifications for bicycle railings. Smooth rub rails shall be attached to the bicycle railing and located at a bicycle handlebar height of 3.5 ft. (1.1 m) above the top of the deck.

Prior to beginning construction or fabrication, the Contractor shall submit design calculations and six sets of shop drawings for each pedestrian bridge to the Engineer for review and approval. In addition, for bridges with any span over 150 ft. (46 m), or over a State or Federal Route, or within the States Right-of-Way, a copy of the shop drawings will be reviewed and approved for structural adequacy, by the Bureau of Bridges and Structures prior to final approval of shop drawings. The shop drawings shall include all support reactions for each load type. The following certification shall be placed on the first sheet of the bridge shop plans adjacent to the seal and signature of the Structural Engineer:

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans and complies with the requirements of the Contract and the current 'AASHTO Guide Specifications for Design of Pedestrian Bridges'."

The substructure is designed per AASHTO and based on the assumed truss loads shown on the plans. If the manufacturer's design exceeds those loads and/or the substructure needs to be adjusted to accommodate the truss superstructure chosen, then the Contractor shall submit the redesign to the Engineer for approval prior to ordering any material or starting construction. All design calculations, shop drawings and redesigned substructure drawings shall be sealed by a Structural Engineer licensed in the State of Illinois.

**Construction:** Truss erection procedures shall be according to the manufacturer's instructions. The deck shall be placed according to the applicable Sections of the Standard Specifications.

When weathering steel is used, all structural steel shall be prepared according to the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel."

When painting is specified, all structural steel shall be cleaned and painted according to the Special Provision for "Cleaning and Painting New Metal Structures". The color of the finish coat shall be as specified in the plans.

**Method of Measurement:** The pedestrian truss superstructure will be measured in square feet (square meters) of completed and accepted bridge deck within the limits of the truss superstructure.

**Basis of Payment:** The pedestrian superstructure will be paid for at the contract unit price per square foot (square meter) for "PEDESTRIAN TRUSS SUPERSTRUCTURE."

## **DRILLED SOLDIER PILE RETAINING WALL**

Effective: September 20, 2001

Revised: October 9, 2009

Description. This work shall consist of providing all labor, materials, and equipment necessary to fabricate and furnish the soldier piles, create and maintain the shaft excavations, set and brace the soldier piles into position and encase the soldier piles in concrete to the specified elevation. Also included in this work is the backfilling of the remainder of the shaft excavation with Controlled Low-Strength Material (CLSM), the furnishing and installation of the timber lagging, and the furnishing and installation of CLSM secant lagging. All work shall be according to the details shown on the plans and as directed by the Engineer.

The remainder of the retaining wall components as shown on the plans, such as concrete facing, shear studs, reinforcement bars, tie backs, hand rails, and various drainage items etc., are not included in this Special Provision but are paid for as specified elsewhere in this Contract.

Materials. The materials used for the soldier piles and lagging shall satisfy the following requirements:

- (a) The structural steel components for the soldier piles shall conform to the requirements of AASHTO M270, Grade 36 (M270M Grade 250), unless otherwise designated on the plans.
- (b) The soldier pile encasement concrete shall be Class DS according to Section 1020, except the mix design shall be as follows:
  - (1) When the plans specify that soil and ground water sulfate contaminates exceed 500 parts per million, a Type V cement shall be required. The cement shall be increased 60 lb./cu. yd. (35 kg/cu m) if the concrete is to be placed under water.
  - (2) If concrete is placed to displace drilling fluid or against temporary casing, the slump shall be  $8 \pm 1$  in. (200 mm  $\pm$  25 mm) at point of placement.
- (c) The Controlled Low-Strength Material (CLSM), used for backfilling shaft excavations above the soldier pile encasement concrete and for backfilling secant lagging excavations, to the existing ground surface, shall be according to Article 1019.
- (d) Temporary casing shall be produced by electric seam, butt, or spiral welding to produce a smooth wall surface, fabricated from steel satisfying ASTM A252 Grade 2. The minimum wall thickness shall be as required to resist the anticipated installation and dewatering stresses, as determined by the Contractor, but in no case less than 1/4 in. (6 mm).
- (e) Drilling slurry shall consist of a polymer or mineral base material. Mineral slurry shall have both a mineral grain size that will remain in suspension with sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. The percentage and specific gravity of the material used to make the suspension shall be

sufficient to maintain the stability of the excavation and to allow proper concrete placement. For polymer slurry, the calcium hardness of the mixing water shall not exceed 100 mg/L.

- (f) Timber Lagging. The minimum tabulated unit stress in bending ( $F_b$ ), used for the design of the timber lagging, shall be 1000 psi (6.9 MPa) unless otherwise specified on the plans. When treated timber lagging is specified on the plans, the method of treatment shall be according to Article 1007.12. All timber shall meet the inspection requirements of Article 1007.01.

Equipment. The drilling equipment shall have adequate capacity, including power, torque and down thrust, to create a shaft excavation of the maximum diameter specified to a depth of 20 percent beyond the depths shown on the plans. Concrete equipment shall be according to Article 1020.03.

Construction Requirements. The shaft excavation for each soldier pile shall extend to the tip elevation indicated on the plans for soldier piles terminating in soil or to the required embedment in rock when rock is indicated on the contract plans. The Contractor shall satisfy the following requirements:

- (a) Drilling Methods. The soldier pile installation shall be according to 516.06(a),(b), or(c)

No shaft excavation shall be made adjacent to a soldier pile with encasement concrete that has a compressive strength less than 1500 psi (10.35 MPa), nor adjacent to secant lagging until the CLSM has reach sufficient strength to maintain it's position and shape unless otherwise approved by the Engineer. Materials removed or generated from the shaft excavations shall be disposed of by the Contractor according to Article 202.03. Excavation by blasting will not be permitted.

- (b) Drilling Slurry. During construction, the level of the slurry shall be maintained at a height sufficient to prevent caving of the hole. In the event of a sudden or significant loss of slurry to the hole, the construction of that shaft shall be stopped and the shaft excavation backfilled or supported by temporary casing until a method to stop slurry loss, or an alternate construction procedure, has been developed and approved by the Engineer.
- (c) Obstructions. Obstructions shall be defined as any object (such as but not limited to, boulders, logs, old foundations, etc.) that cannot be removed with normal earth drilling procedures, but requires special augers, tooling, core barrels or rock augers to remove the obstruction. When obstructions are encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to core, break up, push aside, or remove the obstruction. Lost tools or equipment in the excavation, as a result of the Contractor's operation, shall not be defined as obstructions and shall be removed at the Contractor's expense.
- (d) Top of Rock. The top of rock will be considered as the point where rock, defined as bedded deposits and conglomerate deposits exhibiting the physical characteristics and difficulty of rock removal as determined by the Engineer, is encountered which cannot be drilled with earth augers and/or underreaming tools configured to be effective in the soils indicated in

the contract documents, and requires the use of special rock augers, core barrels, air tools, blasting, or other methods of hand excavation.

- (e) Design Modifications. If the top of rock elevation encountered is below that estimated on the plans, such that the soldier pile length above rock is increased by more than 10 percent, the Engineer shall be contacted to determine if any soldier pile design changes are required. In addition, if the type of soil or rock encountered is not similar to that shown in the subsurface exploration data, the Engineer shall be contacted to determine if revisions are necessary.
- (f) Soldier Pile Fabrication and Placement. The soldier pile is defined as the structural steel section(s) shown on the plans as well as any connecting plates used to join multiple sections. The types of soldier piles shall be defined as HP, W Sections, or Built-Up Sections. Cleaning and painting of all steel components, when specified, shall be as shown on the plans and accomplished according to the special provision for "Cleaning and Painting New Metal Structures". This work will not be paid for separately, but shall be considered included in the cost of Furnishing Soldier Piles of the type specified.

The soldier pile shall be shop fabricated such that no field welding is required. The Contractor shall attach suitable bracing or support to maintain the position of the soldier pile within the shaft excavation such that the final location will satisfy the Construction Tolerances portion of this Special Provision. The bracing or supports shall remain in place until the concrete for encasement has reached a minimum compressive strength of 1500 psi (10.35 MPa).

When embedment in rock is indicated on the plans, modification to the length of a soldier pile may be required to satisfy the required embedment. The modification shall be made to the top of the soldier pile unless otherwise approved by the Engineer. When the top of rock encountered is above the estimated elevation indicated on the plans, the soldier piles shall be cut to the required length. If the top of rock encountered is below that estimated on the plans, the Contractor shall either furnish longer soldier piles or splice on additional length of soldier pile per Article 512.05(a) to satisfy the required embedment in rock. In order to avoid delays, the Contractor may have additional soldier pile sections fabricated as necessary to make the required adjustments. Additional soldier pile quantities, above those shown on the plans, shall not be furnished without prior written approval by the Engineer.

- (g) Concrete Placement. Concrete work shall be performed according to Article 516.12 and as specified herein.

The soldier pile encasement concrete pour shall be made in a continuous manner from the bottom of the shaft excavation to the elevation indicated on the plans. Concrete shall be placed as soon as possible after the excavation is completed and the soldier pile is secured in the proper position. Uneven levels of concrete placed in front, behind, and on the sides of the soldier pile shall be minimized to avoid soldier pile movement, and to ensure complete encasement.

Following the soldier pile encasement concrete pour, the remaining portion of the shaft excavation shall be backfilled with CLSM according to Section 593. CLSM Secant lagging placement shall be placed as soon as practical after the shaft excavation is cleared.

- (h) Construction Tolerances. The soldier piles shall be drilled and located within the excavation to satisfy the following tolerances:
- (1) The center of the soldier pile shall be within 1 1/2 in. (38 mm) of plan station and 1/2 in. (13 mm) offset at the top of the shaft.
  - (2) The out of vertical plumbness of the soldier pile shall not exceed 0.83 percent.
  - (3) The top of the soldier pile shall be within  $\pm 1$  in. ( $\pm 25$  mm) of the plan elevation.
- (i) Timber Lagging. Timber lagging, when required by the plans, installed below the original ground surface, shall be placed from the top down as the excavation proceeds. Lagging shown above grade shall be installed and backfilled against prior to installing any permanent facing to minimize post construction deflections. Over-excavation required to place the timber lagging behind the flanges of the soldier piles shall be the minimum necessary to install the lagging. Any voids produced behind the lagging shall be filled with porous granular embankment at the Contractors expense. When the plans require the Contractor to design the timber lagging, the design shall be based on established practices published in FHWA or AASHTO documents considering lateral earth pressure, construction loading, traffic surcharges and the lagging span length(s). The nominal thickness of the lagging selected shall not be less than 3 in. (75 mm) and shall satisfy the minimum tabulated unit stress in bending ( $F_b$ ) stated elsewhere in this Special Provision. The Contractor shall be responsible for the successful performance of the lagging system until the concrete facing is installed. When the nominal timber lagging thickness(s) and allowable stress are specified on the plans, the timber shall be rough cut or surfaced and in accordance with Article 1007.03.
- (j) Structure Excavation. When structure excavation is necessary to place a concrete facing, it shall be made and paid for according to Section 502 except that the horizontal limits for structure excavation shall be from the face of the soldier pile to a vertical plane 2 ft. (600 mm) from the finished face of the wall. The depth shall be from the top of the original ground surface to the bottom of the concrete facing. The additional excavation necessary to place the lagging whether through soil or CLSM shall be included in this work.
- (k) Geocomposite Wall Drain. When required by the plans, the geocomposite wall drain shall be installed and paid for according to Section 591 except that, in the case where a concrete facing is specified on the plans, the wall drain shall be installed on the concrete facing side of the timber lagging with the pervious (fabric) side of the drain installed to face the timber. When a concrete facing is not specified on the plans, the pervious (fabric) side of the drain shall be installed to face the soil. In this case, the drain shall be installed in stages as the timber lagging is installed. The wall drain shall be placed in sections and spliced, or kept on a continuous roll, so that as each timber is placed, the drain can be properly located as the excavation proceeds.

Method of Measurement. The furnishing of soldier piles will be measured for payment in feet (meters) along the centerline of the soldier pile for each of the types specified. The length shall be determined as the difference between the plan top of soldier pile and the final as built shaft excavation bottom.

The drilling and setting of soldier piles in soil and rock, will be measured for payment and the volumes computed in cubic feet (cubic meters) for the shaft excavation required to set the soldier piles according to the plans and specifications, and accepted by the Engineer. These volumes shall be the theoretical volumes computed using the diameter(s) of the shaft(s) shown in the plans and the depth of the excavation in soil and/or rock as appropriate. The depth in soil will be defined as the difference in elevation between the ground surface at the time of concrete placement and the bottom of the shaft excavation or the top of rock (when present), whichever is encountered first. The depth in rock will be defined as the difference in elevation between the measured top of rock and the bottom of the shaft excavation.

Drilling and placing CLSM secant lagging shall be measured for payment in cubic feet (cubic meters) of the shaft excavation required to install the secant lagging as shown in the plans. This volume shall be the theoretical volume computed using the diameter(s) shown on the plans and the difference in elevation between the as built shaft excavation bottom and the ground surface at the time of the CLSM placement.

Timber lagging shall be measured for payment in square feet (square meters) of timber lagging installed to the limits as shown on the plans. The quantity shall be calculated using the minimum lagging length required on the plans multiplied by the as installed height of timbers, for each bay of timber lagging spanning between the soldier piles.

Basis of Payment. The furnishing of soldier piles will be paid for at the contract unit price per foot (meter) for FURNISHING SOLDIER PILES, of the type specified, for the total number of feet (meters) furnished to the job site. The cost of any field splices required due to changes in top of rock elevation shall be paid for according to Article 109.04.

The drilling and setting of soldier piles will be paid for at the contract unit price per cubic foot (cubic meter) for DRILLING AND SETTING SOLDIER PILES (IN SOIL) and DRILLING AND SETTING SOLDIER PILES (IN ROCK). The required shaft excavation, soldier pile encasement concrete and any CLSM backfill required around each soldier pile will not be paid for separately but shall be included in this item.

The timber lagging will be paid for at the contract unit price per square foot (square meter) for UNTREATED TIMBER LAGGING, or TREATED TIMBER LAGGING as detailed on the plans.

The secant lagging will be paid for at the contract unit price per cubic foot (cubic meter) for SECANT LAGGING. The required shaft excavation and CLSM backfill required to fill that excavation shall be included in this item.

Obstruction mitigation shall be paid for according to Article 109.04.

No additional compensation, other than noted above, will be allowed for removing and disposing of excavated materials, for furnishing and placing concrete, CLSM, bracing, lining, temporary casings placed and removed or left in place, or for any excavation made or concrete placed outside of the plan diameter(s) of the shaft(s) specified.



## **PIPE UNDERDRAINS FOR STRUCTURES**

Effective: May 17, 2000

Revised: January 22, 2010

Description. This work shall consist of furnishing and installing a pipe underdrain system as shown on the plans, as specified herein, and as directed by the Engineer.

Materials. Materials shall meet the requirements as set forth below:

The perforated pipe underdrain shall be according to Article 601.02 of the Standard Specifications. Outlet pipes or pipes connecting to a separate storm sewer system shall not be perforated.

The drainage aggregate shall be a combination of one or more of the following gradations, FA1, FA2, CA5, CA7, CA8, CA11, or CA13 thru 16, according to Sections 1003 and 1004 of the Standard Specifications.

The fabric surrounding the drainage aggregate shall be Geotechnical Fabric for French Drains according to Article 1080.05 of the Standard Specifications.

Construction Requirements. All work shall be according to the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The pipe underdrains shall consist of a perforated pipe drain situated at the bottom of an area of drainage aggregate wrapped completely in geotechnical fabric and shall be installed to the lines and gradients as shown on the plans.

Method of Measurement. Pipe Underdrains for Structures shall be measured for payment in feet (meters), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement. Concrete headwalls shall be included in the cost of Pipe Underdrains for Structures, but shall not be included in the measurement for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for PIPE UNDERDRAINS FOR STRUCTURES of the diameter specified. Furnishing and installation of the drainage aggregate, geotechnical fabric, forming holes in structural elements and any excavation required, will not be paid for separately, but shall be included in the cost of the pipe underdrains for structures.

**POROUS GRANULAR EMBANKMENT, SPECIAL**

Effective: September 28, 2005

Revised: November 14, 2008

Description. This work shall consist of furnishing and placing porous granular embankment special material as detailed on the plans, according to Section 207 except as modified herein.

Materials. The gradation of the porous granular material may be any of the following CA 8 thru CA 18, FA 1 thru FA 4, FA 7 thru FA 9, and FA 20 according to Articles 1003 and 1004.

Construction. The porous granular embankment special shall be installed according to Section 207, except that it shall be uncompacted.

Basis of Payment. This work will be paid for at the contract unit price per Cubic Yard (Cubic Meter) for POROUS GRANULAR EMBANKMENT, SPECIAL.

### **SETTING PILES IN ROCK**

Effective: November 14, 1996

Revised: January 1, 2007

This work shall consist of making shaft excavations through soil and rock, setting piles in rock and backfilling the shaft excavation.

The excavations for each pile shall be made by drilling through the overburden soils and into rock to satisfy the diameter and embedment depth in rock as indicated on the plans. All excavated material shall be disposed of by the Contractor.

The actual top of rock will be considered as the point where rock, defined as bedded deposits and conglomerate deposits exhibiting the physical characteristics and difficulty of rock removal as determined by the Engineer, is encountered which cannot be drilled with earth augers and/or underreaming tools configured to be effective in the soils indicated in the contract documents, and requires the use of special rock augers, core barrels, air tools, blasting, or other methods of hand excavation. When the top of rock encountered is above or below the estimated elevation indicated on the plans, the piles shall be cut or spliced per Article 512.05(a) to satisfy the required embedment in rock.

The Contractor shall be responsible for hole stability by using accepted drilling methods and temporary casing where site conditions warrant, no permanent casings or side forms will be allowed. All loose rock, earth, debris and water shall be removed from the hole prior to placing concrete. If the flow of water into the hole is excessive or if pumping operations are likely to cause hole instability, the level of water in the hole shall be allowed to stabilize and the concrete placed by tremie methods according to Article 503.08 of the Standard Specifications.

The bottom of each hole shall be filled with Class SI Concrete to a depth of at least 6 inches (150 mm) and then the piles shall be placed in the hole and properly located. The piles shall be securely braced and held in position prior to and during the placing and curing of the remainder of the Class SI Concrete until test specimens show that a modulus of rupture of 650 psi (4.5 MPa) has been attained. Any operations that might damage the concrete around the piles shall be deferred until the concrete attains the required strength. The hole shall be filled with Class SI Concrete up to at least 6 inches (150 mm) above the top of rock. The remainder of the hole, to the bottom of encasement, footing or abutment, shall be filled with Class SI Concrete or porous granular embankment at the option of the Contractor unless otherwise detailed in the plans.

This work will be paid for at the contract unit price each for SETTING PILES IN ROCK. The Class SI Concrete and any porous granular embankment backfilled around each pile shall not be paid for separately but shall be included in this item. The furnishing of piles is not included in this item but will be paid for elsewhere in this contract.

## SEGMENTAL CONCRETE BLOCK WALL

Effective: January 7, 1999

Revised: July 9, 2008

**Description.** This work shall consist of furnishing the design computations, shop plans, materials, equipment and labor to construct a Segmental Concrete Block Retaining Wall to the limits shown on the plans.

**General.** The wall shall consist of a leveling pad, precast concrete blocks (either dry-cast or wet cast), select granular backfill and, if required by the design, soil reinforcement. The wall shall be designed and constructed according to the lines, grades, and dimensions shown on the contract plans and approved shop plans.

**Submittals.** The wall supplier shall submit design computations and shop plans to the Engineer according to Article 1042.03(b) of the Standard Specifications. No work or ordering of materials for the structure shall be done by the Contractor until the submittal has been approved in writing by the Engineer. The shop plans shall be sealed by an Illinois Licensed Structural Engineer and shall include all details, dimensions, quantities, and cross sections necessary to construct the wall and shall include, but not be limited to, the following items:

- (a) Plan, elevation, and cross section sheet(s) for each wall showing the following:
  - (1) A plan view of the wall indicating the offsets from the construction centerline to the first course of blocks at all changes in horizontal alignment. These shall be calculated using the offsets to the front face of the block shown on the contract plans and the suppliers proposed wall batter. The plan view shall indicate bottom (and top course of block when battered), the excavation and select granular backfill limits as well as any soil reinforcing required by the design. The centerline of any drainage structure or pipe behind or passing through/under the wall shall also be shown.
  - (2) An elevation view of the wall, indicating the elevation and all steps in the top course of blocks along the length of the wall. The top of these blocks shall be at or above the theoretical top of block line shown on the contract plans. This view shall also show the steps and proposed top of leveling pad elevations as well as the finished grade line at the wall face specified on the contract plans. These leveling pad elevations shall be located at or below the theoretical top of leveling line shown on the contract plans. The location, size, and length of any soil reinforcing connected to the blocks shall be indicated.
  - (3) Typical cross section(s) showing the limits of the select granular backfill, soil reinforcement if used in the design. The right-of-way limits shall be indicated as well as the proposed excavation, cut slopes, and the elevation relationship between existing ground conditions and proposed grades.
  - (4) All general notes required for constructing the wall.

- (b) All details for the leveling pads, including the steps, shall be shown. The theoretical top of the leveling pad shall either be below the anticipated frost depth or 1.5 ft. (450 mm) below the finished grade line at the wall face, whichever is greater; unless otherwise shown on the plans. The minimum leveling pad thickness shall be 6 in. (152 mm)
- (c) Cap blocks shall be used to cover the top of the standard block units. The top course of blocks and cap blocks shall be stepped to satisfy the top of block line shown on the contract plans.
- (d) All details of the block and/or soil reinforcement placement around all appurtenances located behind, on top of, or passing through the wall shall be clearly indicated. Any modifications to the design of these appurtenances to accommodate a particular design arrangement shall also be submitted.
- (e) All details of the blocks, including color and texture shall be shown. The exterior face shall preferably be straight, textured with a "split rock face" pattern, and dark gray in color unless otherwise stated on the plans.
- (f) All block types (standard, cap, corner, and radius turning blocks) shall be detailed showing all dimensions.
- (g) All blocks shall have alignment/connection devices such as shear keys, leading/trailing lips, or pins. The details for the connection devices between adjacent blocks and the block to soil reinforcement shall be shown. The block set back or face batter shall be limited to 20 degrees from vertical, unless otherwise shown by the plans.

**Materials.** The materials shall meet the following requirements:

- (a) Dry-Cast Concrete Block: Dry-cast concrete block proposed for use shall be pre-cast and produced according Article 1042.02 and the requirements of ASTM C1372 except as follows:
  - 1. Fly ash shall be according to Articles 1010.01 and 1010.02(b).
  - 2. Ground granulated blast-furnace slag shall be according to Articles 1010.01 and 1010.05.
  - 3. Aggregate shall be according to Articles 1003.02 and 1004.02, with the exception of gradation.
  - 4. Water shall be according to Section 1002.
  - 5. Testing for freeze-thaw durability will not be required. However, unsatisfactory field performance as determined by the Department will be cause to prohibit the use of the block on Department projects.

- (b) Wet-cast Concrete Block. Wet-cast concrete block proposed for use shall be pre-cast and produced according to Section 1020 and Article 1042.02. The concrete shall be Class PC with a minimum compressive strength of at least 3000 psi (31 MPa) at 28 days.
- (c) Select Granular Backfill: The select granular backfill material shall consist of either a coarse aggregate according to Article 1004.05(a), or a fine aggregate according to the first sentence of Article 1003.04(a). The aggregate used shall also meet the following:

Coarse Aggregate Gradation	CA 6 thru CA 16 (Article 1004.01(c))
Fine Aggregate Gradation	FA 1, FA 2, or FA 20 (Article 1003.01(c))
Coarse Aggregate Quality	Minimum Class C (Article 1004.01(b))
Fine Aggregate Quality	Minimum Class C (Article 1003.01(b))
Internal Friction Angle	34° minimum (AASHTO T 236 or T 296)
pH (if reinforcement is used)	4.5 to 9 (AASHTO T 289)

When a fine aggregate is selected, the rear of all block joints shall be covered by a non-woven needle punch geotextile filter material according to Article 1080.05 of the Standard Specifications and shall have a minimum permeability according to ASTM D4491 of 0.008 cm/sec. All fabric overlaps shall be 6 in. (150 mm) and non-sewn. As an alternative to the geotextile, a coarse aggregate shall be placed against the back face of the blocks to create a minimum 12 in. (300 mm) wide continuous gradation filter to prevent the select fill material from passing through the block joints.

- (d) Leveling pad: The material shall be either Class SI concrete according to Article 1020.04 or compacted coarse aggregate according to Articles 1004.04, (a) and (b). The compacted coarse aggregate gradation shall be CA 6 or CA 10.
- (e) Soil Reinforcement: If soil reinforcement is required by the approved design, the Contractor shall submit a manufacturer's certification for the soil reinforcement properties which equals or exceeds those required in the design computations. The soil reinforcement shall be manufactured from high density polyethylene (HDPE) uniaxial or polypropylene biaxial resins or high tenacity polyester fibers with a PVC coating, stored between -20 and 140° F (-29 and 60° C). The following standards shall be used in determining and demonstrating the soil reinforcement capacities:

- ASTM D638 Test Method for Tensile Properties of Plastic
- ASTM D1248 Specification for Polyethylene Plastics Molding and Extrusion Materials
- ASTM D4218 Test Method for Carbon Black Content in Polyethylene Compounds
- ASTM D5262 Test Method for Evaluating the Unconfined Tension Creep Behavior of Geosynthetics
- GG1-Standard Test Method for Geogrid Rib Tensile Strength
- GG2-Standard Test Method for Geogrid Junction Strength
- GG4-Standard Practice for Determination of the Long Term Design Strength of Geogrid
- GG5-Standard Practice for Evaluating Geogrid Pullout Behavior

**Design Criteria.** The design shall be according to AASHTO Specifications and commentaries for Earth Retaining Walls or FHWA Publication No. HI-95-038, SA-96-071 and SA-96-072. The wall supplier shall be responsible for all internal stability aspects of the wall design.

Internal stability design shall insure that adequate factors of safety against overturning and sliding are present at each level of block. If required by design, soil reinforcement shall be utilized and the loading at the block/soil reinforcement connection as well as the failure surface must be indicated. The calculations to determine the allowable load of the soil reinforcement and the factor of safety against pullout shall also be included. The analysis of settlement, bearing capacity, and overall slope stability are the responsibility of the Department.

External loads such as those applied through structure foundations, from traffic or railroads, slope surcharge etc., shall be accounted for in the internal stability design. The presence of all appurtenances behind, in front of, mounted upon, or passing through the wall volume such as drainage structures, utilities, structure foundation elements, or other items shall be accounted for in the internal stability design of the wall.

**Construction Requirements.** The Contractor shall obtain technical assistance from the supplier during wall erection to demonstrate proper construction procedures and shall include all costs related to this technical assistance in the unit price bid for this item.

The foundation material for the leveling pad and select granular backfill volume shall be graded to the design elevation and compacted according to Article 205.05, except the minimum required compaction shall be 95 percent of the standard laboratory density. Any foundation soils found to be unsuitable shall be removed and replaced as directed by the Engineer and shall be paid for according to Article 109.04.

The select granular backfill lift placement shall closely follow the erection of each course of blocks. All aggregate shall be swept from the top of the block prior to placing the next block lift. If soil reinforcement is used, the select granular backfill material shall be leveled and compacted before placing and attaching the soil reinforcement to the blocks. The soil reinforcement shall be pulled taut, staked in place, and select fill placed from the rear face of the blocks outward. The lift thickness shall be the lesser of 10 in. (255 mm) loose measurement or the proposed block height.

The select granular backfill shall be compacted according to Article 205.05, except the minimum required compaction shall be 95 percent of the standard laboratory density. Compaction shall be achieved using a minimum of 3 passes of a lightweight mechanical tamper, roller, or vibratory system. The top 12 in. (300 mm) of backfill shall be a cohesive, impervious material capable of supporting vegetation, unless other details are specified on the plans.

The blocks shall be maintained in position as successive lifts are compacted along the rear face of the block. Vertical, horizontal, and rotational alignment tolerances shall not exceed 0.5 in. (12 mm) when measured along a 10 ft. (3 m) straight edge.

**Method of Measurement.** Segmental Concrete Block Wall will be measured by the square foot (square meter) of wall face from the top of block line to the theoretical top of the leveling pad for the length of the wall in a vertical plane, as shown on the contract plans.

**Basis of Payment.** This work will be paid for at the contract unit price per square foot (square meter) for SEGMENTAL CONCRETE BLOCK WALL.



## PRECAST MODULAR RETAINING WALL

Effective: March 19, 2001

Revised: April 30, 2010

Description. This work shall consist of preparing the design, furnishing the materials, and constructing the precast modular retaining walls to the lines, grades and dimensions shown in the contract plans and as directed by the Engineer.

General. The precast modular wall shall consist of precast concrete modules, select fill and a leveling pad. The precast concrete modules shall be sized to have sufficient external stability resistance at each module course to satisfy the design criteria. The material, fabrication and construction shall comply with this Special Provision and the requirements specified by the supplier of the wall system selected by the Contractor for use on the project.

The precast modular retaining wall shall be one of the following pre-approved wall systems:

T-Wall      The Neel Company  
Stepwall    Prestress Engineering Corporation  
Doublewal   Doublewal Corporation  
Stone Strong   Stone Strong, LLC.  
Recon Wall System   Darnall Concrete Products Co.  
Redi-Rock Wall   Redi-Rock International, LLC

Submittals. The wall system supplier shall submit complete design calculations and shop drawings to the Department for review and approval no later than 90 days prior to beginning construction of the wall. All submittals shall be sealed by a Illinois Licensed Structural Engineer and shall include all details, dimensions, quantities and cross sections necessary to construct the wall and shall include, but not be limited to, the following items:

- (a) Plan, elevation and cross section sheet(s) for each wall showing the following:
  - (1) A plan view of the wall indicating the offsets from the construction centerline to the face of the wall at all changes in horizontal alignment. The plan view shall show the limits of precast modules and stations where changes in length and/or size of modules occur. The centerline shall be shown for all drainage structures or pipes behind or passing through and/or under the wall.
  - (2) An elevation view of the wall indicating the elevations of the top of the modules. These elevations shall be at or above the top of exposed module line shown on the contract plans. This view shall show the elevations of the top of the leveling pads, all steps in the leveling pads and the finished grade line shown in the contract plans. Each module type, size and embedded length shall be designated.
  - (3) A listing of the summary of quantities shall be provided on the elevation sheet of each wall.

- (4) Typical cross section(s) showing the precast modules, select fill within the modules, porous granular backfill, leveling pad, right-of-way limits, including excavation cut slopes and elevation relationship between existing ground conditions and the finished grade line.
- (5) All general notes required for constructing the wall as well as the locations of lifting devices and/or support points in the precast modules shall be indicated.
- (b) The leveling pads may be precast or cast in place concrete, or compacted coarse aggregate. All details for the leveling pads, including the steps, shall be shown. The top of the leveling pad shall be located at or below the theoretical top of the leveling pad line shown on the contract plans. The theoretical top of leveling pad line shall be 3.5 ft.(1.1 m) below finished grade line at the front face of the wall, unless otherwise shown on the contract plans.
- (c) Where concrete coping or barrier is specified, the modules shall extend up into the coping or barrier a minimum of 2 in. (50 mm). The top of the modules may be level or sloped to satisfy the top of module line shown on the contract plans. Cast-in-place concrete will not be an acceptable replacement for module areas below the top of module line. Precast coping may be substituted for the CIP coping if approved by the Engineer.
- (d) All module types shall be detailed. The details shall show all dimensions necessary to cast and construct each type of module, all reinforcing steel in the module, and the location of any shear key or connection devices.
- (e) All details of the wall module placement around all appurtenances located behind, on top of, or passing through the wall modules and select fill such as traffic barriers, coping, foundations, and utilities etc. shall be clearly indicated. Any modifications to the design of these appurtenances to accommodate a particular system shall also be submitted.
- (f) When specified on the contract plans, all details of architectural treatment for the exposed surfaces of the module, including color, texture and form liners shall be shown.
- (g) The details of bearing pads, joint filler or other materials used to prevent concrete to concrete contact on the front face as well as any pins, groves or other alignment mechanisms shall be indicated.

The initial submittal shall include three sets of shop drawings and one set of calculations. One set of drawings will be returned to the Contractor with any corrections indicated. After approval, the Contractor shall furnish the Engineer with eight sets of corrected prints and one mylar set for distribution by the Department. No work or ordering of materials for the structure shall be done until the submittal has been approved by the Engineer.

Materials. The precast modular retaining walls shall conform to the supplier's standards as previously approved by the Department, AASHTO Specifications for prefabricated modular walls and the following:

- (a) Steel connection hardware shall be galvanized according to AASHTO M 232 or AASHTO M 111 as applicable.
- (b) All precast modules shall be manufactured with Class PC concrete according to Section 504, Article 1042.02, Article 1042.03, and the following requirements:
  - (1) The minimum panel thickness shall be 3 1/2 in. (90 mm).
  - (2) The minimum reinforcement bar cover shall be 1 1/2 in. (38 mm).
  - (3) The panel reinforcement shall be epoxy coated according to Article 1006.10 (a)(2).
  - (5) All dimensions shall be within 3/16 in. (5 mm).
  - (6) Angular distortion with regard to the height of the panel shall not exceed 0.2 in. (5 mm) in 5 ft. (1.5 m).
  - (7) Surface defects on formed surfaces measured on a length of 5 ft. (1.5 m) shall not be more than 0.1 in. (2.5 mm).

Concrete surfaces exposed to view in the completed wall shall be finished according to Article 503.15(a) of the Standard Specifications.

- (c) Reinforcing steel shall be according to Article 1006.10(a). Welded steel wire fabric for concrete reinforcement shall be according to Article 1006.10(b)(1).
- (d) The select fill, defined as the material placed in the reinforced volume behind the wall, shall be according to Sections 1003 and 1004 of the Standard Specifications and the following:
  - (1) Select Fill Gradation. Either a coarse aggregate or a fine aggregate may be used. For coarse aggregate, gradations CA 6 thru CA 16 may be used. For fine aggregate, gradations FA 1, FA 2, or FA 20 may be used.

Other aggregate gradations may be used provided the maximum aggregate size is 1 1/2 in. (38 mm), the maximum material passing the #40 (425  $\mu$ m) sieve is 60 percent, and the maximum material passing the #200 (75  $\mu$ m) sieve is 15 percent.
  - (2) Select Fill Quality. The coarse or fine aggregate shall be Class B quality or better, except that a maximum of 15 percent of the material may be finer than the #200 (75  $\mu$ m) sieve.

(3) Select Fill Internal Friction Angle. The effective internal friction angle for the coarse or fine aggregate shall be a minimum 34 degrees according to AASHTO T 236 on samples compacted to 95 percent density according to Illinois Modified AASHTO T 99. The AASHTO T 296 test with pore pressure measurement may be used in lieu of AASHTO T 236. If the vendor's design uses a friction angle higher than 34 degrees, as indicated on the approved shop drawings, this higher value shall be taken as the minimum required.

Test Frequency. Prior to start of construction, the Contractor shall provide an internal friction angle test result to show the select fill material meets the specification requirement. This test result shall be no more than 12 months old. In addition, a sample of select fill material will be obtained for testing and approval by the Department. Thereafter, the minimum frequency of sampling and testing at the jobsite will be one per 20,000 cubic yards (15,500 cubic meters) of select fill.

- (e) The porous granular embankment, behind the precast modules, shall be according to Section 207 of the Standard Specifications.
- (f) The geotextile filter material used across the module joints shall be either a non-woven needle punch polyester or polypropylene or a woven monofilament polypropylene.
- (g) The bearing pads shall be rubber, neoprene, polyvinyl chloride, or polyethylene material of the type and grade as recommended by the wall supplier. Other material recommended by the wall supplier may be used if approved by the Engineer.
- (h) Leveling pad: The material shall be either Class SI concrete according to Article 1020.04 or compacted coarse aggregate according to Articles 1004.04, (a) and (b). The compacted coarse aggregate gradation shall be CA 6 or CA 10.

Design Criteria. The design shall be according to the AASHTO Design Specifications for Prefabricated Modular Walls except as modified herein. The wall supplier shall be responsible for all external stability aspects of the wall design (including sliding, overturning, bearing pressure and stability of temporary construction slopes). The analyses of settlement and overall slope stability will be the responsibility of the Department.

Typical design procedures and details, once accepted by the Department, shall be followed. All wall system changes shall be submitted in advance to the Department for approval.

External loads, such as those applied through structure foundations, from traffic or railroads, slope surcharge etc., shall be accounted for in the external stability design. The presence of all appurtenances behind, in front of, mounted upon, or passing through the wall volume such as drainage structures, utilities, structure foundation elements or other items shall be accounted for in the external stability design of the wall.

Coulomb's lateral earth pressure theory shall be used to calculate the vertical and horizontal forces acting on the rear face of the precast modules.

The overturning calculations shall assume no more than 80 percent of the soil dead load within the precast modules available to resist overturning forces. Sliding calculations shall consider sliding both across the base and of the base across the foundation soils. The factors of safety against sliding and overturning must be no less than 1.5 and 2.0, respectively, and the computations shall confirm these factors of safety occur at each module level.

The maximum applied equivalent uniform bearing pressure under each module width shall be clearly indicated on the shop drawings submitted and shall be less than the allowable bearing pressure of the soil shown on the contract plans. Footings or other treatments to satisfy the bearing pressure requirements will be designed by the wall supplier and included in the wall bid price.

If the wall supplier needs additional information to complete the design, the Contractor shall be responsible for obtaining the information at no additional cost to the Department.

Construction Requirements. The Contractor shall obtain technical assistance from the supplier during wall erection to demonstrate proper construction procedures and shall include any costs related to this technical assistance in the unit price bid for this item.

The foundation soils for the structure shall be graded for a width equal to or exceeding the module width. Prior to wall construction, the foundation shall be compacted with a smooth wheel vibratory roller. Any foundation soils found to be unsuitable shall be removed and replaced, as directed by the Engineer, and shall be paid for separately according to Section 202 of the Standard Specifications.

The modules may not be loaded or shipped to the project site until they have obtained a minimum compressive strength of 3500 psi (24 MPa) and no sooner than seven days after casting. Precast modules shall be lifted and supported at the points indicated on the shop plans. They shall be stored off the ground. Stacked modules shall be separated by battens across the full width of each bearing point as recommended by the supplier to prevent concrete to concrete contact.

The first course of modules must be erected with particular care and adjustment as required to in correct the vertical, horizontal and transverse alignment. Poor alignment of the base course will magnify tolerance problems in upper modules and require dismantling and re-erection of the wall. A ¼ in. (6 mm) minimum and ¾ in. (18 mm) maximum joint separation shall be provided between adjacent modules at the face to prevent direct concrete to concrete contact. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾ in. (19 mm) when measured along a 10 ft. (3 m) straight edge. The overall vertical tolerance of the wall, (plumbness from top to bottom) shall not exceed 1/2 in. per 10 ft. (13 mm per 3 m) of wall height.

The rear face of all vertical and horizontal module joints shall be covered by a geotextile filter fabric, attached to the modules with a suitable adhesive. No adhesive will be allowed on this material directly over the joints to maintain fabric permeability. The minimum fabric width shall

be 12 in. (300 mm) and where laps must be used, a non-sewn lap of 6 in. (150 mm) shall be used as a minimum.

The select fill and porous granular embankment placement shall closely follow the erection of each lift of modules. The maximum lift thickness shall be placed according to the supplier's recommended procedures except, the lifts shall not exceed 10 in. (255 mm) loose measurement or as approved by the Engineer.

At the end of each day's operations, the Contractor shall shape the last level of select fill to permit runoff of rainwater away from the wall face. Select fill shall be compacted according to the project specifications for embankment except the minimum required compaction shall be 95 percent of maximum density as determined by AASHTO T 99. The Engineer will perform one density test per 5000 cu yd (3800 cu m) and not less than one test per 2 ft (0.6 m) of lift.

Method of Measurement. Precast Modular Retaining Wall will be measured for payment in square feet (square meters). The retaining wall will be measured from the "top of exposed module line" to the theoretical top of leveling pad line for the length of the wall as shown on the contract plans.

Basis of Payment. This work, including furnishing and placement of the precast modules, select fill, joint separation material, geotextile and other accessories will be paid for at the contract unit price per square foot (square meter) for PRECAST MODULAR RETAINING WALL.

Porous Granular Embankment placed outside of the select fill volume will be measured and paid for according to Section 207 of the Standard Specifications.

Concrete coping when specified on the contract plans will not be included for payment in this work but shall be included for payment as specified elsewhere in this contract.

State of Illinois  
Department of Transportation  
Bureau of Local Roads and Streets

SPECIAL PROVISION  
FOR  
INSURANCE

Effective: February 1, 2007  
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

- City of Rockford
- Rock River Water Reclamation District
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- 
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- 

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

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State of Illinois  
Department of Transportation  
Bureau of Local Roads and Streets  
SPECIAL PROVISION  
FOR  
CONSTRUCTION AND MAINTENANCE SIGNS

Effective: January 1, 2004  
Revised: June 1, 2007

All references to Sections or Articles in this specification shall be construed to mean a specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

701.14. Signs. Add the following paragraph to Article 701.14:

All warning signs shall have minimum dimensions of 1200 mm x 1200 mm (48" x 48") and have a black legend on a fluorescent orange reflectorized background, meeting, as a minimum, Type AP reflectivity requirements of Table 1091-2 in Article 1091.02.



**ABOVE GRADE INLET PROTECTION (BDE)**

Effective: July 1, 2009

Add the following to Article 280.02 of the Standard Specifications:

“(k) Above Grade Inlet Filter .....1081.15(i)”

Add the following paragraph after the second paragraph of Article 280.04(c) of the Standard Specifications:

“When above grade inlet filters are specified, they shall be of sufficient size to completely span and enclose the inlet structure. Prior to ordering materials, the Contractor shall determine the size of the various drainage structures being protected.”

Add the following paragraph after the second paragraph of Article 280.08(d) of the Standard Specifications:

“Protection of drainage structures with rigid inlet protection assemblies will be paid for at the contract unit price per each for ABOVE GRADE INLET FILTERS.”

Add the following to Article 1081.15 of the Standard Specifications:

“(i) Above Grade Inlet Filters. Above grade inlet filters shall consist of a rigid polyethylene frame covered with a fitted geotextile filter. A clean, used fitted filter and a used rigid polyethylene frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the above grade inlet filter assembly shall be according to the following.

(1) Frame Construction. Frame shall be constructed of a high density polyethylene copolymer. The design of the frame shall allow the structure to fit completely over the sewer inlet. The frame shall be a minimum of 26 in. (650 mm) tall and the top of the frame shall be designed with an opening to allow large volumes of water to pass through under high flow events. The frame shall conform to the following requirements:

Frame		
Material Property	Test Method	Value
Tensile Yield Strength	ASTM D 638	3600 psi (24.82 MPa)
Elongation at Break	ASTM D 638	>600%
Tensile-Impact Strength	ASTM D 1822	170 ft lb/sq in (230 J)
Brittleness Temperature	ASTM D 746	<-105°F (-76.11°C)
Environmental Stress Cracking	ASTM D 1693	>800 hours
Durometer Hardness, Shore A	ASTM D 2240	68

Vicat Softening Temperature	ASTM D 1525	254°F (123.33°C)
Deflection Temperature	ASTM D 648	157°F (69.44°C)
Coefficient of Linear Thermal Expansion	ASTM D 696	$7 \times 10^{-5}$ in/in/°F ( $12.6 \times 10^{-5}$ m/m/°C)
Bulk Density	ASTM D 1895	37 lbs/cu ft (592.7 kg/cu m)

- (2) Fitted Geotextile Filter. The sides of the fitted geotextile filter shall be constructed of 100 percent continuous polyester needle-punched fabric. The filter shall be fabricated to provide a direct fit to the frame. The top of the filter shall integrate a coarse screening to allow large volumes of water to pass through in the event of heavy flows. This screening shall have a minimum apparent opening of 1/2 in. (13 mm). The filter shall have integrated anti-buoyancy pockets capable of holding no less than 3.0 cu ft (0.08 cu m) of stabilization material. Each filter shall have a label with the following information sewn to or otherwise permanently adhered to the outside: manufacturer's name, product name, and lot, model or serial number. The fitted geotextile filter shall conform to the following requirements:

Fitted Geotextile Filter		
Material Property	Test Method	Minimum Avg. Roll Value
Weight	ASTM D 3776	3.0 oz/sq yd +/- 10% (71.1 grams/sq m)
Grab Tensile Strength	ASTM D 4632	80 lb min. (36.29 kg)
Grab Tensile Elongation	ASTM D 4632	50%
Bursting Strength	ASTM D 3786	150 psi min. (1.03 MPa)
Puncture Resistance	ASTM D 4833	50 lb min. (22.68 kg)
Trapezoid Tearing Strength	ASTM D 4533	30 lb min. (13.61 kg)
Apparent Opening Size	ASTM D 4751	Sieve No. 70 (0.212 mm)
Permittivity	ASTM D 4491	2.0/sec
Water Permeability	ASTM D 4491	102 gal/min/sq ft (4150 liter/min/sq m)
UV Resistance	ASTM D 4355	70% at 500 hours

- (3) Certification. The manufacturer shall furnish a certificate with each shipment of above grade inlet filter assemblies, stating the amount of product furnished and that the material complies with these requirements."

**AMERICAN RECOVERY AND REINVESTMENT ACT PROVISIONS (BDE)**

Effective: April 1, 2009

Required Contract Provision to Implement ARRA Section 902:

Section 902 of the American Recovery and Reinvestment Act (ARRA) of 2009 requires that each contract awarded using ARRA funds allow the U.S. Comptroller General and his representatives with the authority to:

- “(1) to examine any records of the Contractor or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or subcontract; and
- (2) to interview any officer or employee of the Contractor or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions.”

Accordingly, the Comptroller General and his representatives shall have the authority and rights as provided under Section 902 of the ARRA with respect to this contract, which is funded with funds made available under the ARRA. Section 902 further states that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of the Comptroller General.

Notification of the Authority of the Inspector General:

Section 1515(a) of the ARRA provides authority for any representatives of the Inspector General to examine any records or interview any employee or officers working on this contract. The Contractor is advised that representatives of the inspector general have the authority to examine any record and interview any employee or officer of the Contractor, its subcontractors or other firms working on this contract. Section 1515(b) further provides that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of an inspector general.

80243

## AMERICAN RECOVERY AND REINVESTMENT ACT SIGNING (BDE)

Effective: April 1, 2009

Revised: April 15, 2009

Description. This work shall consist of furnishing, fabricating and installing sign panels, complete with sign faces, legend, and supplemental panels according to Section 720 of the Standard Specifications and as specified herein.

Materials. The "Putting America to Work" sign shall be fabricated using Type AA or AZ fluorescent orange sheeting for the background material with black vinyl or black opaque ink legend, symbol and borders. The "American Recovery and Reinvestment Act" sign shall be fabricated using Type AP green sheeting for the background with Type AP white sheeting for the legend and border. A green translucent overlay film may also be used over white Type AP sheeting to fabricate the "American Recovery and Reinvestment Act" sign.

Sign Layout. See following attachment. The "Putting America to Work" sign shall be 84 in. x 18 in. The "American Recovery and Reinvestment Act" sign shall be 84 in x 60 in.

General. The signs shall be erected to applicable portions of Article 701.14 of the Standard Specifications. These signs shall be erected midway between the first and second warning signs as required by the traffic control plan and standards utilized for this project. If the second warning sign is defining a moving or intermittent operation, the sign may be maintained at a distance of 500 ft (150 m) beyond the first post mounted ROAD CONSTRUCTION AHEAD sign. The signs shall remain in place for the duration of the project. Upon completion of the project, the signs and posts shall be removed and shall remain the property of the Contractor.

Basis of Payment. This work will not be paid for separately but shall be included in the cost of Traffic Control items as shown on the plans.

80236

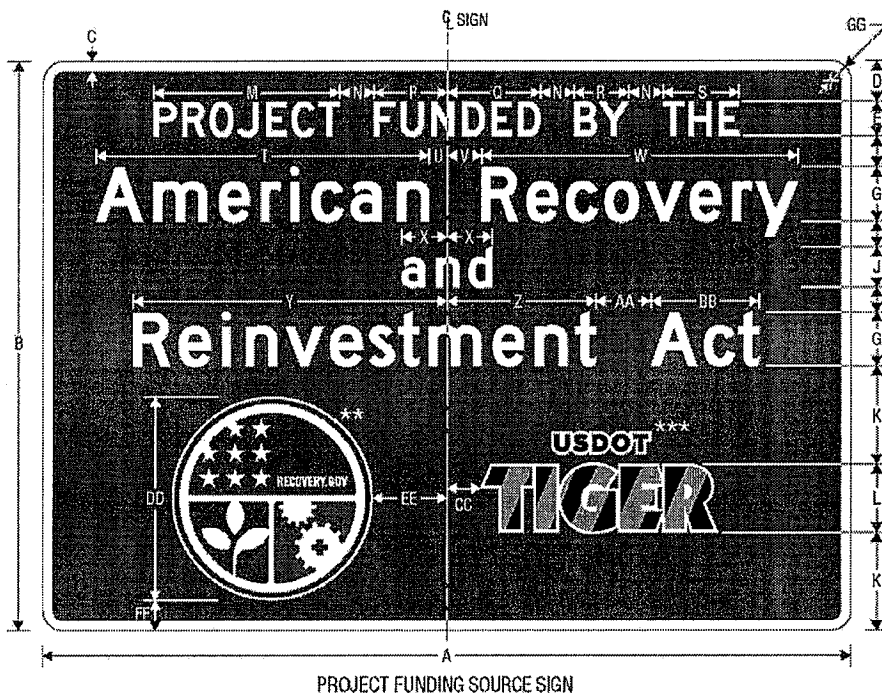
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**PROJECT FUNDING SOURCE SIGN ASSEMBLY  
AMERICAN RECOVERY AND REINVESTMENT ACT  
SIGN LAYOUT DETAILS**



PROJECT FUNDING SOURCE  
SIGN ASSEMBLY

**PROJECT FUNDING SOURCE SIGN ASSEMBLY  
AMERICAN RECOVERY AND REINVESTMENT ACT  
SIGN LAYOUT DETAILS**



NOTE: SIGN SHALL NOT BE INSTALLED WITHOUT PROJECT FUNDING SOURCE PLAQUE

Dimensions in inches

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	84	1.5	6	5 D	4.5	8 D*	3.75	6 D* (45 LC)	14.5	10	27.917	5	10.831
84	60	1	5	4 C	3.5	6 C*	3	4 D* (3 LC)	9.25	7	19.047	4	7.362

Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD
14.087	8.106	11.556	49.42	2.742	5.258	46.904	6.812	46.76	22.472	8	16.288	5	30
9.484	5.162	7.763	31.722	2.415	3.585	30.552	4.542	30.911	14.737	6	10.175	4	21

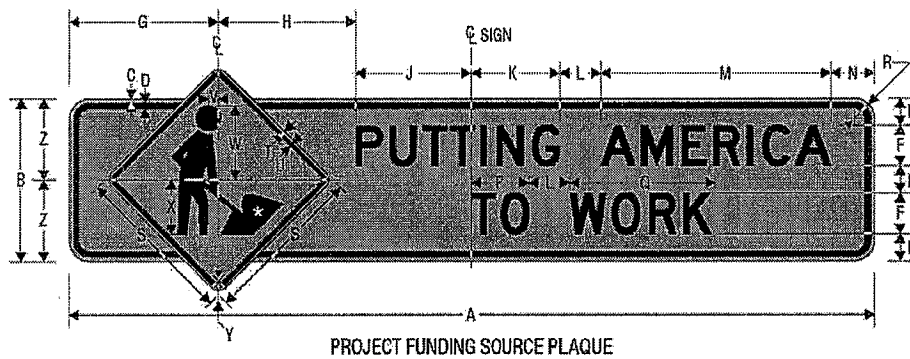
EE	FF	GG
11	4.5	3
7.5	2.25	2.25

\* Increase character spacing 50%  
\*\* See Pictograph  
\*\*\* See Pictograph

COLORS: LEGEND, BORDER — WHITE (RETROREFLECTIVE)  
BACKGROUND — GREEN (RETROREFLECTIVE)

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## PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



NOTE: PLAQUE SHALL NOT BE INSTALLED  
WITHOUT SIGN

\* See *Standard Highway Signs*  
Page 6-59 for symbol design.

Dimensions in inches

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	24	0.625	0.875	4	6 D	22.349	20.370	17.281	13.28	6	34.22	6.5	8.765
84	18	0.375	0.625	3.5	4 D	16.607	15.686	9.707	10.667	4	22.813	5	5.843

Q	R	S	T	U	V	W	X	Y	Z
21.013	3	24	0.375	0.625	1.5	11	8	1.5	12
14.009	2.25	18	0.375	0.625	1	7	6	1.5	9

COLORS: LEGEND, BORDER — BLACK  
BACKGROUND — ORANGE (RETROREFLECTIVE)

165

**PROJECT FUNDING SOURCE SIGN ASSEMBLY  
AMERICAN RECOVERY AND REINVESTMENT ACT  
SIGN LAYOUT DETAILS**



RECOVERY  
Vector-Based, Vinyl-Ready Pictograph

COLORS: LEGEND, OUTLINE	- WHITE (RETROREFLECTIVE)
BORDER	- BLUE (RETROREFLECTIVE)
BACKGROUND (UPPER)	- BLUE (RETROREFLECTIVE)
BACKGROUND (LOWER RIGHT)	- RED (RETROREFLECTIVE)
BACKGROUND (LOWER LEFT)	- GREEN (RETROREFLECTIVE)

1166



**PROJECT FUNDING SOURCE SIGN ASSEMBLY  
AMERICAN RECOVERY AND REINVESTMENT ACT  
SIGN LAYOUT DETAILS**



USDOT TIGER  
Vector-Based, Vinyl-Ready Pictograph

COLORS: OUTLINE — WHITE (RETROREFLECTIVE)  
USDOT LEGEND — BLACK  
TIGER DIAGONALS — BLACK,  
ORANGE (RETROREFLECTIVE)

**ALKALI-SILICA REACTION FOR PRECAST AND PRECAST PRESTRESSED CONCRETE (BDE)**

Effective: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in precast and precast prestressed concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to cast-in-place concrete.

Aggregate Expansion Values. Each coarse and fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II cement having a total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

AGGREGATE GROUPS			
Coarse Aggregate or Coarse Aggregate Blend  ASTM C 1260 Expansion	Fine Aggregate or Fine Aggregate Blend  ASTM C 1260 Expansion		
	≤ 0.16%	> 0.16% - 0.27%	> 0.27%
	≤ 0.16%	Group I	Group II
> 0.16% - 0.27%	Group II	Group II	Group III
> 0.27%	Group III	Group III	Group IV

Mixture Options. Based upon the aggregate group, the following mixture options shall be used; however, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

- Group I - Mixture options are not applicable. Use any cement or finely divided mineral.
- Group II - Mixture options 1, 2, 3, 4, or 5 shall be used.
- Group III - Mixture options 1, 2 and 3 combined, 4, or 5 shall be used.

Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

- a) Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used.

When a coarse or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

$$\text{Weighted Expansion Value} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots$$

Where: a, b, c... = percentage of aggregate in the blend;  
A, B, C... = expansion value for that aggregate.

- b) Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. The replacement ratio is defined as "finely divided mineral:portland cement".
- 1) Class F Fly Ash. For Class PC concrete, precast products, and PS concrete, Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.
  - 2) Class C Fly Ash. For Class PC Concrete, precast products, and Class PS concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.
  - 3) Ground Granulated Blast-Furnace Slag. For Class PC concrete, precast products, and Class PS concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.
  - 4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.
- c) Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.60 percent. When aggregate in Group II is involved, any finely divided mineral may be used with a portland cement.
- d) Mixture Option 4. The cement used shall have a maximum total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.45 percent. When aggregate in Group II or III is involved, any finely divided mineral may be used with a portland cement.
- e) Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is  $\leq 0.16$  percent when performed on the aggregate in

the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ), a new ASTM C 1567 test will not be required.

Testing. If an individual aggregate has an ASTM C 1260 expansion value  $> 0.16$  percent, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The ASTM C 1293 test shall be performed with Type I or II cement having a total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container or wick of absorbent material, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 or 1567 test result. The Engineer will not accept the result if the precision and bias for the test methods are not met.

The laboratory performing the ASTM C 1567 test shall either be accredited by the AASHTO Materials Reference Laboratory (AMRL) for ASTM C 227 under Portland Cement or Aggregate; or shall be inspected for Hydraulic Cement - Physical Tests by the Cement and Concrete Reference Laboratory (CCRL) and shall be approved by the Department. The laboratory performing the ASTM C 1293 test shall be inspected for Portland Cement Concrete by CCRL and shall be approved by the Department.

80213

**APPROVAL OF PROPOSED BORROW AREAS, USE AREAS, AND/OR WASTE AREAS  
(BDE)**

Effective: November 1, 2008

Revised: November 1, 2010

Replace the first paragraph of Article 107.22 of the Standard Specifications with the following:

"All proposed borrow areas, including commercial borrow areas; use areas, including, but not limited to temporary access roads, detours, runarounds, plant sites, and staging and storage areas; and/or waste areas are to be designated by the Contractor to the Engineer and approved prior to their use. Such areas outside the State of Illinois shall be evaluated, at no additional cost to the Department, according to the requirements of the state in which the area lies; and approval by the authority within that state having jurisdiction for such areas shall be forwarded to the Engineer. Such areas within Illinois shall be evaluated as described herein.

A location map delineating the proposed borrow area, use area, and/or waste area shall be submitted to the Engineer for approval along with an agreement from the property owner granting the Department permission to enter the property and conduct cultural and biological resource reconnaissance surveys of the site for archaeological resources, threatened or endangered species or their designated essential habitat, wetlands, prairies, and savannahs. The type of location map submitted shall be a topographic map, a plat map, or a 7.5 minute quadrangle map. Submittals shall include the intended use of the site and provide sufficient detail for the Engineer to determine the extent of impacts to the site. The Engineer will initiate cultural and biological resource reconnaissance surveys of the site, as necessary, at no cost to the Contractor. The Engineer will advise the Contractor of the expected time required to complete all surveys. If the proposed area is within 150 ft (45 m) of the highway right-of-way, a topographic map of the proposed site will be required as specified in Article 204.02."

80207

**BUILDING REMOVAL - CASE IV (NO ASBESTOS) (BDE)**

Effective: September 1, 1990  
Revised: April 1, 2010

BUILDING REMOVAL: This work shall consist of the removal and disposal of two building(s), together with all foundations, retaining walls, and piers, down to a plane 1 ft (300 mm) below the ultimate or existing grade in the area and also all incidental and collateral work necessary to complete the removal of the building(s) in a manner approved by the Engineer. Any holes, such as basements, shall be filled with a suitable granular material. The building(s) are identified as follows:

<u>Bldg. No.</u>	<u>Parcel No.</u>	<u>Location</u>	<u>Description</u>
No. 1	N/A	302+77 Rt.	Wooden backyard storage shed
No. 2	N/A	305+80 Rt.	Wooden backyard storage shed

Discontinuance of Utilities: The Contractor shall arrange for the discontinuance of all utility services and the removal of the metering devices that serve the building(s) according to the respective requirements and regulations of the City, County, or utility companies involved. The Contractor shall disconnect and seal, in an approved manner, all service outlets that serve any building(s) he/she is to remove.

Signs: Immediately upon execution of the contract and prior to the wrecking of any structures, the Contractor shall be required to paint or stencil, in contrasting colors of an oil base paint, on all four sides of each residence and two opposite sides of other structures, the following sign:

PROPERTY ACQUIRED FOR  
HIGHWAY CONSTRUCTION  
TO BE DEMOLISHED BY THE

VANDALS WILL BE PROSECUTED

The signs shall be positioned in a prominent location on the structure so that they can be easily seen and read and at a sufficient height to prevent defacing. The Contractor shall not paint signs nor start demolition of any building(s) prior to the time that the State becomes the owner of the respective building(s).

Basis of Payment: This work will be paid for at the contract lump sum unit price for BUILDING REMOVAL, numbers as listed above, which price shall be payment in full for complete removal of the buildings and structures, including any necessary backfilling material as specified herein.

The lump sum unit price(s) for this work shall represent the cost of demolition. Any salvage value shall be reflected in the contract unit price for this item.

Notifications: The "Demolition/Renovation Notice" form, which can be obtained from the IEPA office, shall be completed and submitted to the address listed below at least ten days prior to commencement of any demolition activity.

Asbestos Demolition/Renovation Coordinator  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
P. O. Box 19276  
Springfield, Illinois 62794-9276  
(217)785-1743

Notices shall be updated if there is a change in the starting date or the amount of asbestos changes by more than 20 percent.

Submittals:

- A. All submittals and notices shall be made to the Engineer except where otherwise specified herein.
- B. Prior to starting work, the Contractor shall submit proof of written notification and compliance with the "Notifications" paragraph.

50531

## CEMENT (BDE)

Effective: January 1, 2007

Revised: April 1, 2009

Revise Section 1001 of the Standard Specifications to read:

### "SECTION 1001. CEMENT

**1001.01 Cement Types.** Cement shall be according to the following.

- (a) Portland Cement. Acceptance of portland cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland cement shall be according to ASTM C 150, and shall meet the standard physical and chemical requirements. Type I or Type II may be used for cast-in-place, precast, and precast prestressed concrete. Type III may be used according to Article 1020.04, or when approved by the Engineer. All other cements referenced in ASTM C 150 may be used when approved by the Engineer.

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. The total of all inorganic processing additions shall be a maximum of 4.0 percent by weight (mass) of the cement. However, a cement kiln dust inorganic processing addition shall be limited to a maximum of 1.0 percent. Organic processing additions shall be limited to grinding aids that improve the flowability of cement, reduce pack set, and improve grinding efficiency. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302, Class C fly ash according to the chemical requirements of AASHTO M 295, and cement kiln dust.

- (b) Portland-Pozzolan Cement. Acceptance of portland-pozzolan cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland-pozzolan cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type IP may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. The pozzolan constituent for Type IP shall be a maximum of 21 percent of the weight (mass) of the portland-pozzolan cement.

For cast-in-place construction, portland-pozzolan cement shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-



reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall be limited to cement kiln dust at a maximum of 1.0 percent.

- (c) Portland Blast-Furnace Slag Cement. Acceptance of portland blast-furnace slag cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland blast-furnace slag cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type IS portland blast-furnace slag cement may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. The blast-furnace slag constituent for Type IS shall be a maximum of 25 percent of the weight (mass) of the portland blast-furnace slag cement.

For cast-in-place construction, portland blast-furnace slag cement shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall be limited to cement kiln dust at a maximum of 1.0 percent.

- (d) Rapid Hardening Cement. Rapid hardening cement shall be used according to Article 1020.04 or when approved by the Engineer. The cement shall be on the Department's current "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs", and shall be according to the following.

- (1) The cement shall have a maximum final set of 25 minutes, according to Illinois Modified ASTM C 191.
- (2) The cement shall have a minimum compressive strength of 2000 psi (13,800 kPa) at 3.0 hours, 3200 psi (22,100 kPa) at 6.0 hours, and 4000 psi (27,600 kPa) at 24.0 hours, according to Illinois Modified ASTM C 109.
- (3) The cement shall have a maximum drying shrinkage of 0.050 percent at seven days, according to Illinois Modified ASTM C 596.

- (4) The cement shall have a maximum expansion of 0.020 percent at 14 days, according to Illinois Modified ASTM C 1038.
- (5) The cement shall have a minimum 80 percent relative dynamic modulus of elasticity; and shall not have a weight (mass) gain in excess of 0.15 percent or a weight (mass) loss in excess of 1.0 percent, after 100 cycles, according to AASHTO T 161, Procedure B.
- (e) Calcium Aluminate Cement. Calcium aluminate cement shall be used only where specified by the Engineer. The cement shall meet the standard physical requirements for Type I cement according to ASTM C 150, except the time of setting shall not apply. The chemical requirements shall be determined according to ASTM C 114 and shall be as follows: minimum 38 percent aluminum oxide ( $Al_2O_3$ ), maximum 42 percent calcium oxide (CaO), maximum 1 percent magnesium oxide (MgO), maximum 0.4 percent sulfur trioxide ( $SO_3$ ), maximum 1 percent loss on ignition, and maximum 3.5 percent insoluble residue.

**1001.02 Uniformity of Color.** Cement contained in single loads or in shipments of several loads to the same project shall not have visible differences in color.

**1001.03 Mixing Brands and Types.** Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall not be mixed or used alternately in the same item of construction unless approved by the Engineer.

**1001.04 Storage.** Cement shall be stored and protected against damage, such as dampness which may cause partial set or hardened lumps. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall be kept separate.”

80166

## CERTIFICATION OF METAL FABRICATOR (BDE)

Effective: July 1, 2010

Revise Article 106.08 of the Standard Specifications to read:

**“106.08 Certification of Metal Fabricator.** All fabricators performing work on metal components of structures shall be certified under the appropriate category of the AISC Quality Certification Program as follows.

- (a) Fabricators of the main load carrying steel components of welded plate girder, box girder, truss, and arch structures shall be certified under Category MBr (Major Steel Bridges).
- (b) Fabricators of the main load carrying steel components of rolled beam structures, either simple span or continuous, and overhead sign structures shall be certified under Category SBr (Simple Steel Bridges).

Fabricators of steel or other non-ferrous metal components of structures not certified under (a) or (b) above shall be certified under the program for Bridge and Highway Metal Component Manufacturers.”

80260

## CONCRETE ADMIXTURES (BDE)

Effective: January 1, 2003

Revised: April 1, 2009

Replace the first paragraph of Article 1020.05(b) of the Standard Specifications to read:

"(b) Admixtures. The use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted when approved by the Engineer. Admixture dosages shall result in the mixture meeting the specified plastic and hardened properties. The Department will maintain an Approved List of Corrosion Inhibitors. Corrosion inhibitor dosage rates shall be according to Article 1020.05(b)(12). The Department will also maintain an Approved List of Concrete Admixtures, and an admixture technical representative shall be consulted when determining an admixture dosage from this list. The dosage shall be within the range indicated on the approved list unless the influence by other admixtures, jobsite conditions (such as a very short haul time), or other circumstances warrant a dosage outside the range. The Engineer shall be notified when a dosage is proposed outside the range. To determine an admixture dosage, air temperature, concrete temperature, cement source and quantity, finely divided mineral sources(s) and quantity, influence of other admixtures, haul time, placement conditions, and other factors as appropriate shall be considered. The Engineer may request the Contractor to have a batch of concrete mixed in the lab or field to verify the admixture dosage is correct. An admixture dosage or combination of admixture dosages shall not delay the initial set of concrete by more than one hour. When a retarding admixture is required or appropriate for a bridge deck or bridge deck overlayer pour, the initial set time shall be delayed until the deflections due to the concrete dead load are no longer a concern for inducing cracks in the completed work. However, a retarding admixture shall not be used to further extend the pour time and justify the alteration of a bridge deck pour sequence.

When determining water in admixtures for water/cement ratio, the Contractor shall calculate 70 percent of the admixture dosage as water, except a value of 50 percent shall be used for a latex admixture used in bridge deck latex concrete overlays."

Revise Section 1021 of the Standard Specifications to read:

### "SECTION 1021. CONCRETE ADMIXTURES

**1021.01 General.** Admixtures shall be furnished in liquid form ready for use. The admixtures shall be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer and trade name of the material. Containers shall be readily identifiable as to manufacturer and trade name of the material they contain.

Corrosion inhibitors will be maintained on the Department's Approved List of Corrosion Inhibitors. All other concrete admixture products will be maintained on the Department's

Approved List of Concrete Admixtures. For the admixture submittal, a report prepared by an independent laboratory accredited by the AASHTO Materials Reference Laboratory (AMRL) for Portland Cement Concrete shall be provided. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications. However, for corrosion inhibitors the ASTM G 109 test information specified in ASTM C 1582 is not required to be from an independent lab. All other information in ASTM C 1582 shall be from an independent lab.

Tests shall be conducted using materials and methods specified on a "test" concrete and a "reference" concrete, together with a certification that no changes have been made in the formulation of the material since the performance of the tests. Per the manufacturer's option, the cement content for all required tests shall either be according to applicable specifications or 5.65 cwt/cu yd (335 kg/cu m). Compressive strength test results for six months and one year will not be required.

Prior to the approval of an admixture, the Engineer reserves the right to request a sample for testing. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). For freeze-thaw testing, the Department will perform the test according to AASHTO T 161, Procedure B. The flexural strength test will be performed according to AASHTO T 177. If the Engineer decides to test the admixture, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The test and reference concrete mixture shall contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by AASHTO.

The manufacturer shall include in the submittal the following admixture information: the manufacturing range for specific gravity, the midpoint and manufacturing range for residue by oven drying, and the manufacturing range for pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

For air-entraining admixtures according to Article 1021.02, the specific gravity allowable manufacturing range shall be established by the manufacturer and the test method shall be according to ASTM C 494. For residue by oven drying and pH, the allowable manufacturing range and test methods shall be according to ASTM C 260.

For admixtures according to Articles 1021.03, 1021.04, 1021.05, 1021.06, and 1021.07, the pH allowable manufacturing range shall be established by the manufacturer and the test method shall be according to ASTM E 70. For specific gravity and residue by oven drying, the allowable manufacturing range and test methods shall be according to ASTM C 494.

When test results are more than seven years old, the manufacturer shall re-submit the infrared spectrophotometer trace and the report prepared by an independent laboratory accredited by AASHTO.

All admixtures, except chloride-based accelerators, shall contain a maximum of 0.3 percent chloride by weight (mass).

Random field samples may be taken by the Department to verify an admixture meets specification. A split sample will be provided to the manufacturer if requested. Admixtures that do not meet specification requirements or an allowable manufacturing range established by the manufacturer shall be replaced with new material.

**1021.02 Air-Entraining Admixtures.** Air-entraining admixtures shall be according to AASHTO M 154.

**1021.03 Retarding and Water-Reducing Admixtures.** The admixture shall be according to the following.

- (a) The retarding admixture shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
- (b) The water-reducing admixture shall be according to AASHTO M 194, Type A.
- (c) The high range water-reducing admixture shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

**1021.04 Accelerating Admixtures.** The admixture shall be according to AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating).

**1021.05 Self-Consolidating Admixtures.** The self-consolidating admixture system shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a concrete mixture that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

The high range water-reducing admixture shall be according to AASHTO M 194, Type F.

The viscosity modifying admixture shall be according to ASTM C 494, Type S (specific performance).

**1021.06 Rheology-Controlling Admixture.** The rheology-controlling admixture shall be capable of producing a concrete mixture with a lower yield stress that will consolidate easier for slipform applications used by the Contractor. The rheology-controlling admixture shall be according to ASTM C 494, Type S (specific performance).

**1021.07 Corrosion Inhibitor.** The corrosion inhibitor shall be according to one of the following.

- (a) Calcium Nitrite. The corrosion inhibitor shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution, and shall comply with the requirements of AASHTO M 194, Type C (accelerating).
- (b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582.”

80094

## CONCRETE MIX DESIGNS (BDE)

Effective: April 1, 2009

Add the following to Article 1020.05(c) of the Standard Specifications:

"(5) Performance Based Finely Divided Mineral Combination. For Class PV and SI concrete a performance based finely divided mineral combination may be used. The minimum cement factor, maximum cement factor, and water cement ratio of Article 1020.04 shall be replaced with the values below, and the performance based finely divided mineral combination herein is an alternative to Articles 1020.05(c)(1), (c)(2), (c)(3), and (c)(4). The mix design shall meet the following requirements and the Engineer may request a trial batch.

- a. The mixture shall contain a minimum of 375 lbs/cu yd (222 kg/cu m) of portland cement. For a blended cement, a sufficient amount shall be used to obtain the required 375 lbs/cu yd (222 kg/cu m) of portland cement in the mixture. For example, a blended cement stated to have 20 percent finely divided mineral, ignoring any ASTM C 595 tolerance on the 20 percent, would require a minimum of 469 lbs/cu yd (278 kg/cu m) of material in the mixture. When the mixture is designed for cement content from 375 lbs/cu yd (222 kg/cu m) to 400 lbs/cu yd (237 kg/cu m), the total of organic processing additions, inorganic processing additions, and limestone addition in the cement shall not exceed 5.0 percent.
- b. The mixture shall contain a maximum of two finely divided minerals. The finely divided mineral in a blended cement shall count toward the total number of finely divided minerals allowed. The finely divided mineral(s) shall constitute a maximum of 35.0 percent of the total cement plus finely divided mineral(s). The fly ash portion shall not exceed 30.0 percent for Class C fly ash or 25.0 percent for Class F fly ash. The Class C and F fly ash combination shall not exceed 30.0 percent. The ground granulated blast-furnace slag portion shall not exceed 35.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed 5.0 percent. The finely divided mineral in the blended cement shall apply to the maximum 35.0 percent, and shall be determined as discussed in a. above for determining portland cement in blended cement.
- c. For central mixed Class PV and SI concrete, the mixture shall contain a minimum of 535 lbs/cu yd (320 kg/cu m) of cement and finely divided mineral(s) summed together, and a water-reducing admixture shall be used. The value shall be 565 lbs/cu yd (335 kg/cu m) without a water-reducing admixture.

For truck mixed or shrink mixed Class PV and SI concrete, the mixture shall contain a minimum of 575 lbs/cu yd (345 kg/cu m) of cement and finely



divided mineral(s) summed together, and a water-reducing admixture shall be used. The value shall be 605 lbs/cu yd (360 kg/cu m) without a water-reducing admixture.

- d. The mixture shall contain a maximum of 705 lbs/cu yd (418 kg/cu m) of cement and finely divided mineral(s) summed together.
- e. The mixture shall have a water/cement ratio of 0.32 – 0.44.
- f. The mixture shall not be used for placement underwater.
- g. The combination of cement and finely divided mineral(s) shall have an ASTM C 1567 expansion value  $\leq 0.16$  percent, and shall be performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly.

If during the two year time period the Contractor needs to replace the portland cement, and the replacement portland cement has an equal or lower total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ), a new ASTM C 1567 test will not be required. However, replacement of a blended cement with another cement will require a new ASTM C 1567 test.”

80226

## CONSTRUCTION AIR QUALITY - DIESEL VEHICLE EMISSIONS CONTROL (BDE)

Effective: April 1, 2009

Revised: July 1, 2009

Diesel Vehicle Emissions Control. The reduction of construction air emissions shall be accomplished by using cleaner burning diesel fuel. The term "equipment" refers to any and all diesel fuel powered devices rated at 50 hp and above, to be used on the project site in excess of seven calendar days over the course of the construction period on the project site (including any "rental" equipment).

All equipment on the jobsite, with engine ratings of 50 hp and above, shall be required to: use Ultra Low Sulfur Diesel fuel (ULSD) exclusively (15 ppm sulfur content or less).

Diesel powered equipment in non-compliance will not be allowed to be used on the project site, and is also subject to a notice of non-compliance as outlined below.

The Contractor shall submit copies of monthly summary reports and include certified copies of the ULSD diesel fuel delivery slips for diesel fuel delivered to the jobsite for the reporting time period, noting the quantity of diesel fuel used.

If any diesel powered equipment is found to be in non-compliance with any portion of this specification, the Engineer will issue the Contractor a notice of non-compliance and identify an appropriate period of time, as outlined below under environmental deficiency deduction, in which to bring the equipment into compliance or remove it from the project site.

Any costs associated with bringing any diesel powered equipment into compliance with these diesel vehicle emissions controls shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall also not be grounds for a claim.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists, he/she will notify the Contractor in writing, and direct the Contractor to correct the deficiency within a specified time period. The specified time-period, which begins upon Contractor notification, will be from 1/2 hour to 24 hours long, based on the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge regarding the time period.

The deficiency will be based on lack of repair, maintenance and diesel vehicle emissions control.

If the Contractor fails to correct the deficiency within the specified time frame, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end

with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

If a Contractor or subcontractor accumulates three environmental deficiency deductions in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of contract time, waiver of penalties, or be grounds for any claim.

80237

## CONSTRUCTION AIR QUALITY - IDLING RESTRICTIONS (BDE)

Effective: April 1, 2009

Idling Restrictions. The Contractor shall establish truck-staging areas for all diesel powered vehicles that are waiting to load or unload material at the jobsite. Staging areas shall be located where the diesel emissions from the equipment will have a minimum impact on adjacent sensitive receptors. The Department will review the selection of staging areas, whether within or outside the existing highway right-of-way, to avoid locations near sensitive areas or populations to the extent possible. Sensitive receptors include, but are not limited to, hospitals, schools, residences, motels, hotels, daycare facilities, elderly housing and convalescent facilities. Diesel powered engines shall also be located as far away as possible from fresh air intakes, air conditioners, and windows. The Engineer will approve staging areas before implementation.

Diesel powered vehicle operators may not cause or allow the motor vehicle, when it is not in motion, to idle for more than a total of 10 minutes within any 60 minute period, except under any of the following circumstances:

- 1) The motor vehicle has a gross vehicle weight rating of less than 8000 lb (3630 kg).
- 2) The motor vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
- 3) The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.
- 4) A police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator.
- 5) The primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.
- 6) A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
- 7) When idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations, lumbering operations; oil or gas well servicing; or farming operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions.
- 8) When the motor vehicle idles due to mechanical difficulties over which the operator has no control.
- 9) The outdoor temperature is less than 32 °F (0 °C) or greater than 80 °F (26 °C).

When the outdoor temperature is greater than or equal to 32 °F (0 °C) or less than or equal to 80 °F (26 °C), a person who operates a motor vehicle operating on diesel fuel shall not cause or allow the motor vehicle to idle for a period greater than 30 minutes in any 60 minute period while waiting to weigh, load, or unload cargo or freight, unless the vehicle is in a line of vehicles that regularly and periodically moves forward.

The above requirements do not prohibit the operation of an auxiliary power unit or generator set as an alternative to idling the main engine of a motor vehicle operating on diesel fuel.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists based on non-compliance with the idling restrictions, he/she will notify the Contractor, and direct the Contractor to correct the deficiency.

If the Contractor fails to correct the deficiency a monetary deduction will be imposed. The monetary deduction will be \$1,000.00 for each deficiency identified.

80239

## DETERMINATION OF THICKNESS (BDE)

Effective: April 1, 2009

Revise Articles 353.12 and 353.13 of the Standard Specifications to Articles 353.13 and 353.14 respectively.

Add the following Article to the Standard Specifications:

**“353.12 Tolerance in Thickness.** The thickness of base course pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction, bike paths, and individual locations less than 500 ft (150 m) long, will be evaluated. Temporary construction is defined as those areas constructed and removed under the same contract. If the base course cannot be cored for thickness prior to placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s), and subtract them from the measured core thickness to determine the base course thickness.

The procedure described in Article 407.10(b) will be followed, except the option of correcting deficient pavement with additional lift(s) shall not apply.”

Revise Article 354.09 of the Standard Specifications to read:

**“354.09 Tolerance in Thickness.** The thickness of base course widening pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction; bike paths and individual locations less than 3 ft (1 m) wide or 1000 ft (300 m) long, will be evaluated. Temporary construction is defined as those areas constructed and removed under the same contract. If the base course widening cannot be cored for thickness prior to placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s), and subtract them from the measured core thickness to determine the base course widening thickness.

The procedure described in Article 407.10(b) will be followed, except:

- (a) The width of a unit shall be the width of the widening along one edge of the pavement.
- (b) The length of the unit shall be 1000 ft (300 m).
- (c) The option of correcting deficient pavement with additional lift(s) shall not apply.”

Revise Article 355.09 of the Standard Specifications to read:

**“355.09 Tolerance in Thickness.** The thickness of HMA base course pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction; bike paths and individual locations less than 500 ft (150 m) long, will be evaluated according to Article 407.10(b). Temporary construction is defined as those areas constructed and removed under the same contract. If the base course cannot be cored for thickness prior to

placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s), and subtract them from the measured core thickness to determine the base course thickness.”

Revise Article 356.07 of the Standard Specifications to read:

**“356.07 Tolerance in Thickness.** The thickness of HMA base course widening pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous area, except for temporary construction; bike paths and individual locations less than 3 ft (1 m) wide or 1000 ft (300 m) long, will be evaluated according to Article 407.10(b) except, the width of a unit shall be the width of the widening along one edge of the pavement and the length of a unit shall be 1000 ft (300 m). Temporary locations are defined as those constructed and removed under the same contract. If the base course widening cannot be cored for thickness prior to placement of the cover layer(s), the Engineer will determine the thickness of the cover layer(s) and subtract them from the measured core thickness to determine the base course widening thickness.”

Revise Article 407.10 of the Standard Specifications to read:

**“407.10 Tolerance in Thickness.** Determination of pavement thickness shall be performed after the pavement surface tests and corrective action have been completed according to Article 407.09. Pay adjustments made for pavement thickness will be in addition to and independent of those made for pavement smoothness. Pavement pay items that individually contain at least 1000 sq yd (840 sq m) of contiguous pavement shall be evaluated with the following exclusions: temporary pavements; variable width pavements; radius returns; short lengths of contiguous pavements less than 500 ft (125 m) in length; and constant width portions of turn lanes less than 500 ft (125 m) in length. Temporary pavements are defined as pavements constructed and removed under the same contract.

The method described in Article 407.10(a), shall be used except for those pavements constructed in areas where access to side streets and entrances necessitates construction in segments less than 1000 ft (300 m). The method described in Article 407.10(b) shall be used in areas where access to side streets and entrances necessitates construction in segments less than 1000 ft (300 m).

(a) Percent Within Limits. The percent within limits (PWL) method shall be as follows.

- (1) Lots and Sublots. The pavement will be divided into approximately equal lots of not more than 5000 ft (1500 m) in length. When the length of a continuous strip of pavement is 500 ft (150 m) or greater but less than 5000 ft (1500 m), these short lengths of pavement, ramps, turn lanes, and other short sections of continuous pavement will be grouped together to form lots approximately 5000 ft (1500 m) in length. Short segments between structures will be measured continuously with the structure segments omitted. Each lot will be subdivided into ten equal sublots. The width of a subplot and lot will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.

- (2) Cores. Cores 2 in. (50 mm) in diameter shall be taken from the pavement by the Contractor, at locations selected by the Engineer. The exact location for each core will be selected at random, but will result in one core per subplot. Core locations will be specified prior to beginning the coring operations.

The Contractor and the Engineer shall witness the coring operations, as well as the measuring and recording of the core lengths. The cores will be measured with a device supplied by the Department immediately upon removal from the core bit and prior to moving to the next core location. Upon concurrence of the length, the core samples shall be disposed of according to Article 202.03.

Upon completion of each core, all water shall be removed from the hole and the hole then filled with a rapid hardening mortar or concrete. The material shall be mixed in a separate container, placed in the hole, consolidated by rodding, and struck-off flush with the adjacent pavement.

- (3) Deficient Sublot. When the length of the core in a subplot is deficient by more than ten percent of plan thickness, the Contractor may take three additional cores within that subplot at locations selected at random by the Engineer. If the Contractor chooses not to take additional cores, the pavement in that subplot shall be removed and replaced.

When the three additional cores are taken, the length of those cores will be averaged with the original core length. If the average shows the subplot to be deficient by ten percent or less, no additional action is necessary. If the average shows the subplot to be deficient by more than ten percent, the pavement in that subplot shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such deficient sublots to remain in place. For deficient sublots allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When a deficient subplot is removed and replaced, or additional lifts are placed, the corrected subplot shall be retested for thickness. The length of the new core taken in the subplot will be used in determining the PWL for the lot.

When a deficient subplot is left in place, and no additional lift(s) are placed, no payment will be made for the deficient subplot. The length of the original core taken in the subplot will be used in determining the PWL for the lot.

- (4) Deficient Lot. After addressing deficient sublots, the PWL for each lot will be determined. When the PWL of a lot is 60 percent or less, the pavement in that lot shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such deficient lots to remain in place.



For deficient lots allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When a deficient lot is removed and replaced, or additional lifts are placed, the corrected lot shall be retested for thickness. The PWL for the lot will then be recalculated based upon the new cores; however, the pay factor for the lot shall be a maximum of 100 percent.

When a deficient lot is left in place, and no additional lift(s) are placed, the PWL for the lot will not be recalculated.

- (5) Right of Discovery. When the Engineer has reason to believe the random core selection process will not accurately represent the true conditions of the work, he/she may order additional cores. The additional cores shall be taken at specific locations determined by the Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action. The need for, and location of, additional cores will be determined prior to commencement of coring operations.

When the additional cores show the pavement to be deficient by more than ten percent of plan thickness, more additional cores shall be taken to determine the limits of the deficient pavement and that area shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such areas of deficient pavement to remain in place. The area of deficient pavement will be defined using the length between two acceptable cores and the full width of the subplot. An acceptable core is a core with a length of at least 90 percent of plan thickness.

For deficient areas allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When an area of deficient pavement is removed and replaced, or additional lifts are placed, the corrected pavement shall be retested for thickness.

When an area of deficient pavement is left in place, and no additional lift(s) are placed, no payment will be made for the deficient pavement.

When the additional cores show the pavement to be at least 90 percent of plan thickness, the additional cores will be paid for according to Article 109.04.

- (6) Profile Index Adjustment. After any area of pavement is removed and replaced or any additional lifts are placed, the corrected areas shall be retested for pavement smoothness and any necessary profile index adjustments and/or corrections will be made based on these final profile readings prior to retesting for thickness.
- (7) Determination of PWL. The PWL for each lot will be determined as follows.

Definitions:

- $x_i$  = Individual values (core lengths) under consideration  
 $n$  = Number of individual values under consideration (10 per lot)  
 $\bar{x}$  = Average of the values under consideration  
 $LSL$  = Lower Specification Limit (98% of plan thickness)  
 $Q_L$  = Lower Quality Index  
 $S$  = Sample Standard Deviation  
 $PWL$  = Percent Within Limits

Determine  $\bar{x}$  for the lot to the nearest two decimal places.

Determine  $S$  for the lot to the nearest three decimal places using:

$$S = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n-1}} \quad \text{where} \quad \sum(x_i - \bar{x})^2 = (x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \dots + (x_{10} - \bar{x})^2$$

Determine  $Q_L$  for the lot to the nearest two decimal places using:

$$Q_L = \frac{(\bar{x} - LSL)}{S}$$

Determine PWL for the lot using the  $Q_L$  and the following table. For  $Q_L$  values less than zero the value shown in the table must be subtracted from 100 to obtain PWL.

- (8) Pay Factors. The pay factor (PF) for each lot will be determined, to the nearest two decimal places, using:

$$PF \text{ (in percent)} = 55 + 0.5 (PWL)$$

If  $\bar{x}$  for a lot is less than the plan thickness, the maximum PF for that lot shall be 100 percent.

- (9) Payment. Payment of incentive or disincentive for pay items subject to the PWL method will be calculated using:

$$\text{Payment} = (((TPF/100)-1) \times CUP) \times (TOTPAVT - DEFPAVT)$$

TPF = Total Pay Factor

CUP = Contract Unit Price  
TOTPAVT = Area of Pavement Subject to Coring  
DEFPAVT = Area of Deficient Pavement

The TPF for the pavement shall be the average of the PF for all the lots; however, the TPF shall not exceed 102 percent.

Area of Deficient pavement (DEFPAVT) is defined as an area of pavement represented by a subplot deficient by more than ten percent which is left in place with no additional thickness added.

Area of Pavement Subject to Coring (TOTPAVT) is defined as those pavement areas included in lots for pavement thickness determination.

PERCENT WITHIN LIMITS							
Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)
0.00	50.00	0.40	65.07	0.80	78.43	1.20	88.76
0.01	50.38	0.41	65.43	0.81	78.72	1.21	88.97
0.02	50.77	0.42	65.79	0.82	79.02	1.22	89.17
0.03	51.15	0.43	66.15	0.83	79.31	1.23	89.38
0.04	51.54	0.44	66.51	0.84	79.61	1.24	89.58
0.05	51.92	0.45	66.87	0.85	79.90	1.25	89.79
0.06	52.30	0.46	67.22	0.86	80.19	1.26	89.99
0.07	52.69	0.47	67.57	0.87	80.47	1.27	90.19
0.08	53.07	0.48	67.93	0.88	80.76	1.28	90.38
0.09	53.46	0.49	68.28	0.89	81.04	1.29	90.58
0.10	53.84	0.50	68.63	0.90	81.33	1.30	90.78
0.11	54.22	0.51	68.98	0.91	81.61	1.31	90.96
0.12	54.60	0.52	69.32	0.92	81.88	1.32	91.15
0.13	54.99	0.53	69.67	0.93	82.16	1.33	91.33
0.14	55.37	0.54	70.01	0.94	82.43	1.34	91.52
0.15	55.75	0.55	70.36	0.95	82.71	1.35	91.70
0.16	56.13	0.56	70.70	0.96	82.97	1.36	91.87
0.17	56.51	0.57	71.04	0.97	83.24	1.37	92.04
0.18	56.89	0.58	71.38	0.98	83.50	1.38	92.22
0.19	57.27	0.59	71.72	0.99	83.77	1.39	92.39
0.20	57.65	0.60	72.06	1.00	84.03	1.40	92.56
0.21	58.03	0.61	72.39	1.01	84.28	1.41	92.72
0.22	58.40	0.62	72.72	1.02	84.53	1.42	92.88
0.23	58.78	0.63	73.06	1.03	84.79	1.43	93.05
0.24	59.15	0.64	73.39	1.04	85.04	1.44	93.21
0.25	59.53	0.65	73.72	1.05	85.29	1.45	93.37
0.26	59.90	0.66	74.04	1.06	85.53	1.46	93.52
0.27	60.28	0.67	74.36	1.07	85.77	1.47	93.67
0.28	60.65	0.68	74.69	1.08	86.02	1.48	93.83
0.29	61.03	0.69	75.01	1.09	86.26	1.49	93.98
0.30	61.40	0.70	75.33	1.10	86.50	1.50	94.13
0.31	61.77	0.71	75.64	1.11	86.73	1.51	94.27
0.32	62.14	0.72	75.96	1.12	86.96	1.52	94.41
0.33	62.51	0.73	76.27	1.13	87.20	1.53	94.54
0.34	62.88	0.74	76.59	1.14	87.43	1.54	94.68
0.35	63.25	0.75	76.90	1.15	87.66	1.55	94.82
0.36	63.61	0.76	77.21	1.16	87.88	1.56	94.95
0.37	63.98	0.77	77.51	1.17	88.10	1.57	95.08
0.38	64.34	0.78	77.82	1.18	88.32	1.58	95.20
0.39	64.71	0.79	78.12	1.19	88.54	1.59	95.33

\*For Q<sub>L</sub> values less than zero, subtract the table value from 100 to obtain PWL

PERCENT WITHIN LIMITS (continued)					
Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)	Quality Index (Q <sub>L</sub> )*	Percent Within Limits (PWL)
1.60	95.46	2.00	98.83	2.40	99.89
1.61	95.58	2.01	98.88	2.41	99.90
1.62	95.70	2.02	98.92	2.42	99.91
1.63	95.81	2.03	98.97	2.43	99.91
1.64	95.93	2.04	99.01	2.44	99.92
1.65	96.05	2.05	99.06	2.45	99.93
1.66	96.16	2.06	99.10	2.46	99.94
1.67	96.27	2.07	99.14	2.47	99.94
1.68	96.37	2.08	99.18	2.48	99.95
1.69	96.48	2.09	99.22	2.49	99.95
1.70	96.59	2.10	99.26	2.50	99.96
1.71	96.69	2.11	99.29	2.51	99.96
1.72	96.78	2.12	99.32	2.52	99.97
1.73	96.88	2.13	99.36	2.53	99.97
1.74	96.97	2.14	99.39	2.54	99.98
1.75	97.07	2.15	99.42	2.55	99.98
1.76	97.16	2.16	99.45	2.56	99.98
1.77	97.25	2.17	99.48	2.57	99.98
1.78	97.33	2.18	99.50	2.58	99.99
1.79	97.42	2.19	99.53	2.59	99.99
1.80	97.51	2.20	99.56	2.60	99.99
1.81	97.59	2.21	99.58	2.61	99.99
1.82	97.67	2.22	99.61	2.62	99.99
1.83	97.75	2.23	99.63	2.63	100.00
1.84	97.83	2.22	99.66	2.64	100.00
1.85	97.91	2.25	99.68	≥ 2.65	100.00
1.86	97.98	2.26	99.70		
1.87	98.05	2.27	99.72		
1.88	98.11	2.28	99.73		
1.89	98.18	2.29	99.75		
1.90	98.25	2.30	99.77		
1.91	98.31	2.31	99.78		
1.92	98.37	2.32	99.80		
1.93	98.44	2.33	99.81		
1.94	98.50	2.34	99.83		
1.95	98.56	2.35	99.84		
1.96	98.61	2.36	99.85		
1.97	98.67	2.37	99.86		
1.98	98.72	2.38	99.87		
1.99	98.78	2.39	99.88		

\*For Q<sub>L</sub> values less than zero, subtract the table value from 100 to obtain PWL

(b) Minimum Thickness. The minimum thickness method shall be as follows.

- (1) Length of Units. The length of a unit will be a continuous strip of pavement 500 ft (150 m) in length.
- (2) Width of Units. The width of a unit will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.
- (3) Thickness Measurements. Pavement thickness will be based on 2 in. (50 mm) diameter cores.

Cores shall be taken from the pavement by the Contractor at locations selected by the Engineer. When determining the thickness of a unit, one core shall be taken in each unit.

The Contractor and the Engineer shall witness the coring operations, as well as the measuring and recording of the cores. Core measurements will be determined immediately upon removal from the core bit and prior to moving to the next core location. Upon concurrence of the length, the core samples may be disposed of according to Article 202.03.

Upon completion of each core, all water shall be removed from the hole and the hole then filled with a rapid hardening mortar or concrete. The material shall be mixed in a separate container, placed in the hole, consolidated by rodding, and struck-off flush with the adjacent pavement.

- (4) Unit Deficient in Thickness. In considering any portion of the pavement that is deficient, the entire limits of the unit will be used in computing the deficiency or determining the remedial action required.
- (5) Thickness Equals or Exceeds Specified Thickness. When the thickness of a unit equals or exceeds the specified plan thickness, payment will be made at the contract unit price per square yard (square meter) for the specified thickness.
- (6) Thickness Deficient by Ten Percent or Less. When the thickness of a unit is less than the specified plan thickness by ten percent or less, a deficiency deduction will be assessed against payment for the item involved. The deficiency will be a percentage of the contract unit price as given in the following table.

Percent Deficiency (of Plan Thickness)	Percent Deduction (of Contract Unit Price)
0.0 to 2.0	0
2.1 to 3.0	20
3.1 to 4.0	28
4.1 to 5.0	32
5.1 to 7.5	43
7.6 to 10.0	50

- (7) Thickness Deficient by More than Ten Percent. When a core shows the pavement to be deficient by more than ten percent of plan thickness, additional cores shall be taken on each side of the deficient core, at stations selected by the Contractor and offsets selected by the Engineer, to determine the limits of the deficient pavement. No core shall be located within 5 ft (1.5 m) of a previous core obtained for thickness determination. The first acceptable core obtained on each side of a deficient core will be used to determine the length of the deficient pavement. An acceptable core is a core with a thickness of at least 90 percent of plan thickness. The area of deficient pavement will be defined using the length between two acceptable cores and the full width of the unit. The area of deficient pavement shall be removed and replaced; however, when requested in writing by the Contractor, the Engineer may permit in writing such areas of deficient pavement to remain in place. For deficient areas allowed to remain in place, additional lift(s) may be placed, at no additional cost to the Department, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The area(s) to be overlaid, material to be used, thickness(es) of the lift(s), and method of placement will be approved by the Engineer.

When an area of deficient pavement is removed and replaced, or additional lifts are placed, the corrected pavement shall be retested for thickness. The thickness of the new core will be used to determine the pay factor for the corrected area.

When an area of deficient pavement is left in place, and no additional lift(s) are placed, no payment will be made for the deficient pavement. In addition, an amount equal to two times the contract cost of the deficient pavement will be deducted from the compensation due the Contractor.

The thickness of the first acceptable core on each side of the core more than ten percent deficient will be used to determine any needed pay adjustments for the remaining areas on each side of the area deficient by more than ten percent. The pay adjustment will be determined according to Article 407.10(b)(6).

- (8) Right of Discovery. When the Engineer has reason to believe any core location does not accurately represent the true conditions of the work, he/she may order additional cores. These additional cores shall be taken at specific locations determined by the

Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action.

When the additional cores show the pavement to be deficient by more than ten percent of plan thickness, the procedures outlined in Article 407.10(b)(7) shall be followed, except the Engineer will determine the additional core locations.

When the additional cores, ordered by the Engineer, show the pavement to be at least 90 percent of plan thickness, the additional cores will be paid for according to Article 109.04.

- (9) Profile Index Adjustment. After any area of pavement is removed and replaced or any additional lifts are added, the corrected areas shall be retested for pavement smoothness and any necessary profile index adjustments and/or corrections will be made based on these final profile readings prior to retesting for thickness.”

Revise Article 482.06 of the Standard Specifications to read:

**“482.06 Tolerance in Thickness.** The shoulder shall be constructed to the thickness shown on the plans. When the contract includes square yards (square meters) as the unit of measurement for HMA shoulder, thickness determinations shall be made according to Article 407.10(b)(3) and the following.

- (a) Length of the Units. The length of a unit shall be a continuous strip of shoulder 2500 ft (750 m) long.
- (b) Width of the Units. The width of the unit shall be the full width of the shoulder.
- (c) Thickness Deficient by More than Ten Percent. When a core shows the shoulder to be deficient by more than ten percent of plan thickness, additional cores shall be taken on each side of the deficient core, at stations selected by the Contractor and offsets selected by the Engineer, to determine the limits of the deficient shoulder. No core shall be located within 5 ft (1.5 m) of a previous core obtained for thickness determination. The first acceptable core obtained on each side of a deficient core will be used to determine the length of the deficient shoulder. An acceptable core is a core with a thickness of at least 90 percent of plan thickness. The area of deficient shoulder will be defined using the length between two acceptable cores and the full width of the unit. The area of deficient shoulder shall be brought to specified thickness by the addition of the applicable mixture, at no additional cost to the Department and subject to the lift thickness requirements of Article 312.05, or by removal and replacement with a new mixture. However, the surface elevation of the completed shoulder shall not exceed by more than 1/8 in. (3 mm) the surface elevation of the adjacent pavement. When requested in writing by the Contractor, the Engineer may permit in writing such thin shoulder to remain in place. When an area of thin shoulder is left in place, and no additional lift(s) are placed, no payment will be made for the thin shoulder. In addition,



an amount equal to two times the contract unit price of the shoulder will be deducted from the compensation due the Contractor.

When an area of deficient shoulder is removed and replaced, or additional lifts are placed, the corrected pavement shall be retested for thickness.

- (d) Right of Discovery. When the Engineer has reason to believe any core location does not accurately represent the true conditions of the work, he/she may order additional cores. When the additional cores, ordered by the Engineer, show the shoulder to be at least 90 percent of plan thickness, the additional cores will be paid for according to Article 109.04. When the additional core shows the shoulder to be less than 90 percent of plan thickness, the procedure in (c), above shall be followed."

Revise Article 483.07 of the Standard Specifications to read:

**"483.07 Tolerance in Thickness.** The shoulder shall be constructed to the thickness shown on the plans. Thickness determinations shall be made according to Article 482.06 except the option of correcting deficient pavement with additional lift(s) shall not apply."

80227

## DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)

Effective: September 1, 2000

Revised: January 1, 2010

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor:

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. This determination is based on an assessment of the type of work, the location of the work, and the availability of

DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 8.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set forth in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal; or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders may consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's web site at [www.dot.il.gov](http://www.dot.il.gov).

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement. The failure of the bidder to comply will render the bid not responsive.

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:

- (1) The names and addresses of DBE firms that will participate in the contract;

- (2) A description, including pay item numbers, of the work each DBE will perform;
- (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
- (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
- (5) If the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
- (6) If the contract goal is not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document the good faith efforts of the bidder before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan commits sufficient commercially useful DBE work performance to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not commit sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder

must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

- (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
- (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.  
  
b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.

- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision and that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons why good faith efforts have not been found.
- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
  - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
  - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
  - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
  - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements

become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal.

- (a) No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.
- (b) The Contractor must notify and obtain written approval from the Department's Bureau of Small Business Enterprises prior to replacing a DBE or making any change in the participation of a DBE. Approval for replacement will be granted only if it is demonstrated that the DBE is unable or unwilling to perform. The Contractor must make every good faith effort to find another certified DBE subcontractor to substitute for the original DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the original DBE, to the extent needed to meet the contract goal.
- (c) Any deviation from the DBE condition-of-award or contract specifications must be approved, in writing, by the Department. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract.
- (d) In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
  - (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
  - (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
  - (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonably competitive price. If this occurs, the Contractor



shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

- (e) Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted.
- (f) If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (g) All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau of Small Business Enterprises and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau of Small Business Enterprises will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.
- (h) The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (j) of this part.
- (i) The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract

until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

- (j) Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

80029

**DOWEL BARS (BDE)**

Effective: April 1, 2007

Revised: January 1, 2008

Revise the fifth and sixth sentences of Article 1006.11(b) of the Standard Specifications to read:

“The bars shall be epoxy coated according to AASHTO M 284, except the thickness of the epoxy shall be 7 to 12 mils (0.18 to 0.30 mm) and patching of the ends will not be required. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, “Epoxy Coating Plant Certification Procedure”. The Department will maintain an approved list.”

80178

## EQUIPMENT RENTAL RATES (BDE)

Effective: August 2, 2007  
Revised: January 2, 2008

Replace the second and third paragraphs of Article 105.07(b)(4)a. of the Standard Specifications with the following:

“Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).”

Replace Article 109.04(b)(4) of the Standard Specifications with the following:

“(4) Equipment. Equipment used for extra work shall be authorized by the Engineer. The equipment shall be specifically described, be of suitable size and capacity for the work to be performed, and be in good operating condition. For such equipment, the Contractor will be paid as follows.

- a. Contractor Owned Equipment. Contractor owned equipment will be paid for by the hour using the applicable FHWA hourly rate from the “Equipment Watch Rental Rate Blue Book” (Blue Book) in effect when the force account work begins. The FHWA hourly rate is calculated as follows.

$$\text{FHWA hourly rate} = (\text{monthly rate}/176) \times (\text{model year adj.}) \times (\text{Illinois adj.}) + \text{EOC}$$

Where: EOC = Estimated Operating Costs per hour (from the Blue Book)

The time allowed will be the actual time the equipment is operating on the extra work. For the time required to move the equipment to and from the site of the extra work and any authorized idle (standby) time, payment will be made at the following hourly rate:  $0.5 \times (\text{FHWA hourly rate} - \text{EOC})$ .

All time allowed shall fall within the working hours authorized for the extra work.

The rates above include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, and all incidentals. The rates do not include labor.

The Contractor shall submit to the Engineer sufficient information for each piece of equipment and its attachments to enable the Engineer to determine the proper equipment category. If a rate is not established in the Blue Book for a particular piece of equipment, the Engineer will establish a rate for that piece of equipment that is consistent with its cost and use in the industry.

- b. Rented Equipment. Whenever it is necessary for the Contractor to rent equipment to perform extra work, the rental and transportation costs of the equipment plus five percent for overhead will be paid. In no case shall the rental rates exceed those of established distributors or equipment rental agencies.

All prices shall be agreed to in writing before the equipment is used.”

80189

## HOT-MIX ASPHALT – ANTI-STRIPPING ADDITIVE (BDE)

Effective: November 1, 2009

Revise the first and second paragraphs of Article 1030.04(c) of the Standard Specifications to read:

“(c) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified AASHTO T 283. To be considered acceptable by the Department as a mixture not susceptible to stripping, the conditioned to unconditioned split tensile strength ratio (TSR) shall be equal to or greater than 0.85 for 6 in. (150 mm) specimens. Mixtures, either with or without an additive, with TSRs less than 0.85 for 6 in. (150 mm) specimens will be considered unacceptable. Also, the conditioned tensile strength for mixtures containing an anti-strip additive shall not be lower than the original conditioned tensile strength determined for the same mixture without the anti-strip additive.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option.”

80245

**HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)**

Effective: January 1, 2010

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 2 in. (50 mm), from each pavement edge. (i.e. for a 4 in. (100 mm) lift the near edge of the density gauge or core barrel shall be within 4 in. (100 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced ten feet apart longitudinally along the unconfined pavement edge and centered at the random density test location.”

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

“Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0%	90.0%
IL-9.5, IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4%	90.0%
SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%
All Other	Ndesign = 30	93.0 - 97.4%	90.0%”

80246

## **HOT-MIX ASPHALT – DROP-OFFS (BDE)**

Effective: January 1, 2010

Revise the third paragraph of Article 701.07 of the Standard Specifications to read:

“At locations where construction operations result in a differential in elevation exceeding 3 in. (75 mm) between the edge of pavement or edge of shoulder within 3 ft (900 mm) of the edge of the pavement and the earth or aggregate shoulders, Type I or II barricades or vertical panels shall be placed at 100 ft (30 m) centers on roadways where the posted speed limit is 45 mph or greater and at 50 ft (15 m) centers on roadways where the posted speed limit is less than 45 mph.”

80250



**HOT-MIX ASPHALT - FINE AGGREGATE (BDE)**

Effective: April 1, 2010

Add the following to the gradation tables of Article 1003.01(c) of the Standard Specifications:

"FINE AGGREGATE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	3/8	No. 4	No. 8	No. 16	No. 200
FA 22	100	6/	6/	8±8	2±2

FINE AGGREGATE GRADATIONS (Metric)					
Grad No.	Sieve Size and Percent Passing				
	9.5 mm	4.75 mm	2.36 mm	1.18 mm	75 µm
FA 22	100	6/	6/	8±8	2±2

6/ For the fine aggregate gradation FA 22, the aggregate producer shall set the midpoint percent passing, and the Department will apply a range of ± ten percent. The midpoint shall not be changed without Department approval."

Revise Article 1003.03(a) of the Standard Specifications to read:

"(a) Description. Fine aggregate for HMA shall consist of sand, stone sand, chats, slag sand, or steel slag sand. For gradation FA 22, uncrushed material will not be permitted."

Revise Article 1003.03(c) of the Standard Specifications to read:

"(c) Gradation. The fine aggregate gradation for all HMA shall be FA 1, FA 2, FA 20, FA 21, or FA 22.

Gradation FA 1, FA 2, or FA 3 shall be used when required for prime coat aggregate application for HMA."

80259

**HOT-MIX ASPHALT – PLANT TEST FREQUENCY (BDE)**

Effective: April 1, 2008

Revised: January 1, 2010

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

"Parameter	Frequency of Tests	Frequency of Tests	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
Aggregate Gradation  % passing sieves: 1/2 in. (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), No. 30 (600 μm) No. 200 (75 μm)  Note 1.	1 washed ignition oven test on the mix per half day of production  Note 4.	1 washed ignition oven test on the mix per day of production  Note 4.	Illinois Procedure
Asphalt Binder Content by Ignition Oven  Note 2.	1 per half day of production	1 per day	Illinois-Modified AASHTO T 308
VMA  Note 3.	Day's production ≥ 1200 tons:  1 per half day of production  Day's production < 1200 tons:  1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	N/A	Illinois Modified AASHTO R 35
Air Voids  Bulk Specific Gravity of Gyratory Sample	Day's production ≥ 1200 tons:  1 per half day of production	1 per day	Illinois-Modified AASHTO T 312

"Parameter	Frequency of Tests	All Other Mixtures	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture		
	Day's production < 1200 tons:  1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		
Maximum Specific Gravity of Mixture	Day's production ≥ 1200 tons:  1 per half day of production	1 per day	Illinois-Modified AASHTO T 209
	Day's production < 1200 tons:  1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

Note 1. The No. 8 (2.36 mm) and No. 30 (600 μm) sieves are not required for All Other Mixtures.

Note 2. The Engineer may waive the ignition oven requirement for asphalt binder content if the aggregates to be used are known to have ignition asphalt binder content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the asphalt binder content.

Note 3. The  $G_{sb}$  used in the voids in the mineral aggregate (VMA) calculation shall be the same average  $G_{sb}$  value listed in the mix design.

Note 4. The Engineer reserves the right to require additional hot bin gradations for batch plants if control problems are evident."

80201

**HOT-MIX ASPHALT – QC/QA ACCEPTANCE CRITERIA (BDE)**

Effective: January 1, 2010

Revise Article 1030.05(f)(3) of the Standard Specifications to read:

“(3) Department assurance tests for voids, field VMA, and density.”

80251

## HOT-MIX ASPHALT – TRANSPORTATION (BDE)

Effective: April 1, 2008

Revise Article 1030.08 of the Standard Specifications to read:

**“1030.08 Transportation.** Vehicles used in transporting HMA shall have clean and tight beds. The beds shall be sprayed with asphalt release agents from the Department’s approved list. In lieu of a release agent, the Contractor may use a light spray of water with a light scatter of manufactured sand (FA 20 or FA 21) evenly distributed over the bed of the vehicle. After spraying, the bed of the vehicle shall be in a completely raised position and it shall remain in this position until all excess asphalt release agent or water has been drained.

When the air temperature is below 60 °F (15 °C), the bed, including the end, endgate, sides and bottom shall be insulated with fiberboard, plywood or other approved insulating material and shall have a thickness of not less than 3/4 in (20 mm). When the insulation is placed inside the bed, the insulation shall be covered with sheet steel approved by the Engineer. Each vehicle shall be equipped with a cover of canvas or other suitable material meeting the approval of the Engineer which shall be used if any one of the following conditions is present.

- (a) Ambient air temperature is below 60 °F (15 °C).
- (b) The weather is inclement.
- (c) The temperature of the HMA immediately behind the paver screed is below 250 °F (120 °C).

The cover shall extend down over the sides and ends of the bed for a distance of approximately 12 in. (300 mm) and shall be fastened securely. The covering shall be rolled back before the load is dumped into the finishing machine.”

80202

## IMPROVED SUBGRADE (BDE)

Effective: January 1, 2010

Revise the second paragraph of Article 302.04 of the Standard Specifications to read:

“The quantity of modified soil constructed shall be limited to that which can be covered by the full thickness of portland cement concrete pavement or HMA binder during the same construction season.”

Revise the first paragraph of Article 302.07 of the Standard Specifications to read:

“**302.07 Application of Modifier.** The modifier shall be applied uniformly on the soil. The application of modifier shall be limited to that amount which can be mixed with the soil within the same working day.”

Revise the first paragraph of Article 302.08 of the Standard Specifications to read:

“**302.08 Mixing.** The modifier, soil, and water shall be thoroughly mixed. Mixing shall continue until a homogenous layer of the required thickness has been obtained and a minimum of 75 percent of the mixture is smaller than 1 in. (25 mm). The moisture content of the modified soil shall be above optimum moisture content with a maximum of three percent above optimum.”

Revise Article 302.10 of the Standard Specifications to read:

“**302.10 Finishing and Curing.** When multiple lifts are used to construct the modified soil layer, the top lift shall be a minimum of 6 in. (150 mm) thick when compacted.

Construction of pipe underdrains shall follow the requirements of Article 407.07. The surface of the modified soil shall be kept drained according to Article 301.09 and shall maintain moisture content not exceeding three percent above optimum prior to pavement construction.

When compaction of the modified soil is nearing completion, the surface shall be shaped to the required lines, grades, and cross section shown on the plans. For HMA base course and pavement (full-depth) and portland cement concrete base course and pavement, the surface of the modified soil shall be brought to true shape and correct elevation according to Article 301.07, except well compacted earth shall not be used to fill low areas.

The modified soil shall be cured for a minimum of 24 hours. The ambient air temperature shall be above 45 °F (7 °C) during curing.

During the curing period, the moisture content of the modified soil shall be maintained at optimum by sprinkling with water, use of plastic sheeting, or applying bituminous materials according to Article 312.14. During this period, no equipment or traffic will be permitted on the completed work beyond that required for maintenance of curing.

Equipment of such weight, or used in such a way as to cause a rut depth of 1/2 in. (13 mm) or more in the finished modified soil, shall be removed, or the rutting otherwise prevented, as directed by the Engineer.”

Revise the first paragraph of Article 302.11 of the Standard Specifications to read:

“**302.11 Subgrade Stability.** Following curing, the Engineer will determine the stability of the modified soil in terms of the immediate bearing value (IBV), according to Illinois Test Procedure 501. The IBV shall be a minimum of 10.0 measured within 10 calendar days prior to pavement construction.”

Revise the second paragraph of Article 310.04 of the Standard Specifications to read:

“The quantity of lime stabilized soil mixture constructed shall be limited to that which can be covered by the full thickness of portland cement concrete pavement or HMA binder during the same construction season.”

Revise the first paragraph of Article 310.08(a) of the Standard Specifications to read:

“(a) Initial Mixing. The lime, soil, and water shall be thoroughly mixed until a uniform mixture throughout the required depth and width is obtained. All clods and lumps shall be reduced to a maximum size of 2 in. (50 mm). The moisture content of the stabilized soil shall be above optimum moisture content with a maximum of three percent above optimum.”

Insert the following paragraph after the first paragraph of Article 310.10 of the Standard Specifications:

“Construction of pipe underdrains shall follow the requirements of Article 407.07. The surface of the lime stabilized soil shall be kept drained according to Article 301.09 and shall maintain a maximum moisture content of three percent above optimum prior to pavement construction.”

Revise the first paragraph of Article 310.11 of the Standard Specifications to read:

“**310.11 Subgrade Stability.** Following curing, the Engineer will determine the stability of the lime stabilized soil mixture in terms of the immediate bearing value (IBV) according to Illinois Test Procedure 501. The IBV shall be a minimum of 23.0 measured within 10 calendar days prior to pavement construction.”

Revise the second paragraph of Article 311.05 of the Standard Specifications to read:

“The granular material shall be placed and compacted at least three days prior to the placement of pavement or base course. Except where required for temporary access, the quantity of subbase granular material Types A or B to be placed shall be limited to that which can be covered by the full thickness of PCC pavement or HMA binder during the same

construction season.”

80252



**LIQUIDATED DAMAGES (BDE)**

Effective: April 1, 2009

Revise the table in Article 108.09 of the Standard Specifications to read:

"Schedule of Deductions for Each Day of Overrun in Contract Time			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
\$ 0	\$ 100,000	\$ 375	\$ 500
100,000	500,000	625	875
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,125	1,550
3,000,000	5,000,000	1,425	1,950
5,000,000	10,000,000	1,700	2,350
10,000,000	And over	3,325	4,650"

80230

**METAL HARDWARE CAST INTO CONCRETE (BDE)**

Effective: April 1, 2008  
Revised: April 1, 2009

Add the following to Article 503.02 of the Standard Specifications:

“(g) Metal Hardware Cast into Concrete.....1006.13”

Add the following to Article 504.02 of the Standard Specifications:

“(j) Metal Hardware Cast into Concrete.....1006.13”

Revise Article 1006.13 of the Standard Specifications to read:

“**1006.13 Metal Hardware Cast into Concrete.** Unless otherwise noted, all steel hardware cast into concrete, such as inserts, brackets, cable clamps, metal casings for formed holes, and other miscellaneous items, shall be galvanized according to AASHTO M 232 or AASHTO M 111. Aluminum inserts will not be allowed. Zinc alloy inserts shall be according to ASTM B 86, Alloys 3, 5, or 7.

The inserts shall be UNC threaded type anchorages having the following minimum certified proof load.

Insert Diameter	Proof Load
5/8 in. (16 mm)	6600 lb (29.4 kN)
3/4 in. (19 mm)	6600 lb (29.4 kN)
1 in. (25 mm)	9240 lb (41.1 kN)”

80203

## MONTHLY EMPLOYMENT REPORT (BDE)

Effective: April 1, 2009

Revised: January 1, 2010

In addition to any other reporting required by the contract, the Contractor shall provide to the Engineer an employment summary for all employees working on the contract from the contract execution date to the last full pay period each month for the duration of the contract. The report may include but is not limited to:

- a) Total number of employees.
- b) The total hours worked.
- c) Total payroll.

The report shall be completed by the Contractor. The Contractor shall also report for each subcontractor. Employee hours worked from home office or other off-site office hours worked related directly to this contract shall be included. Engineering consulting firms performing construction layout and material testing for the Contractor shall also be included.

Hours worked for material suppliers, services provided by purchase orders, Department employees or consulting firms performing inspection or testing for the Department shall not be included in the report.

The report shall contain all hours worked under the contract from the start of the month to the last full pay period each month and shall be submitted no later than five business days after the end of each month.

The report shall be submitted electronically by accessing the Department's website (<http://www.dot.il.gov/stimulus/index.html>).

Any costs associated with complying with this provision shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80238

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM / EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)**

Effective: April 1, 2007

Revised: November 1, 2009

Revise Article 105.03(a) of the Standard Specifications to read:

“(a) National Pollutant Discharge Elimination System (NPDES) / Erosion and Sediment Control Deficiency Deduction. When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, or the Contractor’s activities represents a violation of the Department’s NPDES permits, the Engineer will notify and direct the Contractor to correct the deficiency within a specified time. The specified time, which begins upon notification to the Contractor, will be from 1/2 hour to 1 week based on the urgency of the situation and the nature of the work effort required. The Engineer will be the sole judge.

A deficiency may be any lack of repair, maintenance, or implementation of erosion and/or sediment control devices included in the contract, or any failure to comply with the conditions of the Department’s NPDES permits. A deficiency may also be applied to situations where corrective action is not an option such as the failure to participate in a jobsite inspection of the project, failure to install required measures prior to initiating earth moving operations, disregard of concrete washout requirements, or other disregard of the NPDES permit.

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or portion of a calendar day until the deficiency is corrected to the satisfaction of the Engineer. The calendar day(s) will begin with notification to the Contractor and end with the Engineer’s acceptance of the correction. The base value of the daily monetary deduction is \$1000.00 and will be applied to each location for which a deficiency exists. The value of the deficiency deduction assessed for each infraction will be determined by multiplying the base value by a Gravity Adjustment Factor provided in Table A. Except for failure to participate in a required jobsite inspection of the project prior to initiating earthmoving operations which will be based on the total acreage of planned disturbance at the following multipliers: <5 Acres: 1; 5-10 Acres: 2; >10-25 Acres: 3; >25 Acres: 5. For those deficiencies where corrective action was not an option, the monetary deduction will be immediate and will be valued at one calendar day multiplied by a Gravity Adjustment Factor.

Table A Deficiency Deduction Gravity Adjustment Factors				
Types of Violations	Soil Disturbed and Not Permanently Stabilized At Time of Violation			
	< 5 Acres	5 - 10 Acres	>10 - 25 Acres	> 25 Acres
Failure to Install or Properly Maintain BMP	0.1 - 0.5	0.2 - 1.0	0.5 - 2.5	1.0 - 5
Careless Destruction of BMP	0.2 - 1	0.5 - 2.5	1.0 - 5.	1.0 - 5
Intrusion into Protected Resource	1.0 - 5	1.0 - 5	2.0 - 10	2.0 - 10
Failure to properly manage Chemicals, Concrete Washouts or Residuals, Litter or other Wastes	0.2 - 1	0.2 - 1	0.5 - 2.5	1.0 - 5
Improper Vehicle and Equipment Maintenance, Fueling or Cleaning	0.1 - 0.5	0.2 - 1	0.2 - 1	0.5 - 2.5
Failure to Provide or Update Written or Graphic Plans Required by SWPPP	0.2 - 1	0.5 - 2.5	1.0 - 5	1.0 - 5
Failure to comply with Other Provisions of the NPDES Permit	0.1 - 0.5	0.2 - 1	0.2 - 1	0.5 - 2.5"

80180

## **PAYMENTS TO SUBCONTRACTORS (BDE)**

Effective: June 1, 2000

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

| 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

## **PERSONAL PROTECTIVE EQUIPMENT (BDE)**

Effective: November 1, 2008

Revise the first sentence of Article 701.12 of the Standard Specifications to read:

“All personnel on foot, excluding flaggers, within the highway right-of-way shall wear a fluorescent orange, fluorescent yellow/green, or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of ANSI/ISEA 107-2004 for Conspicuity Class 2 garments.”

80209



## PORTLAND CEMENT CONCRETE PLANTS (BDE)

Effective: January 1, 2007

Add the following to Article 1020.11(a) of the Standard Specifications.

- “(9) Use of Multiple Plants in the Same Construction Item. The Contractor may simultaneously use central-mixed, truck-mixed, and shrink-mixed concrete from more than one plant, for the same construction item, on the same day, and in the same pour. However, the following criteria shall be met.
- a. Each plant shall use the same cement, finely divided minerals, aggregates, admixtures, and fibers.
  - b. Each plant shall use the same mix design. However, material proportions may be altered slightly in the field to meet slump and air content criteria. Field water adjustments shall not result in a difference that exceeds 0.02 between plants for water/cement ratio. The required cement factor for central-mixed concrete shall be increased to match truck-mixed or shrink-mixed concrete, if the latter two types of mixed concrete are used in the same pour.
  - c. The maximum slump difference between deliveries of concrete shall be 3/4 in. (19 mm) when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the slump difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for slump by the Contractor. Thereafter, when a specified test frequency for slump is to be performed, it shall be conducted for each plant at the same time.
  - d. The maximum air content difference between deliveries of concrete shall be 1.5 percent when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the air content difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for air content by the Contractor. Thereafter, when a specified test frequency for air content is to be performed, it shall be conducted for each plant at the same time.
  - e. Strength tests shall be performed and taken at the jobsite for each plant. When a specified strength test is to be performed, it shall be conducted for each plant at the same time. The difference between plants for their mean strength shall not exceed 450 psi (3100 kPa) compressive and 80 psi (550 kPa) flexural. The strength standard deviation for each plant shall not exceed 650 psi (4480 kPa) compressive and 110 psi (760 kPa) flexural. The mean and standard deviation requirements shall apply to the test of record. If the strength difference requirements are exceeded, the Contractor shall take corrective action.

- f. The maximum haul time difference between deliveries of concrete shall be 15 minutes. If the difference is exceeded, but haul time is within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and check subsequent deliveries of concrete until the haul time difference is corrected.”

80170

**PRECAST CONCRETE HANDLING HOLES (BDE)**

Effective: January 1, 2007

Add the following to Article 540.02 of the Standard Specifications:

“(g) Handling Hole Plugs.....1042.16”

Add the following paragraph after the sixth paragraph of Article 540.06 of the Standard Specifications:

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar, or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Article 542.02 of the Standard Specifications:

“(ee) Handling Hole Plugs .....1042.16”

Revise the fifth paragraph of Article 542.04(d) of the Standard Specifications to read:

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 550.02 of the Standard Specifications:

“(o) Handling Hole Plugs.....1042.16”

Replace the fourth sentence of the fifth paragraph of Article 550.06 of the Standard Specifications with the following:

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 602.02 of the Standard Specifications:

“(p) Handling Hole Plugs..... 1042.16(a)”

Replace the fifth sentence of the first paragraph of Article 602.07 of the Standard Specifications with the following:

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Section 1042 of the Standard Specifications:

“**1042.16 Handling Hole Plugs.** Plugs for handling holes in precast concrete products shall be as follows.

- (a) Precast Concrete Plug. The precast concrete plug shall have a tapered shape and shall have a minimum compressive strength of 3000 psi (20,700 kPa) at 28 days.
- (b) Polyethylene Plug. The polyethylene plug shall have a “mushroom” shape with a flat round top and a stem with three different size ribs. The plug shall fit snugly and cover the handling hole.

The plug shall be according to the following.

Mechanical Properties	Test Method	Value (min.)
Flexural Modulus	ASTM D 790	3300 psi (22,750 kPa)
Tensile Strength (Break)	ASTM D 638	1600 psi (11,030 kPa)
Tensile Strength (Yield)	ASTM D 638	1200 psi (8270 kPa)

Thermal Properties	Test Method	Value (min.)
Brittle Temperature	ASTM D 746	-49 °F (-45 °C)
Vicat Softening Point	ASTM D 1525	194 °F (90 °C)”

80171

## RECLAIMED ASPHALT PAVEMENT (RAP) (BDE)

Effective: January 1, 2007

Revised: January 1, 2010

In Article 1030.02(g), delete the last sentence of the first paragraph in (Note 2).

Revise Section 1031 of the Standard Specifications to read:

### "SECTION 1031. RECLAIMED ASPHALT PAVEMENT

**1031.01 Description.** Reclaimed asphalt pavement (RAP) is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

**1031.02 Stockpiles.** The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. "Homogeneous Surface").

Prior to milling, the Contractor shall request the District to provide verification of the quality of the RAP to clarify appropriate stockpile.

- (a) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass one sieve size larger than the maximum sieve size specified for the mix the RAP will be used in.
- (b) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent:  
1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (c) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an

inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(d) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low ESAL), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(e) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

**1031.03 Testing.** When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable  $G_{mm}$ . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous /Conglomerate	Conglomerate "D" Quality
1 in. (25 mm)		± 5 %

1/2 in. (12.5 mm)	± 8 %	± 15 %
No. 4 (4.75 mm)	± 6 %	± 13 %
No. 8 (2.36 mm)	± 5 %	
No. 16 (1.18 mm)		± 15 %
No. 30 (600 μm)	± 5 %	
No. 200 (75 μm)	± 2.0 %	± 4.0 %
Asphalt Binder	± 0.4 % <sup>1/</sup>	± 0.5 %
G <sub>mm</sub>	± 0.03	

1/ The tolerance for FRAP shall be ± 0.3 %.

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

#### 1031.04 Quality Designation of Aggregate in RAP/FRAP.

(a) The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (1) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL), or HMA (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
- (2) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
- (3) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
- (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) The aggregate quality of FRAP shall be determined as follows.

Fractionated stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a

representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications.”

**1031.05 Use of RAP/FRAP in HMA.** The use of RAP/FRAP shall be a Contractor’s option when constructing HMA in all contracts. The use of RAP/FRAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.
- (c) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better.
- (d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.
- (e) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, conglomerate, or conglomerate DQ.
- (f) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table below for a given N Design.

Max RAP Percentage

HMA Mixtures <sup>1/, 3/</sup>	Maximum % RAP		
	Binder/Leveling Binder	Surface	Polymer Modified
Ndesign			
30	30	30	10
50	25	15	10
70	15 / 25 <sup>2/</sup>	10 / 15 <sup>2/</sup>	10
90	10	10	10
105	10	10	10



- 1/ For HMA shoulder and stabilized subbase (HMA) N-30, the amount of RAP shall not exceed 50% of the mixture.
- 2/ Value of Max % RAP if homogeneous RAP stockpile of IL-9.5 RAP is utilized.
- 3/ When RAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135 °C) the grades shall be reduced as follows:

Overlays:

When WMA contains between 20 and 30 percent RAP the high temperature shall be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-22). When WMA contains 30 percent or more RAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

Full Depth:

When WMA contains between 20 and 30 percent RAP, the low temperature shall be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG64-28). When the WMA contains 30 percent or more RAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

- (g) When the Contractor chooses the FRAP option, the percentage of FRAP shall not exceed the amounts indicated in the table below for a given N Design.

Max FRAP Percentage

HMA Mixtures <sup>1/, 2/</sup>	Maximum % FRAP		
	Ndesign	Binder/Leveling Binder	Surface
30	35	35	10
50	30	25	10
70	25	20	10
90	20	15	10
105	10	10	10

- 1/ For HMA shoulder and stabilized subbase (HMA) N30, the amount of FRAP shall not exceed 50 percent of the mixture.

- 2/ When FRAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135 °C) the grades shall be reduced as follows:

Overlays:

When WMA contains between 20 and 30 percent FRAP the high temperature shall be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-22). When WMA contains 30 percent or more FRAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

Full Depth:

When WMA contains between 20 and 30 percent FRAP, the low temperature shall be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG64-28). When the WMA contains 30 percent or more FRAP the high and low temperature grades shall each be reduced by one grade (i.e. 35 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

**1031.06 HMA Mix Designs.** At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP material meeting the above detailed requirements.

RAP/FRAP designs shall be submitted for volumetric verification. If additional RAP/FRAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP/FRAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP stockpiles may be used in the original mix design at the percent previously verified.

**1031.07 HMA Production.** The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP/FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and either switch to the virgin aggregate design or submit a new RAP/FRAP design.

HMA plants utilizing RAP/FRAP shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAP/FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.
- (8) Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) RAP/FRAP weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram).
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be

inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

**1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders.** The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

80172

## REFLECTIVE SHEETING ON CHANNELIZING DEVICES (BDE)

Effective: April 1, 2007

Revised: November 1, 2008

Revise the seventh paragraph of Article 1106.02 of the Standard Specifications to read:

“At the time of manufacturing, the retroreflective prismatic sheeting used on channelizing devices shall meet or exceed the initial minimum coefficient of retroreflection as specified in the following table. Measurements shall be conducted according to ASTM E 810, without averaging. Sheeting used on cones, drums and flexible delineators shall be reboundable as tested according to ASTM D 4956. Prestriped sheeting for rigid substrates on barricades shall be white and orange. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration, and to the daytime and nighttime color requirements of ASTM D 4956.

Initial Minimum Coefficient of Retroreflection candelas/foot candle/sq ft (candelas/lux/sq m) of material				
Observation Angle (deg.)	Entrance Angle (deg.)	White	Orange	Fluorescent Orange
0.2	-4	365	160	150
0.2	+30	175	80	70
0.5	-4	245	100	95
0.5	+30	100	50	40”

Revise the first sentence of the first paragraph of Article 1106.02(c) of the Standard Specifications to read:

“Barricades and vertical panels shall have alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass.”

Revise the third sentence of the first paragraph of Article 1106.02(d) of the Standard Specifications to read:

“The bottom panels shall be 8 x 24 in. (200 x 600 mm) with alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass.”

80183

## REINFORCEMENT BARS - STORAGE AND PROTECTION (BDE)

Effective: August 1, 2008

Revised: April 1, 2009

Revise Article 508.03 of the Standard Specifications to read:

**“508.03 Storage and Protection.** Reinforcement bars shall be stored off the ground using platforms, skids, or other supports; and shall be protected from mechanical injury and from deterioration by exposure. Epoxy coated bars shall be stored on wooden or padded steel cribbing and all systems for handling shall have padded contact areas. The bars or bundles shall not be dragged or dropped.

When epoxy coated bars are stored in a manner where they will be exposed to the weather more than 60 days prior to use, they shall be protected from deterioration such as that caused by sunlight, salt spray, and weather exposure. The protection shall consist of covering with opaque polyethylene sheeting or other suitable opaque material. The covering shall be secured and allow for air circulation around the bars to minimize condensation under the cover.

Covering of the epoxy coated bars will not be required when the bars are installed and tied, or when they are partially incorporated into the concrete.”

80206

**SEEDING (BDE)**

Effective: July 1, 2004

Revised: July 1, 2010

Revise the following seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

"Table 1 - SEEDING MIXTURES		
Class – Type	Seeds	lb/acre (kg/hectare)
1A Salt Tolerant Lawn Mixture 7/	Bluegrass Perennial Ryegrass Red Fescue (Audubon, Sea Link, or Epic) Hard Fescue (Rescue 911, Spartan II, or Reliant IV) Fults Salt Grass 1/ or Salty Alkaligrass	60 (70) 20 (20) 20 (20) 20 (20) 60 (70)
2 Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV) Perennial Ryegrass Creeping Red Fescue Red Top	100 (110) 50 (55) 40 (50) 10 (10)
2A Salt Tolerant Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV) Perennial Ryegrass Red Fescue (Audubon, Sea Link, or Epic) Hard Fescue (Rescue 911, Spartan II, or Reliant IV) Fults Salt Grass 1/ or Salty Alkaligrass	60 (70) 20 (20) 30 (20) 30 (20) 60 (70)
3 Northern Illinois Slope Mixture 7/	Elymus Canadensis (Canada Wild Rye) Perennial Ryegrass Alsike Cover 2/ Desmanthus Illinoensis (Illinois Bundleflower) 2/, 5/ Andropogon Scoparius (Little Bluestem) 5/ Bouteloua Curtipendula (Side-Oats Grama) Fults Salt Grass 1/ or Salty Alkaligrass Oats, Spring Slender Wheat Grass 5/ Buffalo Grass (Cody or Bowie) 4/, 5/, 9/	5 (5) 20 (20) 5 (5) 2 (2) 12 (12) 10 (10) 30 (35) 50 (55) 15 (15) 5 (5)

"Table 1 - SEEDING MIXTURES			
6A	Salt Tolerant Conservation Mixture	Andropogon Scoparius (Little Bluestem) 5/	5 (5)
		Elymus Canadensis (Canada Wild Rye) 5/	2 (2)
		Buffalo Grass (Cody or Bowie) 4/, 5/, 9/	5 (5)
		Vernal Alfalfa 2/	15 (15)
		Oats, Spring	48 (55)
		Fults Salt Grass 1/ or Salty Alkaligrass	20 (20)"

Revise Note 7 of Table 1 – Seeding Mixtures of Article 250.07 of the Standard Specifications to read:

"7/ In Districts 1 through 6, the planting times shall be April 1 to June 15 and August 1 to November 1. In Districts 7 through 9, the planting times shall be March 1 to June 1 and August 1 to November 15. Seeding may be performed outside these dates provided the Contractor guarantees a minimum of 75 percent uniform growth over the entire seeded area(s) after a period of establishment. Inspection dates for the period of establishment will be as follows: Seeding conducted in Districts 1 through 6 between June 16 and July 31 will be inspected after April 15 and seeding conducted between November 2 and March 31 will be inspected after September 15. Seeding conducted in Districts 7 through 9 between June 2 and July 31 will be inspected after April 15 and seeding conducted between November 16 and February 28 will be inspected after September 15. The guarantee shall be submitted to the Engineer in writing prior to performing the work. After the period of establishment, areas not exhibiting 75 percent uniform growth shall be interseeded or reseeded, as determined by the Engineer, at no additional cost to the Department."

Revise the first paragraph of Article 1081.04(a) of the Standard Specifications to read:

"(a) Sampling and Testing. Each lot of seed furnished shall be tested by a State Agriculture Department (including other States) or by land grant college or university agricultural sections or by a Registered Seed Technologist. Germination testing of seed shall be accomplished within the 12 months prior to the seed being installed on the project."

Delete the last sentence of the first paragraph of Article 1081.04(c)(2) of the Standard Specifications.

Revise Table II of Article 1081.04(c)(6) of the Standard Specifications to read:

TABLE II						
Variety of Seeds	Hard Seed %	Purity %	Pure Live Seed %	Weed %	Secondary * Noxious Weeds No. per oz (kg)	Notes
	Max.	Min.	Min.	Max.	Max. Permitted	
Alfalfa	20	92	89	0.50	6 (211)	1/



TABLE II						
Variety of Seeds	Hard Seed %	Purity %	Pure Live Seed %	Weed %	Secondary * Noxious Weeds No. per oz (kg)	Notes
	Max.	Min.	Min.	Max.	Max. Permitted	
Clover, Alsike	15	92	87	0.30	6 (211)	2/
Red Fescue, Audubon	0	97	82	0.10	3 (105)	-
Red Fescue, Creeping	-	97	82	1.00	6 (211)	-
Red Fescue, Epic	-	98	83	0.05	1 (35)	-
Red Fescue, Sea Link	-	98	83	0.10	3 (105)	-
Tall Fescue, Blade Runner	-	98	83	0.10	2 (70)	-
Tall Fescue, Falcon IV	-	98	83	0.05	1 (35)	-
Tall Fescue, Inferno	0	98	83	0.10	2 (70)	-
Tall Fescue, Tarheel II	-	97	82	1.00	6 (211)	-
Tall Fescue, Quest	0	98	83	0.10	2 (70)	-
Fults Salt Grass	0	98	85	0.10	2 (70)	-
Salty Alkaligrass	0	98	85	0.10	2 (70)	-
Kentucky Bluegrass	-	97	80	0.30	7 (247)	4/
Oats	-	92	88	0.50	2 (70)	3/
Redtop	-	90	78	1.80	5 (175)	3/
Ryegrass, Perennial, Annual	-	97	85	0.30	5 (175)	3/
Rye, Grain, Winter	-	92	83	0.50	2 (70)	3/
Hard Fescue, Reliant IV	-	98	83	0.05	1 (35)	-
Hard Fescue, Rescue 911	0	97	82	0.10	3 (105)	-
Hard Fescue, Spartan II	-	98	83	0.10	3 (105)	-
Timothy	-	92	84	0.50	5 (175)	3/
Wheat, hard Red Winter	-	92	89	0.50	2 (70)	3/

Revise the first sentence of the first paragraph of Article 1081.04(c)(7) of the Standard Specifications to read:

"The seed quantities indicated per acre (hectare) for Prairie Grass Seed in Classes 3, 3A, 4, 4A, 6, and 6A in Article 250.07 shall be the amounts of pure, live seed per acre (hectare) for each species listed."

80131

## SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)

Effective: November 1, 2005

Revised: July 1, 2010

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for cast-in-place concrete construction items involving Class MS, DS, and SI concrete.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. Article 1020.04 of the Standard Specifications shall apply, except as follows:

- (a) The cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m). The cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used.
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be  $\pm 2$  in. ( $\pm 50$  mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-6, and Illinois Modified AASHTO T 22, 23, 121, 126, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mix Design Submittal. The Contractor's Level III PCC Technician shall submit a mix design according to the "Portland Cement Concrete Level III Technician" course manual, except target slump information is not applicable and will not be required. However, a target slump flow shall be submitted.

A J-ring value shall be submitted if a lower mix design maximum will apply. An L-box blocking ratio shall be submitted if a higher mix design minimum will apply. The Contractor shall also indicate applicable construction items for the mix design.

Trial mixture information will be required by the Engineer. A trial mixture is a batch of concrete tested by the Contractor to verify the Contractor's mix design will meet specification requirements. Trial mixture information shall include test results as specified in the "Portland Cement Concrete Level III Technician" course manual. Test results shall also include slump flow, visual stability index, J-ring value or L-box blocking ratio, and hardened visual stability index. For the trial mixture, the slump flow shall be near the proposed target slump flow.

Trial Batch. A minimum 2 cu yd (1.5 cu m) trial batch shall be produced, and the self-consolidating concrete admixture dosage proposed by the Contractor shall be used. The slump flow shall be within 1.0 in. (25 mm) of the maximum slump flow range specified by the Contractor, and the air content shall be within the top half of the allowable specification range.

The trial batch shall be scheduled a minimum of 21 calendar days prior to anticipated use and shall be performed in the presence of the Engineer.

The Contractor shall provide the labor, equipment, and materials to test the concrete. The mixture will be evaluated by the Engineer for strength, air content, slump flow, visual stability index, J-ring value or L-box blocking ratio, and hardened visual stability index.

Upon review of the test data from the trial batch, the Engineer will verify or deny the use of the mix design and notify the Contractor.

A new trial batch will be required whenever there is a change in the source of any component material, proportions beyond normal field adjustments, dosage of the self-consolidating concrete admixture, batch sequence, mixing speed, mixing time, or as determined by the Engineer. The testing criteria for the new trial batch will be determined by the Engineer.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer

performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall ensure the design of the falsework and forms is adequate for the additional form pressure caused by the fluid concrete. Forms shall be tight to prevent leakage of fluid concrete.

When the form height for placing the self-consolidating concrete is greater than 10.0 ft (3.0 m), direct monitoring of form pressure shall be performed according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer. For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

“Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.”

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, J-ring or L-box, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

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## **SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)**

Effective: July 1, 2004

Revised: July 1, 2010

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. The mix design criteria shall be as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be  $\pm 2$  in. ( $\pm 50$  mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The hardened visual stability index shall be a maximum of 1.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer

performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Placing and Consolidating. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer.

Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

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**STORM SEWERS (BDE)**

Effective: April 1, 2009

Revised: April 1, 2010

Add the following to Article 550.02 of the Standard Specifications:

- “(p) Polyvinyl Chloride (PVC) Profile Wall Pipe-304 ..... 1040.03
- “(q) Polyethylene (PE) Pipe with a Smooth Interior ..... 1040.04
- “(r) Corrugated Polyethylene (PE) Pipe with a Smooth Interior ..... 1040.04
- “(s) Polyethylene (PE) Profile Wall Pipe ..... 1040.04”

Add the following to the list of flexible pipes under Class B storm sewers in the first table of Article 550.03 of the Standard Specifications:

- “Polyvinyl Chloride (PVC) Profile Wall Pipe-304
- Polyethylene (PE) Pipe with a Smooth Interior
- Corrugated Polyethylene (PE) Pipe with a Smooth Interior
- Polyethylene (PE) Profile Wall Pipe”

Revise the 2<sup>nd</sup> - 7<sup>th</sup> tables of Article 550.03 of the Standard Specifications to read:

"STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE																				
Nom. Dia. in.	Type 1 Fill Height: 3' and less with 1' minimum cover										Type 2 Fill Height: Greater than 3', not exceeding 10'									
	RCCP Class	CSP Class	ESCP	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW	RCCP Class	CSP Class	ESCP	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW
10	NA	3	X	X	NA	NA	NA	X	NA	NA	NA	1	*X	X	**	NA	NA	X	NA	NA
12	IV	NA	NA	X	X	X	X	X	X	NA	III	1	*X	X	X	X	X	X	X	NA
15	IV	NA	NA	X	X	X	X	X	X	NA	III	2	X	X	X	X	X	X	X	NA
18	IV	NA	NA	X	X	X	X	X	X	X	III	2	X	X	X	X	X	X	X	X
21	IV	NA	NA	X	X	X	X	NA	NA	X	III	2	X	X	X	X	X	NA	NA	X
24	IV	NA	NA	X	X	X	X	X	X	X	III	2	X	X	X	X	X	X	X	X
27	IV	NA	NA	X	X	X	X	X	X	X	III	NA	X	X	X	X	X	X	X	X
30	III	NA	X	X	X	X	X	X	X	X	III	NA	X	X	X	X	X	X	X	X
33	III	NA	X	X	NA	X	X	X	X	X	III	NA	X	X	NA	X	X	X	X	X
36	III	NA	X	X	X	X	X	X	X	X	III	NA	X	X	X	X	X	X	X	X
42	II	NA	NA	NA	NA	X	X	X	X	X	III	NA	NA	NA	NA	X	X	X	X	X
48	II	NA	NA	NA	NA	X	X	X	X	X	III	NA	NA	NA	NA	X	X	X	X	X
54	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
66	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
72	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
78	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
84	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
90	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
96	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
102	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
108	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe  
 CSP Concrete Sewer, Storm Drain, and Culvert Pipe  
 ESCP Extra Strength Clay Pipe  
 PVC Polyvinyl Chloride (PVC) Pipe  
 CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior

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PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794  
 PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304  
 PE Polyethylene (PE) Pipe with a Smooth Interior  
 CPE Corrugated Polyethylene (PE) Pipe with a Smooth Interior  
 PEPW Polyethylene (PE) Profile Wall Pipe  
 X This material may be used for the given pipe diameter and fill height.  
 NA This material is Not Acceptable for the given pipe diameter and fill height.  
 \* May also use standard strength Clay Sewer Pipe  
 \*\* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.

STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE														
Nom. Dia. in.	Type 3 Fill Height: Greater than 10', not exceeding 15'									Type 4 Fill Height: Greater than 15', not exceeding 20'				
	RCCP Class	CSP Class	ESCP	PVC	CPVC	PVCPW -794	PVCPW -304	PE	PEPW	RCCP Class	PVC	CPVC	PVCPW -794	PVCPW -304
10	NA	3	X	X	**	NA	NA	X	NA	NA	X	**	NA	NA
12	IV	NA	X	X	X	X	X	X	NA	V	X	X	X	X
15	IV	NA	NA	X	X	X	X	X	NA	V	X	X	X	X
18	IV	NA	NA	X	X	X	X	X	NA	V	X	X	X	X
21	IV	NA	NA	X	X	X	X	NA	X	V	X	X	X	X
24	IV	NA	NA	X	X	X	X	X	X	V	X	X	X	X
27	IV	NA	NA	X	X	X	X	X	X	V	X	X	X	X
30	IV	NA	NA	X	X	X	X	X	X	V	X	X	X	X
33	IV	NA	NA	X	NA	X	X	X	IV	X	NA	X	X	X
36	IV	NA	NA	X	X	X	X	X	IV	X	X	X	X	X
42	IV	NA	NA	NA	NA	X	X	X	IV	NA	NA	X	X	X
48	IV	NA	NA	NA	NA	X	X	X	IV	NA	NA	X	X	X
54	IV	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
60	IV	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
66	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
72	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
78	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
84	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
90	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
96	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
102	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA
108	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe  
 CSP Concrete Sewer, Storm Drain, and Culvert Pipe  
 ESCP Extra Strength Clay Pipe  
 PVC Polyvinyl Chloride (PVC) Pipe  
 CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior  
 PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794  
 PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304  
 PE Polyethylene (PE) Pipe with a Smooth Interior  
 PEPW Polyethylene (PE) Profile Wall Pipe  
 X This material may be used for the given pipe diameter and fill height.  
 NA This material is Not Acceptable for the given pipe diameter and fill height.  
 \*\* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.

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**STORM SEWERS**  
**KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED**  
**FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE**

Nom. Dia. in.	Type 5 Fill Height: Greater than 20', not exceeding 25'					Type 6 Fill Height: Greater than 25', not exceeding 30'					Type 7 Fill Height: Greater than 30', not exceeding 35'	
	RCCP Class	PVC	CPVC	PVCPW -794	PVCPW -304	RCCP Class	PVC	CPVC	PVCPW -794	PVCPW -304	RCCP Class	PVC
10	NA	X	**	NA	NA	NA	X	**	NA	NA	NA	X
12	V-3160D	X	X	X	X	V-3790D	X	X	X	X	V-4000D	X
15	V-3080D	X	X	X	X	V-3390D	X	NA	NA	NA	V-3575D	X
18	V	X	X	X	X	V-3115D	X	NA	NA	NA	V-3300D	X
21	V	X	X	X	X	V	X	NA	NA	NA	V-3110D	X
24	V	X	X	X	X	V	X	NA	NA	NA	V	X
27	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
30	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
33	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
36	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
42	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
48	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
54	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
60	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
66	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
72	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
78	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
84	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
90	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
96	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
102	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
108	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe  
PVC Polyvinyl Chloride (PVC) Pipe  
CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior  
PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794  
PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304  
X This material may be used for the given pipe diameter and fill height.  
NA This material is Not Acceptable for the given pipe diameter and fill height.  
\*\* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.  
Note RCCP Class V - 3160D, etc. shall be furnished according to AASHTO M 170 Section 6.  
These loads are D loads to produce a 0.01 in. crack.

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**STORM SEWERS (metric)  
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED  
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE**

Nom. Dia. mm	Type 1 Fill Height: 1 m and less with 0.3 m minimum cover										Type 2 Fill Height: Greater than 1 m, not exceeding 3 m									
	RCCP Class	CSP Class	ESCP	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW	RCCP Class	CSP Class	ESCP	PVC	CPVC	PVCPW -794	PVCPW -304	PE	CPE	PEPW
250	NA	3	X	X	NA	NA	NA	X	NA	NA	NA	1	*X	X	**	NA	NA	X	NA	NA
300	IV	NA	NA	X	X	X	X	X	X	NA	III	1	*X	X	X	X	X	X	X	NA
375	IV	NA	NA	X	X	X	X	X	X	NA	III	2	X	X	X	X	X	X	X	NA
450	IV	NA	NA	X	X	X	X	X	X	X	III	2	X	X	X	X	X	X	X	X
525	IV	NA	NA	X	X	X	X	NA	NA	X	III	2	X	X	X	X	X	NA	NA	X
600	IV	NA	NA	X	X	X	X	X	X	X	III	2	X	X	X	X	X	X	X	X
675	IV	NA	NA	X	X	X	X	X	X	X	III	NA	X	X	X	X	X	X	X	X
750	III	NA	X	X	X	X	X	X	X	X	III	NA	X	X	X	X	X	X	X	X
825	III	NA	X	X	NA	X	X	X	X	X	III	NA	X	X	NA	X	X	X	X	X
900	III	NA	X	X	X	X	X	X	X	X	III	NA	X	X	X	X	X	X	X	X
1050	II	NA	NA	NA	NA	X	X	X	X	X	III	NA	NA	NA	NA	X	X	X	X	X
1200	II	NA	NA	NA	NA	X	X	X	X	X	III	NA	NA	NA	NA	X	X	X	X	X
1350	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA	NA	NA
1500	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
1650	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
1800	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
1950	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
2100	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
2250	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
2400	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
2550	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA
2700	I	NA	NA	NA	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	NA	NA

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- CSP Concrete Sewer, Storm Drain, and Culvert Pipe
- ESCP Extra Strength Clay Pipe
- PVC Polyvinyl Chloride (PVC) Pipe
- CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior
- PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794
- PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304
- PE Polyethylene (PE) Pipe with a Smooth Interior
- CPE Corrugated Polyethylene (PE) Pipe with a Smooth Interior
- PEPW Polyethylene (PE) Profile Wall Pipe
- X This material may be used for the given pipe diameter and fill height.
- NA This material is Not Acceptable for the given pipe diameter and fill height.
- \* May also use standard strength Clay Sewer Pipe
- \*\* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.

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**STORM SEWERS (metric)  
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED  
FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE**

Nom. Dia. mm	Type 3 Fill Height: Greater than 3 m, not exceeding 4.5 m									Type 4 Fill Height: Greater than 4.5 m, not exceeding 6 m				
	RCCP Class	CSP Class	ESCP	PVC	CPVC	PVCPW -794	PVCPW -304	PE	PEPW	RCCP Class	PVC	CPVC	PVCPW -794	PVCPW -304
250	NA	3	X	X	**	NA	NA	X	NA	NA	X	**	NA	NA
300	IV	NA	X	X	X	X	X	X	NA	V	X	X	X	X
375	IV	NA	NA	X	X	X	X	X	NA	V	X	X	X	X
450	IV	NA	NA	X	X	X	X	X	X	V	X	X	X	X
525	IV	NA	NA	X	X	X	X	NA	X	V	X	X	X	X
600	IV	NA	NA	X	X	X	X	X	X	V	X	X	X	X
675	IV	NA	NA	X	X	X	X	X	X	V	X	X	X	X
750	IV	NA	NA	X	X	X	X	X	X	V	X	X	X	X
825	IV	NA	NA	X	NA	X	X	X	X	IV	X	NA	X	X
900	IV	NA	NA	X	X	X	X	X	X	IV	X	X	X	X
1050	IV	NA	NA	NA	NA	X	X	X	X	IV	NA	NA	X	X
1200	IV	NA	NA	NA	NA	X	X	X	X	IV	NA	NA	X	X
1350	IV	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
1500	IV	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
1650	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
1800	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
1950	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
2100	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
2250	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
2400	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
2550	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA
2700	III	NA	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- CSP Concrete Sewer, Storm Drain, and Culvert Pipe
- ESCP Extra Strength Clay Pipe
- PVC Polyvinyl Chloride (PVC) Pipe
- CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior
- PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794
- PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304
- PE Polyethylene (PE) Pipe with a Smooth Interior
- PEPW Polyethylene (PE) Profile Wall Pipe
- X This material may be used for the given pipe diameter and fill height.
- NA This material is Not Acceptable for the given pipe diameter and fill height.
- \*\* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.

STORM SEWERS (metric) KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE												
Nom. Dia. mm	Type 5 Fill Height: Greater than 6 m, not exceeding 7.5 m					Type 6 Fill Height: Greater than 7.5 m, not exceeding 9 m					Type 7 Fill Height: Greater than 9 m, not exceeding 10.5 m	
	RCCP Class	PVC	CPVC	PVCPW -794	PVCPW -304	RCCP Class	PVC	CPVC	PVCPW -794	PVCPW -304	RCCP Class	PVC
250	NA	X	**	NA	NA	NA	X	**	NA	NA	NA	X
300	V-150D	X	X	X	X	V-180D	X	X	X	X	V-190D	X
375	V-145D	X	X	X	X	V-160D	X	NA	NA	NA	V-170D	X
450	V	X	X	X	X	V-150D	X	NA	NA	NA	V-160D	X
525	V	X	X	X	X	V	X	NA	NA	NA	V-150D	X
600	V	X	X	X	X	V	X	NA	NA	NA	V	X
675	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
750	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
825	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
900	V	X	NA	NA	NA	V	X	NA	NA	NA	V	X
1050	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
1200	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
1350	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
1500	V	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
1650	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
1800	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
1950	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
2100	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
2250	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
2400	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
2550	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA
2700	IV	NA	NA	NA	NA	V	NA	NA	NA	NA	V	NA

- RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- PVC Polyvinyl Chloride (PVC) Pipe
- CPVC Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior
- PVCPW-794 Polyvinyl Chloride (PVC) Profile Wall Pipe-794
- PVCPW-304 Polyvinyl Chloride (PVC) Profile Wall Pipe-304
- X This material may be used for the given pipe diameter and fill height.
- NA This material is Not Acceptable for the given pipe diameter and fill height.
- \*\* May be used if Bureau of Materials and Physical Research approves and with manufacturer's certification.
- Note: RCCP Class V - 150D, etc. shall be furnished according to AASHTO M 170M Section 6. These loads are D loads to produce a 0.3 mm crack.

Revise the last paragraph of Article 550.06 of the Standard Specifications to read:

“PVC and PE pipes shall be joined according to the manufacturer’s specifications.”

Revise the second paragraph of Article 550.07 of the Standard Specifications to read:

“When using flexible pipe, as listed in the first table of Article 550.03, the aggregate shall be continued to a height of at least 1 ft (300 mm) above the top of the pipe and compacted to a minimum of 95 percent of standard lab density by mechanical means.”

Revise Article 550.08 of the Standard Specifications to read:

“550.08 Deflection Testing for Storm Sewers. All PVC and PE storm sewers shall be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted. The testing shall be performed in the presence of the Engineer.

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For PVC and PE storm sewers with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC and PE storm sewers with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel drag shall be used.

Where the mandrel is used, the mandrel shall be furnished by the Contractor and pulled by hand through the pipeline with a suitable rope or cable connected to each end. Winching or other means of forcing the deflection gauge through the pipeline will not be allowed.

The mandrel shall be of a shape similar to that of a true circle enabling the gauge to pass through a satisfactory pipeline with little or no resistance. The mandrel shall be of a design to prevent it from tipping from side to side and to prevent debris build-up from occurring between the channels of the adjacent fins or legs during operation. Each end of the core of the mandrel shall have fasteners to which the pulling cables can be attached. The mandrel shall have nine, various sized fins or legs of appropriate dimension for various diameter pipes. Each fin or leg shall have a permanent marking that states its designated pipe size and percent of deflection allowable.

The outside diameter of the mandrel shall be 95 percent of the base inside diameter. For all PVC pipe and PE Profile Wall pipe, the base inside diameter shall be defined using ASTM D 3034 methodology. For all other PE pipe, the base inside diameter shall be defined as the average inside diameter based on the minimum and maximum tolerances specified in the corresponding ASTM or AASHTO material specifications.

If the pipe is found to have a deflection greater than that specified, that pipe section shall be removed, replaced, and retested."

Revise Article 1040.04(b) of the Standard Specifications to read:

"(b) Corrugated PE Pipe with a Smooth Interior. The pipe shall be according to AASHTO M 294 (nominal size – 12 to 48 in. (300 to 1200 mm)). The pipe shall be Type S or D."

Revised the first and second paragraphs of Article 1040.04(c) to read:

"(c) PE Profile Wall Pipe. The pipe shall be according to ASTM F 894 and shall have a minimum ring stiffness constant of 160. The pipe shall also have a minimum cell classification of PE 334433C as defined in ASTM D 3350.

(1) Pipe Culverts and Storm Sewers. When used for pipe culverts and storm sewers, the section properties shall be according to AASHTO's Section 17. The manufacturer shall submit written certification that the material meets AASHTO's Section 17 properties."

80234

## **SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)**

Effective: April 2, 2005

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting in accordance with Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

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**TEMPORARY EROSION CONTROL (BDE)**

Effective: November 1, 2002

Revised: July 1, 2010

Add the following to Article 280.02 of the Standard Specifications to read:

“(k) Filter Fabric .....1080.03”

Revise the third paragraph of Article 280.03 of the Standard Specifications to read:

“Erosion control systems shall be installed prior to beginning any activities which will potentially create erodible conditions. Erosion control systems for areas outside the limits of construction such as storage sites, plant sites, waste sites, haul roads, and Contractor furnished borrow sites shall be installed prior to beginning soil disturbing activities at each area. These offsite systems shall be designed by the Contractor and be subject to the approval of the Engineer.”

Add the following paragraph after the third paragraph of Article 280.03 of the Standard Specifications:

“The temporary erosion and sediment control systems shown on the plans represent the minimum systems anticipated for the project. Conditions created by the Contractor’s operations, or for the Contractor’s convenience, which are not covered by the plans, shall be protected as directed by the Engineer at no additional cost to the Department. Revisions or modifications of the erosion and sediment control systems shall have the Engineer’s written approval.”

Revise Article 280.04(a) of the Standard Specifications to read:

“(a) Temporary Ditch Checks. This system consists of the construction of temporary ditch checks to prevent siltation, erosion, or scour of ditches and drainage ways. Temporary ditch checks shall be constructed with rolled excelsior, products from the Department’s approved list, or with aggregate placed on filter fabric when specified. Filter fabric shall be installed according to the requirements of Section 282. Riprap shall be placed according to Article 281.04. Manufactured ditch checks shall be installed according to the manufacturer’s specifications. Spacing of ditch checks shall be such that the low point in the center of one ditch check is at the same elevation as the base of the ditch check immediately upstream. Temporary ditch checks shall be sufficiently long enough that the top of the device in the middle of the ditch is lower than the bottom of the terminating ends of the ditch side slopes.”

Revise the last sentence of the first paragraph of Article 280.04(g) of the Standard Specifications to read:

“The temporary mulch cover shall be according to either Article 251.03 or 251.04 except for any reference to seeding.”

Revise Article 280.07(b) of the Standard Specifications to read:

“(b) Temporary Ditch Checks. This work will be measured for payment along the long axis of the device in place in feet (meters) except for aggregate ditch checks which will be measured for payment in tons (metric tons). Payment will not be made for aggregate in excess of 108 percent of the amount specified by the Engineer.”

Revise Article 280.07(f) of the Standard Specifications to read:

“(f) Temporary Mulch. This work will be measured for payment according to Article 251.05(b).”

Add the following paragraph after the ninth paragraph of Article 280.07 of the Standard Specifications:

“Temporary or permanent erosion control systems required for areas outside the limits of construction will not be measured for payment.”

Revise Article 280.08(b) of the Standard Specifications to read:

“(b) Temporary Ditch Checks. This work will be paid for at the contract unit price per foot (meter) for TEMPORARY DITCH CHECKS except for aggregate ditch checks which will be paid for at the contract unit price per ton (metric ton) for AGGREGATE DITCH CHECKS.”

Revise Article 280.08(f) of the Standard Specifications to read:

“(f) Temporary Mulch. Temporary Mulch will be paid for according to Article 251.06.”

Delete the tenth (last) paragraph of Article 280.08 of the Standard Specifications.

Revise the second sentence of the first paragraph of Article 1081.15(e) of the Standard Specifications to read:

“The upstream facing of the aggregate ditch check shall be constructed of gradation CA 3. The remainder of the ditch check shall be constructed of gradation RR 3.”

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**TRAINING SPECIAL PROVISIONS (BDE)** This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 1. In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

**WORKING DAYS**

Effective: January 1, 2002

The Contractor shall complete the work within 520 working days.

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**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

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**ATTACHMENTS**

**A. Employment Preference for Appalachian Contracts  
(included in Appalachian contracts only)**

**I. GENERAL**

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.
3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;  
Section IV, paragraphs 1, 2, 3, 4 and 7;  
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:
  - a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

- b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

**II. NONDISCRIMINATION**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his operating policy the following statement: "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

**2. EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees,

applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

#### **6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be

in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

**8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from

and to utilize DBE subcontractors or subcontractors with meaningful

minority group and female representation among their employees.

Contractors shall obtain lists of DBE construction firms from SHA



personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

**9. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of

DBE subcontractors or subcontractors with meaningful minority and

female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

### III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

### IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located

on roadways classified as local roads or rural minor collectors, which are exempt.)

#### 1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

#### 2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the

contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advised the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

### 3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

### 4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

#### a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any

employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid

the full amount of fringe benefits listed on the wage determination

for the applicable classification. If the Administrator for the Wage

and Hour Division determines that a different practice prevails for

the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

#### b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration

withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

**c. Helpers:**

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

**5. Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**6. Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

**7. Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

**8. Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or

permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

**9. Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

**V. STATEMENTS AND PAYROLLS**

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

**1. Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

**2. Payrolls and Payroll Records:**

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.
- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely

all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for submitting payroll copies of all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
- (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
- (3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

## VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data

required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

## VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractors' own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

## VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in

surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

#### **IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

##### **NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS**

18 U.S.C. 1020 reads as follows:

*“Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or*

*Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or*

*Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;*

*Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.”*

#### **X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or

subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

#### **XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
- d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal

is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions

and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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#### **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions**

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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#### **2. Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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2. Where the prospective primary participant is unable to certify

**Certification Regarding Debarment, Suspension, Ineligibility And  
Voluntary Exclusion-Lower Tier Covered Transactions:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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**XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR  
LOBBYING**

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY  
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

**NOTICE**

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.