

# **BID PROPOSAL INSTRUCTIONS**

**ABOUT IDOT PROPOSALS:** All proposals are potential bidding proposals. Each proposal contains all certifications and affidavits, a proposal signature sheet and a proposal bid bond.

## **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.

## **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.

## **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 124) 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.

## **WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?**

When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status"(BDE 124) 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 and the Chief Procurement Officer 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 to Bid or Not For Bid Report within a reasonable time of complete and correct original document submittal should contact the Department as to the status. 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 bidder'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 or revision will be included with the Electronic Plans and Proposals. 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 service emails 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 [DOT.D&Econtracts@illinois.gov](mailto:DOT.D&Econtracts@illinois.gov)

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

## **STANDARD GUIDELINES FOR SUBMITTING BIDS**

- All pages should be single sided.
- Use the Cover Page that is provided in the Bid Proposal (posted on the IDOT Web Site) as the first page of your submitted bid. It has the item number in large bold type in the upper left-hand corner and lines provided for your company name and address in the upper right-hand corner.
- Do not use report covers, presentation folders or special bindings and do not staple multiple times on left side like a book. Use only 1 staple in the upper left hand corner. Make sure all elements of your bid are stapled together including the bid bond or guaranty check (if required).
- Do not include any certificates of eligibility, your authorization to bid, Addendum Letters or affidavit of availability.
- Do not include the Subcontractor Documentation with your bid (pages i – iii and pages a – g). This documentation is required only if you are awarded the project.
- Use the envelope cover sheet (provided with the proposal) as the cover for the proposal envelope.
- Do not rely on overnight services to deliver your proposal prior to 10 AM on letting day. It will not be read if it is delivered after 10 AM.
- Do not submit your Substance Abuse Prevention Program (SAPP) with your bid. If you are awarded the contract this form is to be submitted to the district engineer at the pre-construction conference.

## **BID SUBMITTAL CHECKLIST**

- Cover page** (the sheet that has the item number on it) – This should be the first page of your bid proposal, **followed by your bid (the Schedule of Prices/Pay Items)**. If you are using special software or CBID to generate your schedule of prices, do not include the blank pages of the schedule of prices that came with the proposal package.
- Page 4 (Item 9)** – Check “YES” if you will use a subcontractor(s) with an annual value over \$50,000. Include the subcontractor(s) name, address, general type of work to be performed and the dollar amount. If you will use subcontractor(s) but are uncertain who or the dollar amount; check “YES” but leave the lines blank.
- After page 4** – Insert the following documents: The **Illinois Office Affidavit** (Not applicable to federally funded projects) followed by Cost Adjustments for Steel, Bituminous and Fuel (if applicable) and the Contractor Letter of Assent (if applicable). The general rule should be, if you don’t know where it goes, put it after page 4.
- Page 10 (Paragraph J)** – Check “YES” or “NO” whether your company has any business in Iran.
- Page 10 (Paragraph K)** – (Not applicable to federally funded projects) List the name of the apprenticeship and training program sponsor holding the certificate of registration from the US Department of Labor. If no applicable program exists, please indicate the work/job category **Your bid will not be read if this is not completed.** Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.
- Page 11 (Paragraph L)** – A copy of your State Board of Elections certificate of registration is no longer required with your bid.
- Page 11 (Paragraph M)** – Indicate if your company has hired a lobbyist in connection with the job for which you are submitting the bid proposal.
- Page 12 (Paragraph C)** – This is a work sheet to determine if a completed Form A is required. It is not part of the form and you do not need to make copies for each completed Form A.
- Pages 14-17 (Form A)** – One Form A (4 pages) is required for each applicable person in your company. Copies of the forms can be used and only need to be changed when the information changes. The certification signature and date must be original for each letting. **Do not staple the forms together.** If you answered “NO” to all of the questions in Paragraph C (page 12), complete the first section (page 14) with your company information and then sign and date the Not Applicable statement on page 17.
- Page 18 (Form B)** - If you check “YES” to having other current or pending contracts it is acceptable to use the phrase, “See Affidavit of Availability on file”. **Ownership Certification** (at the bottom of the page) - Check N/A if the Form A(s) you submitted accounts for 100 percent of the company ownership. Check YES if any percentage of ownership falls outside of the parameters that require reporting on the Form A. Checking NO indicates that the Form A(s) you submitted is not correct and you will be required to submit a revised Form A.
- Page 20 (Workforce Projection)** – Be sure to include the Duration of the Project. It is acceptable to use the phrase “Per Contract Specifications”.

**Proposal Bid Bond** – (Insert after the proposal signature page) Submit your proposal Proposal Bid Bond (if applicable) using the current Proposal Bid Bond form provided in the proposal package. The Power of Attorney page should be stapled to the Proposal Bid Bond. If you are using an electronic bond, include your bid bond number on the Proposal Bid Bond and attach the Proof of Insurance printed from the Surety’s Web Site.

**Disadvantaged Business Utilization Plan and/or Good Faith Effort** – The last items in your bid should be the DBE Utilization Plan (SBE 2026), followed by the DBE Participation Statement (SBE 2025) and supporting paperwork. If you have documentation of a Good Faith Effort, it is to follow the SBE Forms.

**The Bid Letting is now available in streaming Audio/Video from the IDOT Web Site.** A link to the stream will be placed on the main page of the current letting on the day of the Letting. The stream will not begin until 10 AM. The actual reading of the bids does not begin until approximately 10:30 AM.

Following the Letting, the As-Read Tabulation of Bids will be posted by the end of the day. You will find the link on the main Web page for the current letting.

**QUESTIONS: pre-letting up to execution of the contract**

Contractor pre-qualification .....	217-782-3413
Small Business, Disadvantaged Business Enterprise (DBE) .....	217-785-4611
Contracts, Bids, Letting process or Internet downloads .....	217-782-7806
Estimates Unit.....	217-785-3483
Aeronautics.....	217-785-8515
IDNR (Land Reclamation, Water Resources, Natural Resources).....	217-782-6302

**QUESTIONS: following contract execution**

Subcontractor documentation, payments .....	217-782-3413
Railroad Insurance .....	217-785-0275

# 210

RETURN WITH BID

Proposal Submitted By
Name
Address
City

## Letting June 13, 2014

### 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.

**BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL**

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



**Illinois Department  
of Transportation**

Springfield, Illinois 62764

**Contract No. 93617  
SANGAMON County  
Section 13-00475-00-BR (Springfield)  
Route FAU 7975 (Carpenter Street)  
Project TIG-5146(087)  
District 6 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

- A Bid Bond is included.
- A Cashier's Check or a Certified Check is included
- An Annual Bid Bond is included or is on file with IDOT.

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

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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. 93617  
SANGAMON County  
Section 13-00475-00-BR (Springfield)  
Project TIG-5146(087)  
Route FAU 7975 (Carpenter Street)  
District 6 Construction Funds**

**This project consists of the construction of two new railroad structures and th the construction of a new vertical alignment to create an underpass located on Carpenter Street between 9th Street and 11th Street in the City of Springfield.**

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 will govern performance and payments.

**RETURN WITH BID**

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned bidder 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 bid proposal he/she waives all right to plead any misunderstanding regarding the same.
  
4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned bidder 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, or as specified in the special provisions, 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 bid proposals will be made payable to the Treasurer, State of Illinois.

If a combination bid is submitted, the proposal guaranties which accompany the individual bid 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 will fail to execute a contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty will 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 will become void or the proposal guaranty check will 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 bid proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual bid proposal. If the guaranty check is placed in another bid proposal, state below where it may be found.

The proposal guaranty check will be found in the bid 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 bidder 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 contract 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 will 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 (the 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. **EXECUTION OF CONTRACT:** The Department of Transportation will, in accordance with the rules governing Department procurements, execute the contract and shall be the sole entity having the authority to accept performance and make payments under the contract. Execution of the contract by the Chief Procurement Officer (CPO) or the State Purchasing Officer (SPO) is for approval of the procurement process and execution of the contract by the Department. Neither the CPO nor the SPO shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Code.
10. **The services of a subcontractor will be used.**

Check box Yes   
 Check box No

For known subcontractors with subcontracts with an annual value of more than \$50,000, the contract shall include their name, address, general type of work to be performed, and the dollar allocation for each subcontractor.  
 (30 ILCS 500/20-120)

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COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
SANGAMON	167	06	13-00475-00-BR (SPRINGFIELD)	TIG-5146/087/000	FAU 7975

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
LR430050	CONC PAVER SIDEWALK	SQ YD	220.000 X		=		
XX004895	PIPE UNDERDRN CLN OUT	EACH	17.000 X		=		
XX005896	CONCRETE PAD REMOVAL	SQ FT	240.000 X		=		
XX008948	F&E STRUCT STEEL BR 1	L SUM	1.000 X		=		
XX008949	F&E STRUCT STEEL BR 2	L SUM	1.000 X		=		
XX008950	LUM LED COBRA HEAD	EACH	10.000 X		=		
XX008951	LUM LED WALL MOUNTED	EACH	176.000 X		=		
XX008952	LUM DEC LIGHT TAPE	FOOT	154.000 X		=		
XX008953	SECANT LAGGING	CU FT	2,250.000 X		=		
XX008954	P P CONC FASCIA BEAM	FOOT	84.000 X		=		
XX008955	MED VOL DIST RELOCATE	L SUM	1.000 X		=		
X0321865	ANTI-GRAFFIT PROT SYS	SQ FT	8,767.000 X		=		
X0323360	WOOD POLE REMOVAL	EACH	2.000 X		=		
X0323389	STORM SEW CONNECTION	EACH	2.000 X		=		
X0323569	STEEL POST REMOVAL	EACH	1.000 X		=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0324761	DRAINAGE SYSTEM SPL	L SUM	1.000 X	=			
X0325379	DIRECTIONAL BORING	FOOT	87.000 X	=			
X0326390	CONCRETE SLAB REMOVAL	SQ YD	28.000 X	=			
X0326458	PAVEMENT REPL SPL	SQ YD	111.000 X	=			
X0326671	CONC SURF COLOR TRMNT	SQ FT	1,549.000 X	=			
X0326911	TRANSVERSE DRAINS COM	EACH	3.000 X	=			
X0327131	DRAIN STRUCTURES N1	EACH	2.000 X	=			
X0327132	DRAIN STRUCTURES N2	EACH	1.000 X	=			
X0350810	BOLLARD REMOVAL	EACH	1.000 X	=			
X0783300	P.S. ELECTRICAL WORK	L SUM	1.000 X	=			
X0783500	P.S. MECHANICAL WORK	L SUM	1.000 X	=			
X4404400	PAVT REMOVAL SPL	SQ YD	4,061.000 X	=			
X5030540	FLOOR DRAINS SPL	EACH	18.000 X	=			
X5610706	WATER MAIN REMOV 6	FOOT	353.000 X	=			
X5610710	WATER MAIN REMOV 10	FOOT	313.000 X	=			

FAU 7975  
 13-00475-00-BR (SPRINGFIELD)  
 SANGAMON

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 93617

ECMS002 DTGECM03 ECMR003 PAGE 3  
 RUN DATE - 05/06/14  
 RUN TIME - 183122

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X5860110	GRANULAR BACKFILL STR	CU YD	216.000	X	=		
X6012005	PIPE DRAINS 12 SPL	FOOT	199.000	X	=		
X6020074	INLETS TA T3V F&G	EACH	14.000	X	=		
X6023508	INLETS TA W/SPL F&G	EACH	4.000	X	=		
X6040205	FRAMES & LIDS SPECIAL	EACH	2.000	X	=		
X6061460	PAVED DITCH SPEC	FOOT	549.000	X	=		
X6640210	TEMP CH LK FENCE PORT	FOOT	201.000	X	=		
X6640308	CH LK GATES SPL	EACH	2.000	X	=		
X6640570	CH LK FENCE 8 SPL	FOOT	1,642.000	X	=		
X7010216	TRAF CONT & PROT SPL	L SUM	1.000	X	=		
X7240300	SIGN REMOVAL	EACH	2.000	X	=		
X8050135	SERV INSTALL TY C MOD	EACH	2.000	X	=		
X8210675	LUM METAL HAL HM 400W	EACH	4.000	X	=		
X8570226	FAC T4 CAB SPL	EACH	1.000	X	=		
Z0007124	STEEL RAILING SPL	FOOT	2,066.000	X	=		

FAU 7975  
 13-00475-00-BR (SPRINGFIELD)  
 SANGAMON

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 93617

ECMS002 DTGECM03 ECMR003 PAGE 4  
 RUN DATE - 05/06/14  
 RUN TIME - 183122

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X				
Z0022800	FENCE REMOVAL	FOOT	1,965.000 X				
Z0026407	TEMP SHT PILING	SQ FT	9,153.000 X				
Z0034210	MECH ST EARTH RET WL	SQ FT	7,267.000 X				
Z0046304	P UNDR FOR STRUCT 4	FOOT	2,283.000 X				
Z0046306	P UNDR FOR STRUCT 6	FOOT	194.000 X				
Z0047700	PUMPING STATION	L SUM	1.000 X				
Z0048665	RR PROT LIABILITY INS	L SUM	1.000 X				
Z0068300	STEEL CASINGS 36	FOOT	70.000 X				
Z0069700	SUB-BALLAST	CU YD	4,802.000 X				
Z0076600	TRAINEES	HOOR	2,500.000 X		0.80		2,000.00
Z0076604	TRAINEES TPG	HOOR	2,500.000 X		15.00		37,500.00
20101000	TEMPORARY FENCE	FOOT	1,563.000 X				
20200100	EARTH EXCAVATION	CU YD	21,970.000 X				
20700220	POROUS GRAN EMBANK	CU YD	118.000 X				

FAU 7975  
 13-00475-00-BR (SPRINGFIELD)  
 SANGAMON

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 93617

ECMS002 DTGECM03 ECMR003 PAGE 5  
 RUN DATE - 05/06/14  
 RUN TIME - 183122

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20800150	TRENCH BACKFILL	CU YD	326.000	X	=		
21001000	GEOTECH FAB F/GR STAB	SQ YD	5,440.000	X	=		
25000110	SEEDING CL 1A	ACRE	0.750	X	=		
25000400	NITROGEN FERT NUTR	POUND	67.000	X	=		
25000500	PHOSPHORUS FERT NUTR	POUND	67.000	X	=		
25000600	POTASSIUM FERT NUTR	POUND	67.000	X	=		
25000700	AGR GROUND LIMESTONE	TON	1.500	X	=		
25100125	MULCH METHOD 3	ACRE	0.650	X	=		
25100630	EROSION CONTR BLANKET	SQ YD	558.000	X	=		
28000400	PERIMETER EROS BAR	FOOT	2,261.000	X	=		
28000500	INLET & PIPE PROTECT	EACH	44.000	X	=		
28100103	STONE RIPRAP CL A2	SQ YD	375.000	X	=		
28200200	FILTER FABRIC	SQ YD	375.000	X	=		
30300112	AGG SUBGRADE IMPR 12	SQ YD	5,470.000	X	=		
35102400	AGG BASE CSE B 12	SQ YD	2,073.000	X	=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
35400300	PCC BASE CSE W 8	SQ YD	14.000 X	=	=	=	=
40200700	AGG SURF CSE A 8	SQ YD	44.000 X	=	=	=	=
40600100	BIT MATLS PR CT	GALLON	81.000 X	=	=	=	=
40603335	HMA SC "D" N50	TON	72.000 X	=	=	=	=
42000301	PCC PVT 8 JOINTED	SQ YD	4,535.000 X	=	=	=	=
42001300	PROTECTIVE COAT	SQ YD	5,576.000 X	=	=	=	=
42300200	PCC DRIVEWAY PAVT 6	SQ YD	233.000 X	=	=	=	=
42400100	PC CONC SIDEWALK 4	SQ FT	3,008.000 X	=	=	=	=
42400800	DETECTABLE WARNINGS	SQ FT	128.000 X	=	=	=	=
44000100	PAVEMENT REM	SQ YD	12,655.000 X	=	=	=	=
44000155	HMA SURF REM 1 1/2	SQ YD	793.000 X	=	=	=	=
44000200	DRIVE PAVEMENT REM	SQ YD	406.000 X	=	=	=	=
44000500	COMB CURB GUTTER REM	FOOT	183.000 X	=	=	=	=
44000600	SIDEWALK REM	SQ FT	8,095.000 X	=	=	=	=
50200100	STRUCTURE EXCAVATION	CU YD	426.000 X	=	=	=	=

FAU 7975  
 13-00475-00-BR (SPRINGFIELD)  
 SANGAMON

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT NUMBER - 93617

ECMS002 DTGECM03 ECMR003 PAGE 7  
 RUN DATE - 05/06/14  
 RUN TIME - 183122

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
50300225	CONC STRUCT	CU YD	718.500	X	=	=	=
50300255	CONC SUP-STR	CU YD	98.800	X	=	=	=
50300285	FORM LINER TEX SURF	SQ FT	3,262.000	X	=	=	=
50500505	STUD SHEAR CONNECTORS	EACH	6,816.000	X	=	=	=
50800105	REINFORCEMENT BARS	POUND	349,720.000	X	=	=	=
50800205	REINF BARS, EPOXY CTD	POUND	124,150.000	X	=	=	=
51500100	NAME PLATES	EACH	2.000	X	=	=	=
51603000	DRILLED SHAFT IN SOIL	CU YD	1,418.000	X	=	=	=
51604000	DRILLED SHAFT IN ROCK	CU YD	155.000	X	=	=	=
54213657	PRC FLAR END SEC 12	EACH	1.000	X	=	=	=
550A0050	STORM SEW CL A 1 12	FOOT	1,194.000	X	=	=	=
550A0090	STORM SEW CL A 1 18	FOOT	89.000	X	=	=	=
550A0120	STORM SEW CL A 1 24	FOOT	210.000	X	=	=	=
55100200	STORM SEWER REM 6	FOOT	161.000	X	=	=	=
55100500	STORM SEWER REM 12	FOOT	530.000	X	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
55101400	STORM SEWER REM 30	FOOT	357.000 X	=			
55200900	STORM SEWERS JKD 24	FOOT	65.000 X	=			
56100800	WATER MAIN 10	FOOT	486.000 X	=			
58000100	MEMBRANE WATERPROOF	SQ FT	7,052.000 X	=			
58700300	CONCRETE SEALER	SQ FT	19,049.000 X	=			
59100100	GEOCOMPOSITE WALL DR	SQ YD	431.000 X	=			
59300100	CONTR LOW-STRENG MATL	CU YD	268.000 X	=			
60100915	PIPE DRAINS 6	FOOT	34.000 X	=			
60100945	PIPE DRAINS 12	FOOT	38.000 X	=			
60107600	PIPE UNDERDRAINS 4	FOOT	1,359.000 X	=			
60109530	P UNDR FAB LINE TR 8	FOOT	2,482.000 X	=			
60109540	P UNDR FAB LINE TR 10	FOOT	754.000 X	=			
60218400	MAN TA 4 DIA T1F CL	EACH	1.000 X	=			
60219000	MAN TA 4 DIA T8G	EACH	4.000 X	=			
60219540	MAN TA 4 DIA T24F&G	EACH	3.000 X	=			



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				DOLLARS	CENTS	DOLLARS	CTS
60219570	MAN TA 4 DIA T3V F&G	EACH	4.000 X	=	=	=	=
60221100	MAN TA 5 DIA T1F CL	EACH	1.000 X	=	=	=	=
60222270	MAN TA 5 DIA T3V F&G	EACH	2.000 X	=	=	=	=
60240328	INLETS TB T24F&G	EACH	6.000 X	=	=	=	=
60257900	MAN RECONST	EACH	1.000 X	=	=	=	=
60260100	INLETS ADJUST	EACH	6.000 X	=	=	=	=
60500040	REMOV MANHOLES	EACH	7.000 X	=	=	=	=
60500060	REMOV INLETS	EACH	7.000 X	=	=	=	=
60603800	COMB CC&G TB6.12	FOOT	88.000 X	=	=	=	=
60604400	COMB CC&G TB6.18	FOOT	100.000 X	=	=	=	=
60606800	COMB CC&G TB9.18	FOOT	1,207.000 X	=	=	=	=
60607100	COMB CC&G TB9.18 MOD	FOOT	215.000 X	=	=	=	=
60618300	CONC MEDIAN SURF 4	SQ FT	1,873.000 X	=	=	=	=
60620400	CONC MED TSB9.06	SQ FT	2,062.000 X	=	=	=	=
63000001	SPBGR TY A 6FT POSTS	FOOT	450.000 X	=	=	=	=

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
63200310	GUARDRAIL REMOV	FOOT	27.000	X	=		
66400105	CH LK FENCE 4	FOOT	1,396.000	X	=		
67000400	ENGR FIELD OFFICE A	CAL MO	24.000	X	=		
67100100	MOBILIZATION	L SUM	1.000	X	=		
70102625	TR CONT & PROT 701606	L SUM	1.000	X	=		
70102635	TR CONT & PROT 701701	L SUM	1.000	X	=		
70102640	TR CONT & PROT 701801	L SUM	1.000	X	=		
70300240	TEMP PVT MK LINE 6	FOOT	340.000	X	=		
70300280	TEMP PVT MK LINE 24	FOOT	94.000	X	=		
70301000	WORK ZONE PAVT MK REM	SQ FT	358.000	X	=		
72000100	SIGN PANEL T1	SQ FT	79.000	X	=		
72000200	SIGN PANEL T2	SQ FT	150.000	X	=		
72400100	REMOV SIN PAN ASSY TA	EACH	18.000	X	=		
72900100	METAL POST TY A	FOOT	259.000	X	=		
72900200	METAL POST TY B	FOOT	58.000	X	=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
78005100	EPOXY PVT MK LTR-SYM	SQ FT	68.000 X	=	=	=	=
78005120	EPOXY PVT MK LINE 5	FOOT	1,470.000 X	=	=	=	=
78005130	EPOXY PVT MK LINE 6	FOOT	1,939.000 X	=	=	=	=
78005150	EPOXY PVT MK LINE 12	FOOT	124.000 X	=	=	=	=
78005180	EPOXY PVT MK LINE 24	FOOT	198.000 X	=	=	=	=
78100100	RAISED REFL PAVT MKR	EACH	23.000 X	=	=	=	=
78200300	PRISMATIC CURB REFL	EACH	19.000 X	=	=	=	=
80400100	ELECT SERV INSTALL	EACH	1.000 X	=	=	=	=
81028350	UNDRGRD C PVC 2	FOOT	75.000 X	=	=	=	=
81028370	UNDRGRD C PVC 3	FOOT	95.000 X	=	=	=	=
81028390	UNDRGRD C PVC 4	FOOT	337.000 X	=	=	=	=
81100320	CON AT ST 1 PVC GS	FOOT	200.000 X	=	=	=	=
81200200	CON EMB STR 3/4 PVC	FOOT	1,070.000 X	=	=	=	=
81200270	CON EMB STR 4 PVC	FOOT	168.000 X	=	=	=	=
81300410	JUN BX SS AS 10X8X4	EACH	4.000 X	=	=	=	=

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
81400100	HANDHOLE	EACH	4.000	X	=		
81400300	DBL HANDHOLE	EACH	2.000	X	=		
81603010	UD 2#10#10GXLPUSE 3/4	FOOT	1,500.000	X	=		
81603085	UD 3#4#4GXLPUSE 1 1/4	FOOT	500.000	X	=		
81702110	EC C XLP USE 1C 10	FOOT	3,000.000	X	=		
81702130	EC C XLP USE 1C 6	FOOT	2,071.000	X	=		
82500350	LT CONT BASEM 240V100	EACH	1.000	X	=		
82500360	LT CONT BASEM 480V100	EACH	1.000	X	=		
83002350	LT P A 40MH 8DA-TW	EACH	2.000	X	=		
83002400	LT P A 40MH 10DA	EACH	6.000	X	=		
83600300	LIGHT POLE FDN 30D	FOOT	48.000	X	=		
83800650	BKWY DEV COU SS SCRIN	EACH	24.000	X	=		
84200600	REM LT U NO SALV	EACH	2.000	X	=		
84200804	REM POLE FDN	EACH	2.000	X	=		
84500110	REMOV LIGHTING CONTR	EACH	1.000	X	=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87301245	ELCBL C SIGNAL 14 5C	FOOT	4,490.000	X	=	=	
87301255	ELCBL C SIGNAL 14 7C	FOOT	1,387.000	X	=	=	
87301900	ELCBL C EGRDC 6 1C	FOOT	734.000	X	=	=	
87502640	TS POST A 10	EACH	2.000	X	=	=	
87502690	TS POST A 15	EACH	2.000	X	=	=	
87502710	TS POST A 17	EACH	2.000	X	=	=	
87700200	S MAA & P 32	EACH	1.000	X	=	=	
87700310	S MAA & P 54	EACH	1.000	X	=	=	
87702860	STL COMB MAA&P 26	EACH	1.000	X	=	=	
87702970	STL COMB MAA&P 48	EACH	1.000	X	=	=	
87702980	STL COMB MAA&P 50	EACH	2.000	X	=	=	
87800100	CONC FDN TY A	FOOT	18.000	X	=	=	
87800200	CONC FDN TY D	FOOT	7.000	X	=	=	
87800400	CONC FDN TY E 30D	FOOT	10.000	X	=	=	
87800415	CONC FDN TY E 36D	FOOT	56.000	X	=	=	

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87800420	CONC FDN TY E 42D	FOOT	21.000 X	=	=	=	=
88040070	SH P LED 1F 3S BM	EACH	6.000 X	=	=	=	=
88040090	SH P LED 1F 3S MAM	EACH	12.000 X	=	=	=	=
88040150	SH P LED 1F 5S BM	EACH	4.000 X	=	=	=	=
88040160	SH P LED 1F 5S MAM	EACH	4.000 X	=	=	=	=
88102825	PED SH P LED 1F BM CT	EACH	12.000 X	=	=	=	=
88200400	TS BACKPLATE F PLAST	EACH	26.000 X	=	=	=	=
88800100	PED PUSH-BUTTON	EACH	12.000 X	=	=	=	=
89000100	TEMP TR SIG INSTALL	EACH	1.000 X	=	=	=	=
89501100	RELOC EX TS CONT	EACH	1.000 X	=	=	=	=
89501250	RELOC EX TS EQUIP	EACH	2.000 X	=	=	=	=
89502375	REMOV EX TS EQUIP	EACH	2.000 X	=	=	=	=
89502385	REMOV EX CONC FDN	EACH	8.000 X	=	=	=	=

TOTAL \$

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

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NOTE:

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

## RETURN WITH BID

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

#### I. GENERAL

A. Article 50 of the Code establishes the duty of all State CPOs, SPOs, 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 CPO to void the contract, and may result in the suspension or debarment of the bidder or subcontractor. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

I acknowledge, understand and accept these terms and conditions.

#### 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**

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 State 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 State 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

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. Information concerning the exemption process is available from the Department upon request.

### **B. Negotiations**

Section 50-15. Negotiations.

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.

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**

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.

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**

Section 50-30. Revolving door prohibition.

CPOs, SPOs, 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.

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**

Section 50-40. Reporting anticompetitive practices.

When, for any reason, any vendor, bidder, contractor, CPO, SPO, 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 CPO.

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**

Section 50-45. Confidentiality.

Any CPO, SPO, 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.

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

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.

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.

I acknowledge, understand and accept these terms and conditions for the above assurances.

### 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 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 CPO 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

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 2012.

(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 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 CPO 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.

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

#### B. Felons

Section 50-10. Felons.

(a) 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.

(b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the 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 CPO may declare the related contract void if any of the certifications required by this Section are false.

## RETURN WITH BID

### **C. Debt Delinquency**

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 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 CPO 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**

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 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 CPO 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 500/50-14 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 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 CPO may declare the contract void if this certification is false.

### **F. Educational Loan**

Section 3 of the Educational Loan Default Act provides 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.

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**

Section 33E-11 of the Criminal Code of 2012 provides:

(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.

(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.

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**

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

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

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

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.

The bidder certifies that if awarded a contract in excess of \$5,000 it will provide a drug free workplace in compliance with the provisions of the Act.

### **J. Disclosure of Business Operations in Iran**

Section 50-36 of the 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 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.

## RETURN WITH BID

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

In accordance with the provisions of Section 30-22 (6) of the 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.**

**NA-FEDERAL**

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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.

**RETURN WITH BID**

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

Sections 20-160 and 50-37 of the 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 Code, and that it makes the following certification:

**The undersigned bidder 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. If the business entity is required to register, the CPO shall verify that it is in compliance on the date the bid or proposal is due. The CPO shall not accept a bid or proposal if the business entity is not in compliance with the registration requirements.**

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 Code. This provision does not apply to Federal-aid contracts.

**M. Lobbyist Disclosure**

Section 50-38 of the 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 CPO 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 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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I acknowledge, understand and accept these terms and conditions for the above certifications.

## 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 CPO may void the bid, or contract, 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 Code. Furthermore, the CPO 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 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 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 200 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. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification. **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 200 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 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)

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 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 \_\_\_

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(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 \_\_\_

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(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 \_\_\_

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

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(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 \_\_\_

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

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**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): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RETURN WITH BID**

**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:  \_\_\_\_\_  
Signature of Individual or Authorized Representative Date

**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.**

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

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Financial 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 Code (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

Signature of Authorized Representative, Date

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership.

Any remaining ownership interest is held by individuals receiving less than \$106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

Yes No N/A (Form A disclosure(s) established 100% ownership)

## **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.



**RETURN WITH BID**

**Contract No. 93617  
SANGAMON County  
Section 13-00475-00-BR (Springfield)  
Project TIG-5146(087)  
Route FAU 7975 (Carpenter Street)  
District 6 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. 93617  
SANGAMON County  
Section 13-00475-00-BR (Springfield)  
Project TIG-5146(087)  
Route FAU 7975 (Carpenter Street)  
District 6 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.



This Annual Proposal Bid Bond shall become effective at 12:01 AM (CDST) on \_\_\_\_\_ and shall be valid until \_\_\_\_\_ 11:59 PM (CDST).

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

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

as SURETY, and 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 the bid proposal under "Proposal Guaranty" in effect on the date of the 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 may submit bid proposal(s) to the STATE OF ILLINOIS, acting through the Department of Transportation, for various improvements published in the Transportation Bulletin during the effective term indicated above.

NOW, THEREFORE, if the Department shall accept the bid proposal(s) of the PRINCIPAL; and if the PRINCIPAL shall, within the time and as specified in the bidding and contract documents; 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 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 has caused this instrument to be signed by its officer \_\_\_\_\_ day of \_\_\_\_\_ A.D., \_\_\_\_\_

In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer \_\_\_\_\_ day of \_\_\_\_\_ A.D., \_\_\_\_\_

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

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

By \_\_\_\_\_  
(Signature and Title)

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

**Notary for PRINCIPAL**

**Notary for SURETY**

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Signed and attested before me on \_\_\_\_\_ (date)

Signed and attested before me on \_\_\_\_\_ (date)

by \_\_\_\_\_  
(Name of Notary Public)

by \_\_\_\_\_  
(Name of Notary Public)

(Seal) \_\_\_\_\_  
(Signature of Notary Public)

(Seal) \_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Date Commission Expires)

\_\_\_\_\_  
(Date Commission Expires)

In lieu of completing the above section of the Annual Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal(s) 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.

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Electronic Bid Bond ID #	Company/Bidder Name	Signature and Title
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This bond may be terminated, at Surety's request, upon giving not less than thirty (30) days prior written notice of the cancellation/termination of the bond. Said written notice shall be issued to the Illinois Department of Transportation, Chief Contracts Official, 2300 South Dirksen Parkway, Springfield, Illinois, 62764, and shall be served in person, by receipted courier delivery or certified or registered mail, return receipt requested. Said notice period shall commence on the first calendar day following the Department's receipt of written cancellation/termination notice. Surety shall remain firmly bound to all obligations herein for proposals submitted prior to the cancellation/termination. Surety shall be released and discharged from any obligation(s) for proposals submitted for any letting or date after the effective date of cancellation/termination.



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

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

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

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

as SURETY, and 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 the bid proposal under "Proposal Guaranty" in effect on the date of the 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; 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 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 has caused this instrument to be signed by its officer \_\_\_\_\_ day of \_\_\_\_\_ A.D., \_\_\_\_\_

In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer \_\_\_\_\_ day of \_\_\_\_\_ A.D., \_\_\_\_\_

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

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

By \_\_\_\_\_  
(Signature and Title)

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

**Notary for PRINCIPAL**

**Notary for SURETY**

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Signed and attested before me on \_\_\_\_\_ (date)  
by \_\_\_\_\_

Signed and attested before me on \_\_\_\_\_ (date)  
by \_\_\_\_\_

(Name of Notary Public)

(Name of Notary Public)

(Seal) \_\_\_\_\_  
(Signature of Notary Public)

(Seal) \_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Date Commission Expires)

\_\_\_\_\_  
(Date Commission Expires)

In lieu of completing the above section of the Proposal Bid Bond form, the Principal may file an Electronic Bid Bond. By signing the proposal 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 2300 South Dirksen Parkway Springfield, Illinois 62764	<b>Local Let Projects</b> Submit forms to the Local Agency

The Department of Transportation is requesting disclosure of information that is necessary to accomplish the purpose as outlined under State and Federal law. Disclosure of this information is **REQUIRED**. Failure to provide any information will result in the contract not being awarded. This form has been approved by the State Forms Manager Center.



# 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. 93617  
SANGAMON County  
Section 13-00475-00-BR (Springfield)  
Project TIG-5146(087)  
Route FAU 7975 (Carpenter Street)  
District 6 Construction Funds**



**Illinois Department of Transportation**

## **SUBCONTRACTOR DOCUMENTATION**

Public Acts 96-0795, 96-0920, and 97-0895 enacted substantial changes to the provisions of the 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 that entered into a contractual agreement with a total value of \$50,000 or more with a person or entity who has a contract subject to the Code and 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 Illinois Department of Transportation's CPO upon request within 15 calendar days after execution of the subcontract.

Financial disclosures required pursuant to Sec. 50-35 of the Code must be submitted for all applicable subcontractors. The subcontract shall contain the certifications required to be made by subcontractors pursuant to Article 50 of the 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.

## RETURN WITH SUBCONTRACT

### STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

Article 50 of the Code establishes the duty of all State CPOs, SPOs, 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 CPO may terminate or void the contract approval if it is later determined that the bidder or subcontractor rendered a false or erroneous certification. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

Section 50-2 of the 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 CPO 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**

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 2012.

(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 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 CPO 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.

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

#### **B. Felons**

Section 50-10. Felons.

(a) 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.

(b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the 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 CPO may declare the related contract void if any of the certifications required by this Section are false.

## RETURN WITH SUBCONTRACT

### **C. Debt Delinquency**

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 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 CPO 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**

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 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 CPO 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 500/50-14 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 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 CPO 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.**

\_\_\_\_\_  
Name of Subcontracting Company

\_\_\_\_\_  
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 CPO 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 Code. Furthermore, the CPO may void the contract.

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

1. Section 50-35 of the Code provides that all subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the 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 200 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. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification. **The forms must be included with each bid.**

**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 200 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 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 \$50,000 or more, from subcontractors identified in Section 20-120 of the 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)**

<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.

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 \_\_\_

---

(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. \_\_\_\_\_

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 & Financial Related Information Disclosure

Form with fields: 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 Code (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 \$50,000 or more, from subcontractors identified in Section 20-120 of the 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

Signature box with fields: Signature of Authorized Officer, Date

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership

Any remaining ownership interest is held by individuals receiving less than \$106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

Yes No N/A (Form A disclosure(s) established 100% ownership)



## NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation. Electronic bids are to be submitted to the electronic bidding system (ics-Integrated Contractors Exchange). Paper-based bids are to be submitted to the Chief Procurement Officer for the Department of Transportation in care of the Chief Contracts Official at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m. June 13, 2014. 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. 93617  
SANGAMON County  
Section 13-00475-00-BR (Springfield)  
Project TIG-5146(087)  
Route FAU 7975 (Carpenter Street)  
District 6 Construction Funds**

**This project consists of the construction of two new railroad structures and th the construction of a new vertical alignment to create an underpass located on Carpenter Street between 9th Street and 11th Street in the City of Springfield.**

- 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

Ann L. Schneider,  
Secretary

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2014

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-12) (Revised 1-1-14)

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LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

The following LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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<u>LR #</u>	<u>Pg #</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
LR SD12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR SD406		<input type="checkbox"/> <b>RESCINDED</b>		
LR 102-2		<input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals	Jan. 1, 2001	Jan. 1, 2014
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 107-4	173	<input checked="" type="checkbox"/> Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-7		<input type="checkbox"/> Wages of Employees on Public Works	Jan. 1, 1999	Jan. 1, 2014
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 109		<input type="checkbox"/> Equipment Rental Rates	Jan. 1, 2012	
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Bituminous Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Apr. 1, 2012
LR 400-2		<input type="checkbox"/> Bituminous Surface Plant Mix (Class B)	Jan. 1, 2008	
LR 400-3		<input type="checkbox"/> Hot In-Place Recycling (HIR) – Surface Recycling	Jan. 1, 2012	
LR 400-4		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-5		<input type="checkbox"/> Cold In-Place Recycling (CIR) With Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-6		<input type="checkbox"/> Cold In Place Recycling (CIR) with Foamed Asphalt	June 1, 2012	
LR 400-7		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Foamed Asphalt	June 1, 2012	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-1		<input type="checkbox"/> Surface Profile Milling of Existing, Recycled or Reclaimed Flexible Pavement	Apr. 1, 2012	Jun. 1, 2012
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		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1000-1		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures	Apr. 1, 2012	Jun. 1, 2012
LR 1000-2		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures	June 1, 2012	
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		<input type="checkbox"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

**BDE SPECIAL PROVISIONS**  
For the April 25 and June 13, 2014 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.

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80240			Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
80274	174	X	Aggregate Subgrade Improvement	April 1, 2012	Jan. 1, 2013
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2013
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			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80292			Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	April 1, 2013
80310	177	X	Coated Galvanized Steel Conduit	Jan. 1, 2013	
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
* 80293			Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	April 1, 2014
* 80294			Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	April 1, 2012	April 1, 2014
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	
* 80334	178	X	Concrete Gutter, Curb, Median, and Paved Ditch	April 1, 2014	
80277			Concrete Mix Design – Department Provided	Jan. 1, 2012	Jan. 1, 2014
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	Jan. 1, 2014
* 80335	179	X	Contract Claims	April 1, 2014	
80029	180	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80265	190	X	Friction Aggregate	Jan. 1, 2011	
80229	194	X	Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80329			Glare Screen	Jan. 1, 2014	
80303	198	X	Granular Materials	Nov. 1, 2012	
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
80246	199	X	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80322	201	X	Hot-Mix Asphalt – Mixture Design Composition and Volumetric Requirements	Nov 1, 2013	
80323	204	X	Hot-Mix Asphalt – Mixture Design Verification and Production	Nov 1, 2013	
80315			Insertion Lining of Culverts	Jan. 1, 2013	Nov 1, 2013
* 80336			Longitudinal Joint and Crack Patching	April 1, 2014	
* 80324			LRFD Pipe Culvert Burial Tables	Nov 1, 2013	April 1, 2014
80325	207	X	LRFD Storm Sewer Burial Tables	Nov 1, 2013	
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
* 80337			Paved Shoulder Removal	April 1, 2014	
80330			Pavement Marking for Bike Symbol	Jan. 1, 2014	
80298			Pavement Marking Tape Type IV	April 1, 2012	
80254			Pavement Patching	Jan. 1, 2010	
80331	217	X	Payrolls and Payroll Records	Jan. 1, 2014	
80332	219	X	Portland Cement Concrete – Curing of Abutments and Piers	Jan. 1, 2014	
80326	220	X	Portland Cement Concrete Equipment	Nov 1, 2013	
* 80338			Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	April 1, 2014	
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80328	221	X	Progress Payments	Nov. 2, 2013	
80281	222	X	Quality Control/Quality Assurance of Concrete Mixes	Jan. 1, 2012	Jan. 1, 2014
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	223	X	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306	225	X	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	April 1, 2014
80327	235	X	Reinforcement bars	Nov 1, 2013	
80283	237	X	Removal and Disposal of Regulated Substances	Jan. 1, 2012	Nov. 2, 2012
80319	241	X	Removal and Disposal of Surplus Materials	Nov. 2, 2012	
80307			Seeding	Nov. 1, 2012	
* 80339			Stabilized Subbase	April 1, 2014	
80127	242	X	Steel Cost Adjustment	April 2, 2004	April 1, 2009
80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	
80301			Tracking the Use of Pesticides	Aug. 1, 2012	
80333			Traffic Control Setup and Removal Freeway/Expressway	Jan. 1, 2014	
20338	246	X	Training Special Provisions	Oct. 15, 1975	
* 80318			Traversable Pipe Grate	Jan. 1, 2013	April 1, 2014
80288	249	X	Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2013
80302	253	X	Weekly DBE Trucking Reports	June 2, 2012	
80289			Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071			Working Days	Jan. 1, 2002	

The following special provisions are in the 2014 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>
80309	Anchor Bolts	Articles 1006.09, 1070.01, and 1070.03	Jan. 1, 2013	
80276	Bridge Relief Joint Sealer	Article 503.19 and Sections 588 and 589	Jan. 1, 2012	Aug. 1, 2012
80312	Drain Pipe, Tile, Drainage Mat, and Wall Drain	Article 101.01, 1040.03, and 1040.04	Jan. 1, 2013	
80313	Fabric Bearing Pads	Article 1082.01	Jan. 1, 2013	
80169	High Tension Cable Median Barrier	Section 644 and Article 1106.02	Jan. 1, 2007	Jan. 1, 2013
80320	Liquidated Damages	Article 108.09	April 1, 2013	
80297	Modified Urethane Pavement Marking	Section 780, Articles 1095.09 and 1105.04	April 1, 2012	
80253	Moveable Traffic Barrier	Section 707 and Article 1106.02	Jan. 1, 2010	Jan. 1, 2013
80231	Pavement Marking Removal	Recurring CS #33	April 1, 2009	
80321	Pavement Removal	Article 440.07	April 1, 2013	
80022	Payments to Subcontractors	Article 109.11	June 1, 2000	Jan. 1, 2006
80316	Placing and Consolidating Concrete	Articles 503.06, 503.07, and 516.12	Jan. 1, 2013	
80278	Planting Woody Plants	Section 253 and Article 1081.01	Jan. 1, 2012	Aug. 1, 2012
80305	Polyurea Pavement Markings	Article 780.14	Nov. 1, 2012	Jan. 1, 2013
80279	Portland Cement Concrete	Sections 312, 503, 1003, 1004, 1019, and 1020	Jan. 1, 2012	Nov. 1, 2013
80218	Preventive Maintenance – Bituminous Surface Treatment	Recurring CS #34	Jan. 1, 2009	April 1, 2012
80219	Preventive Maintenance – Cape Seal	Recurring CS #35	Jan. 1, 2009	April 1, 2012
80220	Preventive Maintenance – Micro Surfacing	Recurring CS #36	Jan. 1, 2009	April 1, 2012
80221	Preventive Maintenance – Slurry Seal	Recurring CS #37	Jan. 1, 2009	April 1, 2012

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80224	Restoring Bridge Approach Pavements Using High-Density Foam	Recurring CS #39	Jan. 1, 2009	Jan. 1, 2012
80255	Stone Matrix Asphalt	Sections 406, 1003, 1004, 1030, and 1011	Jan. 1, 2010	Aug. 1, 2013
80143	Subcontractor Mobilization Payments	Article 109.12	April 2, 2005	April 1, 2011
80308	Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Articles 606.02 and 606.11	Nov. 1, 2012	
80286	Temporary Erosion and Sediment Control	Articles 280.04 and 280.08	Jan. 1, 2012	
80225	Temporary Raised Pavement Marker	Recurring CS #38	Jan. 1, 2009	
80256	Temporary Water Filled Barrier	Section 708 and Article 1106.02	Jan. 1, 2010	Jan. 1, 2013
80273	Traffic Control Deficiency Deduction	Article 105.03	Aug. 1, 2011	
80270	Utility Coordination and Conflicts	Articles 105.07, 107.19, 107.31, 107.37, 107.38, 107.39 and 107.40	April 1, 2011	Jan. 1, 2012

The following special provisions require additional information from the designer. 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

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

Effective as of the: June 13, 2014 Letting

<u>Pg #</u>	<u>√</u>	<u>File Name</u>	<u>Title</u>	<u>Effective</u>	<u>Revised</u>
		GBSP 4	Polymer Modified Portland Cement Mortar	June 7, 1994	July 26, 2013
		GBSP 12	Drainage System	June 10, 1994	Jan 1, 2007
		GBSP 13	High-Load Multi-Rotational Bearings	Oct 13, 1988	Oct 30, 2012
		GBSP 14	Jack and Remove Existing Bearings	April 20, 1994	Jan 1, 2007
		GBSP 15	Three Sided Precast Concrete Structure	July 12, 1994	Oct 15, 2011
		GBSP 16	Jacking Existing Superstructure	Jan 11, 1993	Jan 1, 2007
		GBSP 17	Bonded Preformed Joint Seal	July 12, 1994	Jan 1, 2007
		GBSP 18	Modular Expansion Joint	May 19, 1994	April 18, 2014
		GBSP 21	Cleaning and Painting Contact Surface Areas of Existing Steel Structures	June 30, 2003	May 18, 2011
		GBSP 25	Cleaning and Painting Existing Steel Structures	Oct 2, 2001	April 19, 2012
		GBSP 26	Containment and Disposal of Lead Paint Cleaning Residues	Oct 2, 2001	April 30, 2010
		GBSP 28	Deck Slab Repair	May 15, 1995	Oct 15, 2011
		GBSP 29	Bridge Deck Microsilica Concrete Overlay	May 15, 1995	Oct 30, 2012
		GBSP 30	Bridge Deck Latex Concrete Overlay	May 15, 1995	Jan 18, 2011
		GBSP 31	Bridge Deck High-Reactivity Metakaolin (HRM) Conc Overlay	Jan 21, 2000	Oct 30, 2012
254	X	GBSP 32	Temporary Sheet Piling	Sept 2, 1994	Jan 31, 2012
		GBSP 33	Pedestrian Truss Superstructure	Jan 13, 1998	April 18, 2014
		GBSP 34	Concrete Wearing Surface	June 23, 1994	Feb 6, 2013
		GBSP 35	Silicone Bridge Joint Sealer	Aug 1, 1995	Oct 15, 2011
		GBSP 38	Mechanically Stabilized Earth Retaining Walls	Feb 3, 1999	April 18, 2014
		GBSP 42	Drilled Soldier Pile Retaining Wall	Sept 20, 2001	Jan 3, 2014
		GBSP 43	Driven Soldier Pile Retaining Wall	Nov 13, 2002	Jan 3, 2014
		GBSP 44	Temporary Soil Retention System	Dec 30, 2002	May 11, 2009
		GBSP 45	Bridge Deck Thin Polymer Overlay	May 7, 1997	Feb 6, 2013
		GBSP 46	Geotextile Retaining Walls	Sept 19, 2003	July 26, 2013
256	X	GBSP 51	Pipe Underdrain for Structures	May 17, 2000	Jan 22, 2010
		GBSP 53	Structural Repair of Concrete	Mar 15, 2006	April 18, 2014
		GBSP 55	Erection of Curved Steel Structures	June 1, 2007	
		GBSP 56	Setting Piles in Rock	Nov 14, 1996	April 19, 2012
		GBSP 57	Temporary Mechanically Stabilized Earth Retaining Walls	Jan 6, 2003	April 18, 2014
		GBSP 59	Diamond Grinding and Surface Testing Bridge Sections	Dec 6, 2004	Jan 3, 2014
		GBSP 60	Containment and Disposal of Non-Lead Paint Cleaning Residues	Nov 25, 2004	Mar 6, 2009
		GBSP 61	Slipform Parapet	June 1, 2007	Aug 17, 2012
257	X	GBSP 62	Concrete Deck Beams	June 13, 2008	Oct 9, 2009
		GBSP 64	Segmental Concrete Block Wall	Jan 7, 1999	Oct 30, 2012
		GBSP 65	Precast Modular Retaining Walls	Mar 19, 2001	Jan 3, 2014
		GBSP 67	Structural Assessment Reports for Contractor's Means and Methods	Mar 6, 2009	
		GBSP 70	Braced Excavation	Aug 9, 1995	May 18, 2011
		GBSP 71	Aggregate Column Ground Improvement	Jan 15, 2009	Oct 15, 2011



		GBSP 72	Bridge Deck Fly Ash or GGBF Slag Concrete Overlay	Jan 18, 2011	Oct 15, 2011
		GBSP 73	Cofferdams	Oct 15, 2011	
		GBSP 74	Permanent Steel Sheet Piling (LRFD)	Jan 31, 2012	Aug 17, 2012
		GBSP 75	Bond Breaker for Prestressed Concrete Bulb-T Beams	April 19, 2012	
259	X	GBSP 76	Granular Backfill for Structures	April 19, 2012	Oct 30, 2012
		GBSP 77	Weep Hole Drains for Abutments, Wingwalls, Retaining Walls And Culverts	April 19, 2012	Oct 22, 2013
261	X	GBSP 78	Bridge Deck Construction	Oct 22, 2013	April 18, 2014

LIST ANY ADDITIONAL SPECIAL PROVISIONS BELOW


The following Guide Bridge Special Provisions have been incorporated into the 2012 Standard Specifications:

File Name	Title	Std Spec Location
GBSP22	Cleaning and Painting New Metal Structures	506
GBSP36	Surface Preparation and Painting Req. for Weathering Steel	506
GBSP50	Removal of Existing Non-composite Bridge Decks	501
GBSP58	Mechanical Splicers	508
GBSP63	Demolition Plans for Removal of Existing Structures	501
GBSP68	Piling	512
GBSP69	Freeze-Thaw Aggregates for Concrete Superstructures Poured on Grade	1004

The following Guide Bridge Special Provisions have been discontinued or have been superseded:

File Name	Title	Disposition:
GBSP37	Underwater Structure Excavation Protection	Replaced by GBSP73
GBSP11	Permanent Steel Sheet Piling	Replaced by GBSP74
GBSP47	High Performance Concrete Structures	Discontinued
GBSP52	Porous Granular Embankment (Special)	Replaced by GBSP76
GBSP66	Wave Equation Analysis of Piles	Discontinued

**STATE OF ILLINOIS  
SPECIAL PROVISIONS**

**CONTRACT SPECIFICATIONS**

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," (SSRBC) adopted January 1, 2012 and the latest edition of the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways" (ILMUTCD) and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids; and the "Supplemental Specifications and Recurring Special Provisions," indicated on the Check Sheet, included herein, which apply to and govern the construction of FAU Route 7975 (Carpenter Street), Section 13- 00475-00-BR, Project TIG-5146(087) in the City of Springfield, Sangamon County. In case of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern.

**LOCATION OF PROJECT**

The roadway portion of the reconstruction project begins at the west side of the 9<sup>th</sup> Street and Carpenter Street intersection and ends at the west side of the 11<sup>th</sup> Street and Carpenter Street intersection, a distance of approximately 0.16 miles.

The railway portion of the reconstruction project begins just south of the grade crossing that intersects Norfolk Southern Railway Company (NS) tracks with Enos Street to just north of the grade crossing that intersects NS tracks with Madison Street, a distance of approximately 0.36 miles.

**DESCRIPTION OF IMPROVEMENT**

The roadway improvement at the 9<sup>th</sup> Street intersection with Carpenter Street include milling and overlay of the pavement, reconstruction of the curb and gutter at the radius returns, adjustment of the curb inlets, sidewalks with curb ramps, and pavement markings.

The roadway reconstruction section between 9<sup>th</sup> Street and 11<sup>th</sup> Street consists of the removal of existing pavement including portions of parking lots, curb and gutter, driveway entrances, sidewalk, fencing, abandon utilities and street appurtenances in the existing right of way and within the proposed right of way along Carpenter Street. The proposed improvements consist of the construction of an underpass. It includes earth excavation, two railroad structures, retaining walls, pump station, drainage structures, storm sewer, erosion control items, roadway pavement, curb and gutter, concrete median, sidewalk, pavement marking, lighting, traffic signals and fencing.

The railway reconstruction section between Enos Street and Madison Street consists of earth excavation and the removal of existing parking lot pavement. The proposed improvements include grading for a shoofly track, interim track and future tracks, subballast, drainage items, water main encasement, erosion control, closure of two grade

crossings and fencing.

NS work forces will be removing existing track with ties and removing existing signals and gates at Miller Street, Carpenter Street and Reynolds Street crossings. The NS work forces will also be installing all ballast and track work.

### **CONSTRUCTION SEQUENCE AND SCHEDULE**

The Contractor shall prepare a progress schedule as required by Section 108 of the Standard Specifications. The Contractor shall coordinate items of work in order to keep hazards, traffic inconvenience and access to business along Miller Street, Carpenter Street, and Reynolds Street to a minimum. The Contractor shall also not interfere with NS railway operations while on NS right-of-way except as approved by the NS. Construction shall be staged as shown on the plans and as listed below to meet the following requirements:

- The existing gated and signalized grade crossings at Miller and Reynolds Street shall remain open for as long as possible during construction, until closure is required for removal of pavement and grading for shoofly track. These crossings shall be permanently closed with guardrail and signing. After the crossings are closed the NS will remove the gates and signals.
- Cooperation between CWLP Electric and Water utilities for the work they are performing should be included in progress schedules and anticipated staging. See CWLP Utility Work Coordination Special Provision for details of work being performed by CWLP.
- Cooperation between other utilities for the work they are performing should be included in progress schedule and anticipated staging.

### **CONTRACTOR STAGING AND STORAGE AREA**

The north portion of the Saint John's Parking Lot east of 9<sup>th</sup> Street and south of Carpenter Street may be available for lease for the duration of the project. For information contact:

Dave Olejniczak  
Chief Operation Officer  
St. John's Hospital  
800 E. Carpenter Street  
Springfield, IL 62769  
(217) 757-6256

The property at 927 and 929 East Carpenter and the adjacent vacant lot to the west are available for the contractor's use during construction. The property shall be restored to its pre-construction condition at the conclusion of the project. Access is available through the public right-of-way north of the Citgo Station.

The existing Citgo gas station property north of Carpenter Street within the temporary easement may be used for construction access. If the Contractor wishes to use the temporary

easement area for such things as equipment and material storage, he/she shall obtain written from the property owner involved and present the written approval to the Engineer before using. The property shall be restored to its pre-construction condition at the conclusion of the project.

### **WORKING DAYS**

All work required in the contract shall be completed within 240 working days. A construction progress schedule indicating project milestones shall be completed and strictly adhered to by the Contractor unless a request to modify the schedule is submitted in writing and approved by the Engineer.

Working days may be suspended by the Engineer at such time that the construction activities by railroad personnel inhibit or become the controlling item of work.

### **TRAFFIC CONTROL PLAN**

**Description:** Traffic control shall be in accordance with the applicable sections of the SSRBC, the applicable guidelines contained in the ILMUTCD for Streets and Highways, the Manual on Uniform Traffic Control Devices, latest edition; these special provisions, and any details and highway standards contained herein and in the plans.

**General:** Special attention is called to Articles 107.09 and 107.14, Sections 701 through 705 of the SSRBC, and the following traffic control related Highway Standards; Supplemental Specifications and Recurring Special Provisions; BDE Special Provisions; and Other Special Provisions relating to Traffic Control.

Carpenter Street shall be closed to all traffic.

The contractor shall be responsible for the traffic control devices at all times during construction activities and shall coordinate the items of work to keep traffic hazards and/or inconveniences to a minimum.

No lane closures will be permitted without the use of the appropriate traffic control standard or flagger protection.

All advance-warning signs shall be in new or like new condition at the start of the project. If an advanced warning sign is damaged or becomes unreadable, the sign shall be replaced by a new or like new sign.

Standard 701606 shall be used for storm sewer installation and drainage structure replacement at the intersection of 11<sup>th</sup> Street and Carpenter Street. This standard shall also be used for the 9<sup>th</sup> Street and Carpenter Street intersection improvements.

Standard 701701 shall be used for lane closures at the 9<sup>th</sup> Street and 11<sup>th</sup> Street intersections.

Standard 701801 shall be used for all sidewalk closures necessary during the construction.

Standard 701901 shall be used for traffic control devices during construction.

The Contractor shall provide the name and phone number of a contact on a 24-hour basis in the event an accident or other unforeseen damage occurs that necessitates replacement or resetting of traffic control items.

Lane closures on 9<sup>th</sup> and 11<sup>th</sup> Streets will not be permitted during the Illinois State Fair.

Total lane closure on 9<sup>th</sup> Street shall not exceed 30 calendar days. Total lane closure on 11<sup>th</sup> Street shall not exceed 14 calendar days.

Lane closures on 9<sup>th</sup> Street will not be permitted when 11<sup>th</sup> Street lanes are closed.

**Basis of Payment:** Traffic control and protection standards 701606, 701701, and 701801 shall be paid for at the contract lump sum price.

All detour signing and any additional traffic control and protection, other than those standards listed to be paid for above, as shown on the plans and described in these specifications will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL). This work shall include furnishing, installing, maintaining, replacing, relocating, and removing all traffic control devices used for the purpose of regulating, warning, directing, closing, and detouring traffic on the local streets impacted by the construction of the project.

### **STATUS OF UTILITIES TO BE ADJUSTED**

The following utilities are involved in this project. The utility companies have provided the estimated dates.

<b>Name &amp; Address of Utility</b>	<b>Type</b>	<b>Location</b>	<b>Estimated Date of Relocation Completed</b>
Ameren CILCO North Mr. Rick Combs 825 North MacArthur Blvd. Springfield, IL 62702 Phone: (217) 753-5187	Gas	Throughout the Project	During Construction
Ameren CILCO North Mr. Gerald Hutchinson 825 North MacArthur Blvd. Springfield, IL 62702 Phone: (217) 753-5173	Electric	Throughout the Project	During Construction
City Water, Light & Power Mr. Michael Johnson 401 North 11th Street	Water	Throughout the Project	During Construction

Springfield, IL 62702  
 Phone: (217) 789-2323  
 Ext. 1617

City Water, Light & Power  
 Mr. Rick Meadows  
 1008 East Miller Street  
 Springfield, Illinois 62702  
 Phone: (217) 321-1354

Electric

Throughout the  
 Project

During Construction

City of Springfield  
 (Sewer Department)  
 Mr. John Higgenbotham  
 300 S. 7<sup>th</sup> St.  
 Springfield, IL 62701  
 Phone: (217) 789-2260

Sewer

Throughout the  
 Project

Completed By Contractor

Windstream KDL, Inc.  
 Mr. David E. Ferreira  
 211-B SW Adams Street  
 Peoria, IL 61602  
 Phone: (309) 282-3110

Fiber Optic

Throughout the  
 Project

During Construction

Comcast  
 Mr. David Bly  
 711 South Dirksen Parkway  
 Springfield, IL 62703  
 Phone: (224) 229-3204

Fiber Optic  
 Cable

Throughout the  
 Project

During Construction

AT&T  
 Mr. Jeff Goad  
 1640 E. Hazel Dell Rd.  
 Springfield, IL 62703  
 Phone: (217) 789-5828

Fiber  
 Optic/Telephone

Throughout the  
 Project

During Construction

MCI Communication Services, Inc.  
 Mr. Tom Buher  
 7719 West 60<sup>th</sup> Place  
 Summit, IL 60501  
 thomas.buher@verizon.com  
 Phone: (708) 458-6410

Fiber Optic

Throughout the  
 Project

No Relocation  
 Anticipated

St. John's Hospital  
 Mr. Greg Stading  
 St. John's Director of Facilities  
 800 E. Carpenter Street  
 Springfield, IL 62769  
 Phone: (217) 814-5301  
 Cell: (314) 401-3729

Electric

Throughout the  
 Project

During Construction

Norfolk Southern Corporation  
 Mr. Daniel Parker  
 1200 Peachtree Street  
 NE Box 7-142  
 Atlanta, GA 30309  
 Phone: (404) 529-1256

RR  
 Communication

Throughout the  
 Project

During Construction

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Articles 105.07, 107.20, 107.31, and 108.20 of the Standard Specifications for Road and Bridge Construction shall apply.

The estimated utility relocation dates should be part of the progress schedule submitted by the Contractor. If any utility adjustments or relocations have not been completed by the above dates specified and when required by the Contractor's operations after these dates, the Contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's critical path schedule is affected.

## **ROADWAY**

### **CONCRETE PAVER SIDEWALK**

**Description:** This work shall be in accordance with the plans and Special Provision LRS14. The 4" portland cement concrete base shall be constructed in accordance with Section 424 of the Standard Specifications except that it shall not be measured for payment.

#### **General:**

##### Submittals

- Paver manufacturer's material test data certifying pavers comply with specification.
- Paver samples representing actual size, shape, and color range.
- Paver contractor's methods and quality control plan/statements identifying milestones and procedures to receive approvals and to assure adherence to this specification. This must be tailored to this specific project with actual dates for mockups, approvals and quality control meetings.

##### Environmental Requirements

- Do not install sand or pavers during heavy rain or snowfall.
- Do not install sand and pavers over frozen aggregate base materials.
- Do not install frozen sand or saturated sand.
- Do not install concrete pavers on frozen or saturated sand.

##### P.C.C. Pavers

- Acceptable Concrete P.C.C Paver suppliers include all members of UNI-

Group U.S.A. who can, or do, produce a P.C.C Paver that matches the style, size and colors of the P.C.C. Pavers specified.

- Compressive Strength: Greater than 8000 psi.
- Water Absorption: Maximum of 5%; ASTM 936 and freeze-thaw testing per Section 8 of ASTM C-67.
- Basis for Design for Style, Size and Color as follows:  
Hollandstone Paver by Unilock, Inc.; 7 7/8" X 3 7/8" X 3 1/8";  
Charcoal. (Holland-Stone by Romanstone – Slate)

#### Installation of Pavers

- The “Aesthetic Mockup” shall be required on the project site for approval by the Engineer prior to installation.
- After the sand setting bed has been installed, carefully place the pavers in straight courses with “hand” tight joints and uniform top surface.
- Paver spacer bars will provide joints between pavers (joints may be between 1/16 inch and 3/16 inch wide and no more than 5% of the joints shall exceed 1/4 inch wide to achieve straight bond lines).
- Paver Joint lines shall not deviate more than  $\pm < 1/2$  inch over 50 feet from string lines.
- Fill gaps at the edges of the paved area with cut pavers or edge units.
- Cut pavers, to be placed along the edge, with a double blade paver splitter or masonry saw.
- Adjust paver pattern at pavement edges such that cutting of edge pavers is minimized.
- All cut pavers exposed shall be no smaller than one-third of a whole paver measured in the long direction (approximately 2 5/8”) and no smaller than two-thirds of a whole paver measured in the short direction (approximately 2 9/16”).
- Cut pavers edges are to abut pavers only; a paver spacer bar must abut the cut edge of a paver.
- Do not place cut paver edges against concrete.
- Keep skid steer and forklift equipment off newly laid pavers that have not received initial compaction and joint sand.

#### Field Quality Control



- The surface elevation of pavers shall be 1/8 inch to 1/4 inch above adjacent drainage inlets, concrete collars or channels.
- Lippage: No greater than 1/8 inch difference in height between adjacent pavers.

**Basis of Payment:** This work shall be paid for at the contract unit price per square yard for CONCRETE PAVER SIDEWALK.

The 4" Portland Cement Concrete Base, 1" sand bedding, pavers, and weep holes will be included in the contract unit price per square yard for CONCRETE PAVER SIDEWALK.

### **COMBINATION CURB AND GUTTER, B-9.18 (MODIFIED)**

**Description:** This work shall consist of constructing combination concrete curb and gutter according to Section 606 of the SSRBC and plan details at locations shown on the plans or as directed by the Engineer. This work includes the gutter, curb, wall section, reinforcement, footing, and ties as shown on the plans.

**Basis of Payment:** This work shall be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.18 (MODIFIED).

### **CONTROLLED LOW-STRENGTH MATERIAL**

**Description:** This work shall consist of filling steam vaults, handholes or other structures according to Section 593 of the SSRBC at locations directed by the Engineer.

**General:** Abandoned steam vaults are potentially located within the proposed subgrade of Carpenter Street. The number, size and location of these are unknown, but if encountered, the Engineer should be contacted immediately. Any castings or lids encountered from the vaults shall be stockpiled and delivered to the City of Springfield. The Contractor shall determine if any live utilities are located within the vault that would prevent it from being filled. The Contractor shall notify the Engineer whether or not any live utilities are located within the vault and whether it is acceptable to be filled. Should the vault be filled, all open pipe connections shall be grouted shut and the vault filled with controlled low-strength material to the level of the proposed subgrade.

Existing signal handholes noted in the plans to be removed, but containing unknown existing wires, upon approval of the Engineer, shall be filled with controlled low-strength material.

Other structures not intended to be removed by other means as a part of the contract, encountered by the Contractor and known not to contain live utilities, shall be filled with controlled low-strength material, upon approval of the Engineer.

**Basis of Payment:** This work shall be paid for at the contract unit price per cubic yard for CONTROLLED LOW-STRENGTH MATERIAL.

### **DRAINAGE STRUCTURES (PUMP STATIONS)**

**Description:** Drainage Structures shall be furnished and installed in accordance with Section 602 of the Standard Specifications with exceptions shown on the Plans and as specified herein.

Drainage Structures No. 1 and No. 2 shall be installed and backfilled prior to the installation of the Norfolk Southern Railroad shoofly track.

Drainage Structures No. 1 and No. 2 shall be excavated using a vertical shaft boring machine.

The Contractor shall submit an excavation plan to the Engineer prior to commencing work that is sealed by a professional engineer. The Engineer will forward the plan to the railroad engineer for review. The plan shall include proposed shaft dimensions, proposed shoring, either permanent or temporary, and staging. The shoring shall be designed for earth loads, an HS-20 live load for vehicle traffic, and railroad live load surcharging (based on Cooper's E-80 Live Load and in accordance with AREMA and railroad requirements) by the Norfolk Southern shoofly track.

Temporary or permanent casing shall be in accordance with Section 516 of the Standard Specifications and designed to resist railroad live load surcharge. The railroad live load surcharge shall be based on Cooper's E-80 Live Load and in accordance with AREMA and railroad requirements. Drainage Structures, No. 1 shall be excavated, installed, and backfilled completely prior to commencing construction on either of Drainage Structures, No. 2. At no time shall there be simultaneous construction on multiple drainage structures.

Material removed from the excavation shall be disposed of in accordance with Section 202.03 of the Standard Specifications.

Once each of the vertical shafts have been excavated, a 12-in bedding of CA-7 aggregate or class SI concrete shall be placed in the bottom of the shaft and leveled to form a flat base to set the Drainage Structures.

Drainage Structures shall be precast reinforced concrete manholes conforming to ASTM C-478. The structures shall be water-tight.

All penetrations through the walls of the drainage structure shall be sealed with a non-shrink grout.

The drainage structure sections shall be a minimum of 4-foot tall with the exception of the final section. Each section shall be sealed with two (2) strips of butyl rubber sealant. Joints in the butyl rubber sealant shall be overlapped to prevent gaps.

The drainage structure shall be checked after the installation of each section to ensure a true vertical installation. If the alignment is off, the Contractor shall take corrective action to shim the structure back to level.

The exterior and the bottom of the base of the structures shall receive two coats of asphalt emulsion waterproofing in accordance with Section 503.18 of the Standard Specifications.

The annular space between the structures and the edge of the shaft shall be filled with non-shrink grout from elevation 563 to elevation 582. From elevation 582 to the surface, the annular space between the manhole and the edge of the shaft shall be filled with controlled low strength material, mix 2 in accordance with Section 593 of the SSRBC.

The Contractor shall submit a plan for installing the grout prior to commencing the work. The plan should address completely filling the space between the structure and the rock face and shall address buoyancy issues during installation. Should there be groundwater present in the annular space between the structure and the rock face, the Contractor shall use a grout formulated for curing under water and shall install the grout from the bottom-up. The grout shall conform to ASTM C-1107 and shall have a minimum compressive strength of 5,000 psi after 28 days.

After installation is complete, if there are water leaks at joints, the Contractor shall waterproof the leaks using drilled ports around the leak and a hydrophilic grout.

Openings in the structures for pipes shall be blocked out during manufacturing with knockouts left in place during initial installation.

The top barrels of the Drainage Structures shall be flat. The precast lids shall be sealed to the top ring section with a double row of butyl mastic. The precast lids shall have a cast in place access frames and hatches per the plans. The frame and hatch design live load is AASHTO HS-20 truck load and alternate tandem loads.

Chamfered inverts shall be installed in the structures as shown on the plans. The invert shall be constructed of Class SI concrete conforming to Section 1020.04 of the Standard Specifications. The chamfer and sloped sidewalls in Drainage Structures, No. 2 shall be per the pump manufacturer's recommendations to provide sufficient space between the volute and the invert of the station. The sidewalls shall be sloped to direct debris to the pumps and promote self-cleaning of the structure invert.

The Contractor shall take care not to disturb the fueling station and fueling pad. If damage occurs during construction, it shall be the responsibility of the Contractor to repair/replace at no additional compensation.

**General:** This work includes all mobilization, excavation, temporary or permanent shoring/casing, labor, materials and equipment required to manufacture, furnish, and install the manhole, precast concrete, lid, access frame and hatch, non-shrink grout, controlled low strength material, butyl rubber sealant, asphalt emulsion waterproofing, CA-7, concrete, removal and disposal of excess material and other incidental items as shown on the plans.

**Basis of Payment:** This work will be paid for at the contract unit price per each for DRAINAGE STRUCTURES of the numbers shown on the plans.

### **ENGINEER'S FIELD OFFICE, TYPE A**

**Description:** The contractor has the option of using all or a portion of the building at 927 and 929 East Carpenter Street as the Engineer's field office for the duration of the project. Utility service to the building will be shut off prior to construction.

Access to the Engineer's field office shall be through the public ROW north of the Citgo gas station.

**Basis of Payment:** This work shall be paid for at the contract unit price per calendar month for ENGINEER'S FIELD OFFICE, TYPE A.

### **FENCE REMOVAL**

**Description:** This work shall consist of removing existing fencing, posts, barbed wire, supports, foundations, gates and associated hardware according to Section 201 of the SSRBC at locations shown on the plans or as directed by the Engineer.

**General:** All material included with this removal shall be disposed of off-site by the Contractor.

**Basis of Payment:** This work shall be paid for at the contract unit price per foot for FENCE REMOVAL.

### **FRAMES AND LIDS, SPECIAL**

**Description:** This work shall consist of installing frames and lids according to Section 604 of the SSRBC at locations shown on the plans or as directed by the Engineer.

The frame and lid shall be a Neenah R-1791-A or approved equal.

**Basis of Payment:** This work will be paid for at the contract unit price per each for FRAMES AND LIDS, SPECIAL.

### **HOT-MIX ASPHALT – N50 MIXTURES**

N50 High ESAL mixtures are exempt from the Hamburg Wheel Mix Design Test Criteria described in the Special Provision for Hot Mix Asphalt – Mixture Design Verification and Production.

IL 9.5 N50 High ESAL mixtures are exempt from the Voids in the Mineral Aggregate (VMA)

requirement described in the Special Provision for Hot Mix Asphalt – Mixture Design Composition and Volumetric Requirements. The minimum VMA requirement is 14.5%

**IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)**

Effective: August 1, 2012

Revised: February 1, 2014

In addition to the Contractor's equal employment opportunity affirmative action efforts undertaken as elsewhere required by this Contract, the Contractor is encouraged to participate in the incentive program to provide additional on-the-job training to certified graduates of IDOT funded pre-apprenticeship training programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at \$15.00 per hour for training given a certified TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work

classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for the TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this 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 \$15.00 per hour for certified TRAINEES TRAINING PROGRAM GRADUATE. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeyworker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is 5. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs 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 Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be

employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision \$15.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.

#### **INLETS, TYPE A, TYPE 3V FRAME AND GRATE**

**Description:** This work shall consist of constructing inlets with frames and grates according to Section 602 of the SSRBC at locations shown on the plans or as directed by the Engineer.

**General:** The grate shall be in accordance with Standard 604011.

**Basis of Payment:** This work will be paid for at the contract unit price per each for INLETS, TYPE A, TYPE 3V FRAME AND GRATE.

#### **INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE**

**Description:** This work shall consist of constructing inlets with frames and grates according to Section 602 of the SSRBC at locations shown on the plans or as directed by the Engineer.

**General:** INLETS, TYPE A will be as shown in Standard 602301.

SPECIAL FRAME AND GRATE shall be a Neenah R-4342 or approved equal.

**Basis of Payment:** This work will be paid for at the contract unit price per each for INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE.

#### **PAVED DITCH (SPECIAL)**

**Description:** This work shall consist of constructing a paved ditch behind the proposed

sidewalk at the locations shown on the plans along Carpenter Street according to Section 606 of the SSRBC. The work will include variable widths and depths as necessary to ensure adequate drainage. The PAVED DITCH (SPECIAL) shall be constructed to the elevations and dimensions as shown on the plans.

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

### **PAVEMENT REMOVAL(SPECIAL)**

**Description:** This work shall consist of removing asphalt, concrete pavement, brick, aggregate, earth, and curb and gutter along Carpenter Street. This work shall be according to Section 440 of the IDOT SSRBC. The pavement removal will be included to a depth of 18 inches below the surface of the existing pavement. Any removal required below the 18 inch depth will be paid for as earth excavation. No adjustments will be made for variations in thickness.

**Basis of Payment:** This work will be paid for at the contract unit price per square yard of PAVEMENT REMOVAL(SPECIAL).

### **PAVEMENT REPLACEMENT, SPECIAL**

**Description:** This work shall comply with section 353 and 406 of the IDOT SSRBC.

This work shall be in conjunction with sewer replacements in both the 9<sup>th</sup> Street and 11<sup>th</sup> Street intersections and with sewer encasement on Miller Street. The existing pavement shall be removed by saw cutting to a minimum depth of 9 inches, removal of the existing pavement, and removal of the existing subbase. The contractor shall take care during the removal of the pavement to prevent damage to the adjacent pavement. Removal of the subgrade to the elevation of the sewer replacement shall be included in the cost of the sewer.

Once the proposed elements are in place, the trench shall be backfilled with Controlled Low-Strength Material to the bottom of the proposed pavement. Twelve (12) inches of aggregate subgrade improvement and 8 inches of Portland Cement Concrete Pavement (PCC) shall be placed on top of the backfill. The surface of the proposed pavement should be flush with the adjacent existing pavement.

Pavement Replacement, Special shall be required at any location where the existing pavement is to be removed and will not be replaced within the limits of the Carpenter Street roadway construction. These areas include, but may not be limited to, manhole and sewer replacements, casting removal, and access points for filling existing sewers.

**General:** This work includes the removal, backfill, pavement, and prime coat required for replacing existing pavement.

**Basis of Payment:** This work will be paid for at the contract unit price per square



yard for PAVEMENT REPLACEMENT, SPECIAL. Backfilling the trench will be paid for at the contract unit price per cubic yard for CONTROLLED LOW-STRENGTH MATERIAL.

### **PUMP STATION ELECTRICAL WORK**

**General:** The work to be included under this item shall be the furnishing, installing, and testing of all materials and electrical equipment necessary in order to provide a complete and operational electrical system at the Pump Station.

The Contractor shall furnish and install all materials necessary for a complete and operational installation of the electrical equipment. The complete installation and wiring shall be done in a neat, workmanlike manner. All electrical work shall comply with the requirements of NFPA 70 – National Electrical Code (NEC), most current issue in force, and all other applicable local codes, laws, ordinances, and requirements in force. Electrical equipment shall be installed in conformance with the respective manufacturer's directions and recommendations for the respective application. Any installations which void the UL listing, FM Approval, ETL listing (or other third party listing), and/or the manufacturer's warranty of a device will NOT be permitted.

The electrical work and equipment specified is based on equipment of the type and size as noted on the Plans and specified herein. Should the proposed pump motors (or any other proposed loads) exceed the ratings of the electrical equipment specified, the General Contractor shall be solely responsible for furnishing any and all modifications necessary in order to provide a fully functional system to the satisfaction of the Engineer at no change to the contract cost. The Contractor shall also be required to submit for review, sufficient information determined by the Engineer to be necessary to review such alternates or modifications.

Per Illinois Environmental Protection Agency Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter II: Environmental Protection Agency Part 370: Illinois Recommended Standards for Sewage Works all electrical equipment installed in a sewage pump station wet well shall be suitable for Class I, Division 1, Group D hazardous location. In addition equipment located in a sewage wet well shall be suitable for use under corrosive conditions. All electrical installations associated with a sewage pump station shall conform to the applicable sections of NEC 500, 501, and 504 in addition to the other applicable sections of NEC. Where electrical equipment is installed in a classified hazardous location it shall be UL-listed, Factory Mutual- listed, or ETL-listed suitable for use in the respective classified hazardous location.

Per NFPA 820, Standard for Fire Protection in Wastewater Treatment and Collection Facilities, a wastewater pumping station wet well (with no ventilation or ventilated at less than twelve (12) air changes per hour) is classified as a Class I, Division 1, Group D hazardous location. All electrical installations associated with the pumping station wet well shall conform to the applicable sections of NEC 500, 501, and 504 in addition to the other applicable sections of NEC. Where electrical equipment is installed in a classified hazardous location it shall be UL- listed, Factory Mutual-approved, or ETL-listed suitable for use in the respective classified hazardous location.

All work, power outages, and/or shut down of existing systems shall be coordinated with the respective facility owner's representative. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety & Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 the control of hazardous energy (lockout/tagout).

Contractor shall keep a copy of the latest National Electrical Code in force on site at all times during construction for use as a reference.

Contractor and respective electrical contractor shall keep a set of construction plans and specifications with all addenda and copies of any applicable change orders on site at all times.

**Submittals:** Contractor shall provide shop drawings for all electrical equipment. Shop drawings shall clearly indicate proposed items, capacities, characteristics and details in conformance with the Plans and Specifications. The respective manufacturer shall certify capacities, dimensions, special features, etc. Shop Drawings for all items shall be prepared immediately upon award of Contract. The Contractor shall submit a minimum of four (4) copies to be retained by the Engineer plus the number of copies, for which the Contractor requires distribution. No materials shown thereon shall be ordered until Shop Drawings are reviewed and approved by the Engineer. When a submittal is marked "Revise and Resubmit," "Rejected," and/or "Submit Specified Item" do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations, resubmit, and repeat if necessary to obtain a different action mark such as "No Exceptions Taken" or "Furnish as Corrected". Contractor is responsible for compliance with the specified characteristics. Contractor's responsibility for error and omissions in submittals is not relieved by the Engineer's review of submittals. Accompany each submittal with a transmittal letter that includes the date, project title and number, Contractor's name and address, the number of shop drawings, product data, and/or samples submitted, notification of any deviations from the Contract, and any other pertinent data. Shop drawing submittals shall include the following:

- A. Date and revision dates.
- B. Project title and number(s).
- C. Identification of product or material.
- D. Certified outline and installation drawings.
- E. Performance data and operating characteristics.
- F. Arrangement drawings showing piping, controls and accessory equipment.
- G. Drawings on non-standard components and accessories.

- H. Catalog data marked to indicate materials being furnished.
- I. Operation and Maintenance/Instruction Manuals.
- J. Specified standards, such as ASTM numbers, ANSI numbers, UL listing/standard, NEMA ratings, etc.
- K. A blank space, 3 in. x 5 in., for Architect/Engineer's stamp.
- L. Identification of previously approved deviation(s) from Contract documents.
- M. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract documents.
- N. Space for Prime Contractor's approval stamp.

## EQUIPMENT AND MATERIALS

### Conduit And Fittings

Comply with IDOT Standard Specifications and the following.

**Galvanized Rigid Steel Conduit:** Rigid Steel Conduit and fittings shall be hot-dipped, galvanized, UL-listed, and produced in accordance with UL Standard 6 – Rigid Metal Conduit and ANSI C80.1 – Rigid Steel Conduit, Zinc Coated. Couplings, connectors, and fittings for rigid steel conduit shall be threaded, galvanized steel or galvanized, malleable iron, specifically designed and manufactured for the purpose. Fittings shall conform to ANSI C80.4 – Fittings Rigid Metal Conduit and EMT and UL 514B – Conduit, Tubing, and Cable Fittings. Set screw type fittings are not acceptable.

**Schedule 40 PVC and Schedule 80 PVC Conduit:** Conduit shall be Schedule 40 PVC or Schedule 80, 90 C, UL-rated or approved equal. Material shall comply with NEMA Specification TC-2 (Conduit), TC-3 (Fittings-UL-514), and UL-651 (Standard for rigid nonmetallic conduit). The conduit and fittings shall carry a UL label (on each 10 ft length of conduit and stamped or molded on every fitting). Conduit and fittings shall be identified for type and manufacturer and shall be traceable to location of plant and date manufactured. The markings shall be legible and permanent. The conduit shall be made from polyvinyl chloride C- 300 compound which includes inert modifiers to improve weatherability, heat distortion. Clean rework material, generated by the manufacturer's own conduit production, may be used by the same manufacturer, provided the end products meet the requirements of this Specification. The conduit and fittings shall be homogeneous plastic material free from visible cracks, holes, or foreign inclusions. The conduit bore shall be smooth and free of blisters, nicks or other imperfections which could mar conductors or cables. Conduit, fittings and cement shall be produced by the same manufacturer to assure system integrity and shall be Carlon Plus 40, Plus 80 conduit, or approved equal.

**Rigid Aluminum Conduit:** Rigid Aluminum conduit shall be heavy wall type fabricated from 6063 aluminum alloy, T-1 temper, (former designation T-42). Aluminum rigid conduit shall comply with Underwriter's Laboratories UL-6, latest revision, and American National Standards Institute (ANSI) C80.5 – Rigid Aluminum Conduit.

**PVC Coated Rigid Aluminum Conduit:** PVC coated rigid aluminum conduit and fittings shall be as manufactured by Robroy Industries, Inc., Conduit Division, 1100 US Highway 271 South, Gilmer, Texas 75644, Phone 903-843-5591, Sales Department Fax: 903-843-2516 or approved equivalent. The conduit, prior to coating, shall be new, unused material and shall conform to UL 6, Standard for Safety for Rigid Metal Conduit. An exterior gray PVC coating of a nominal 40 mils, (.040 in.), shall be applied to the conduit and conduit couplings. The PVC coating shall conform to all applicable requirements of NEMA RN-1, Standard for PVC Coated Conduit. An interior red polyurethane coating of 2 mils (.002 in.), shall be applied to the conduit and conduit couplings. The polyurethane coating shall conform to all applicable requirements of NEMA RN- 1, Standard for PVC Coated Conduit. Conduit having areas of thin or no coating shall be unacceptable. The PVC and polyurethane coatings applied to conduit shall have sufficient flexibility to permit field bending without cracking or flaking at temperatures above 30°F (-1°C). All male threads on conduit and all female threads on conduit couplings shall be protected by a coat of red polyurethane.

**PVC-Coated, Galvanized, Rigid Steel Conduit:** PVC-coated, galvanized, rigid steel conduit shall be manufactured by Robroy Industries, Inc., (Conduit Division, 1100 US Highway 271 South, Gilmer, Texas 75644, Phone 903-843-5591, Sales Department Fax: 903-843-2516) Plasti-Bond or approved equivalent. PVC coating shall be a minimum of 40 Mils permanently fused to hot dipped, galvanized, rigid steel conduit. An interior red polyurethane coating of 2 mils (.002 in.), shall be applied to the conduit and conduit couplings.

**Explosion-Proof Flexible Conduit (where applicable):** Explosion-proof, flexible conduit shall be suitable for use in Class I, Division 1, Group D hazardous locations, and liquid-tight for wet locations. Conduit shall have an interior insulating liner to protect conductors from abrasion under vibrating conditions. Conduit shall provide a continuous electrical path. Explosion-proof, flexible conduit shall be Crouse-Hinds, O-Z/Gedney ECGJH, ECLK Series, Appleton EXGJH or EXLK Series Flexible Coupling, or approved equal.

**Explosion-Proof Conduit Seal-Off Fittings:** Explosion-proof conduit seals shall be listed suitable for use in Class I, Division 1, Group D hazardous location. Explosion-proof conduit seals shall be Crouse-Hinds EYS or EZS Series, Appleton EYS, ESU, or EY Series, O-Z/Gedney EYA, EY, EZS Series explosion-proof sealing fitting, or approved equal.

**Miscellaneous Fittings:** Fittings shall be suitable for use with conduits and ducts supplied. All fittings for use with rigid metal conduit shall be threaded. Set screw type fittings are not acceptable. All conduit bodies, fittings, and boxes installed in classified hazardous locations (Class I, Division 1 or 2, Group D) shall be suitable for use in Class I, Division 1, Group D locations. Fittings shall be as manufactured by Appleton, Crouse-Hinds, Hubbel-Killark, O- Z/Gedney, or approved equal.

### Conductors

**XHHW Wire:** Cable shall be UL-listed as Type XHHW-2 per UL Standard 44 for Rubber- Insulated wires and cables. Cable shall also conform to ICEA S-95-658/NEMA WC70 and Federal Specification J-C-30B. Conductors shall be Class B stranded annealed uncoated copper per UL Standard 44. Insulation shall be rated for 600-Volt. Insulation shall be cross-linked polyethylene complying with the physical and electrical requirements of UL Standard 44 for Type XHHW-2. Service conductors shall be Service Wire Company, Type XHHW-2, or approved equal.

**THWN Wire:** Cable shall be 1/C sized as indicated on the Plans. Cable shall comply with Underwriters' Laboratories Standard UL-83 and shall be UL-listed as VW-1. Conductor shall be soft annealed uncoated copper and shall comply with ASTM B3 and B8. Insulation shall be rated for 600-Volt. Insulation shall be polyvinyl-chloride conforming to Underwriters' Laboratories requirements for Type THW. The outer covering shall be nylon conforming to Underwriters' Laboratories for type THHN or THWN-2. Cable shall be UL-listed and marked THWN. Power and control wiring shall be Southwire Type THWN-2, or approved equal.

### Supporting Devices

Strut supports for exterior applications shall be stainless steel strut support. Unistrut P-1000SS is an approved product. Alternate products will be allowed but must meet this specification and be approved by the Engineer. Strut support for equipment located in the wet well, valve vault, or other corrosive areas shall be stainless steel or reinforced fiberglass material as manufactured by Unistrut, B-Line, Aickinstruct, or approved equal. Provide necessary hardware, such as floor flanges, etc., as required to install equipment as specified and as shown on the Plans. All hardware shall be stainless steel.

Provide materials, sizes and types of anchors, fasteners, and supports necessary to carry the loads of equipment and conduits. Consider weights of conduit when selecting products.

Fasteners and anchors shall be corrosion resistant, stainless steel. Where suitable, nonmetallic clamps and fasteners may be used.

Cable hangers shall be heavy duty nylon saddle rack with 3 in. throat opening Underground devices, Northbrook, IL, Cat. No. 3SR1 or 3SR2, or approved equal. Cable hangers shall be adequately sized to accommodate the respective cables. Secure cables to cable hangers with corrosion resistant cable ties.

### Circuit Breakers

Circuit breakers for feeder circuits shall be thermal magnetic, molded case, 250-Amp frame minimum, 18,000 Amps symmetrical minimum, interrupting current rating at 480 VAC for three-pole breakers. Cutler-Hammer Type EhD is an approved product. Alternate products will be allowed but must meet this specification and be approved by the Engineer. Breakers shall have "on", "off" and "tripped" positions and shall be UL-listed. Breakers

shall be sized as required for the respective equipment in accordance with NEC and the respective equipment manufacturer's recommendation. Enclosure shall be NEMA 4X stainless steel with a hinged door and be pad lockable in the off position. Include a separate ground lug. Cutler-Hammer Catalog Number WFDN225 is an approved product. Alternate products must be approved by the Engineer.

### CONSTRUCTION METHODS

**Temporary Power:** The Contractor shall make necessary arrangements and provide all temporary electric service and lighting required during entire construction period including required fees and permits. Cost of electricity used shall be borne by the Contractor. The temporary service shall comply fully with all NEC and OSHA requirements for temporary service.

Electric services shall be of sufficient capacity and characteristics to supply proper current for various types of construction tools, motors, welding machines, lights, heating plant, ventilation system, pumps and other work required. All necessary temporary wiring, panelboard, outlets, switches, lamps, fuses, controls and accessories shall be provided by the Contractor. All 120 VAC, 15-Amp and 20-Amp receptacles shall be ground fault circuit interrupter type.

Materials used for temporary service shall not be used in permanent system unless specific approval is given by the Engineer. Temporary service shall be so constructed and arranged as not to interfere with progress of other trades. This systems shall be erected and maintained strictly in accordance with all ordinances and requirements for temporary service pertaining thereto inclusive of OSHA and NEC, (most current issue in force).

The serving electric utility company for the work site is as follows:

City Water Light and Power (CWLP)  
401 N. 11<sup>th</sup> Street Springfield, IL  
(217) 789-2323

The Contractor who has installed a temporary utility connection as herein specified, shall, prior to final acceptance, remove temporary connections and installations and leave premises restored to condition in which it was found.

**Electric Service Entrance:** Contractor shall furnish and install electric service entrance as detailed on the Plans and specified herein. As part of the service entrance work, the Contractor shall coordinate with the serving utility:

The installation of a 480 VAC, three-phase, 3-wire service sufficient to handle the loads of the respective pump station and associated equipment located at the site. The Contractor shall coordinate the new electric service with the serving electric utility company. The service entrance shall include, but not be limited to, all service entrance equipment, labor and materials as detailed on the Plans and specified herein, in order to provide a complete and operational electrical system.

City Water Light and Power (CWLP): Major work items to be performed by CWLP (not in contract) shall be as follows:

- A. Removal and replacement of existing utility pole, transformers, and electric meter.
- B. The furnishing of power for a 480 VAC, three-phase, 3-wire secondary service sufficient to handle the loads for a 225-Amp service.
- C. Shall furnish & connect the service entrance conductors from the primary line location to the pad mounted transformer.
- D. Shall furnish and install the meter base and meter.
- E. Shall furnish and install grounding electrode for service entrance ground system.
- F. CWLP shall retain the right to review and approve drawings prior to installation.

Contractor: Major work items to be performed by the Contractor (in Contract) shall be as follows: (all work, labor, equipment, and materials shall be as detailed on the Plans specified herein, and per the serving electric utility's requirements, where applicable).

- A. Verifying all requirements with serving electric utility.
- B. Coordinating the electric service entrance work and billing arrangements with the serving electric utility company.
- C. Additional work as required by the serving electric utility and as required to provide a complete and operational electric service entrance system.
- D. Extend service conduit and conductors from the secondary of the service transformer to the pump control panel service disconnect switch.
- E. Coordinate a second utility service to serve the new lighting system and controller.

#### Installation of Conduits

- A. Comply with IDOT Standard Specifications and the following.
- B. All exterior above grade exposed conduit shall be PVC Coated galvanized rigid steel (GRSC) or PVC coated rigid aluminum as detailed on the Plans.

- C. All work shall be laid out with sleeves for openings through slabs, pump station or valve vault walls, etc. as required. If sleeves and inserts are not properly installed, the Contractor will be required to do all necessary cutting and patching to accommodate conduits.
- D. Conduit size and fill requirements shall comply with Chapter 9 and Annex C of the NEC. It should be noted these are minimum requirements and larger conduit sizes or smaller fill requirements shall be used whenever specified or detailed on the Plans.
- E. Ream conduits only after threads are cut. Cut joints square to butt solidly into couplings. Where necessary to join two pieces of conduit and it is impossible to use standard coupling, use 3-piece malleable iron conduit coupling. The use of running thread is prohibited. This applies to all rigid conduit installations, underground or otherwise.
- F. Make all joints in steel underground conduit water-tight with approved joint compound. Temporarily plug conduit openings to exclude water, concrete or any foreign materials during construction. Clean conduit runs before pulling in conductors.
- G. Hickey bends will not be acceptable for conduits 1-in. and larger. Use manufactured elbows or bends fabricated with bending machine. Field bending of all PVC conduit shall be accomplished with the use of equipment approved by the conduit manufacturer. Open flame bending equipment will not be acceptable.
- H. A run of conduit between a junction box, pull box, and/or fitting shall not contain more than the equivalent of four (4) quarter bends, including bends immediately at the respective box or fitting.
- I. Where conduits enter a box or fitting, provide a steel locknut and an insulated metallic bushing. Use this method to terminate conduit in panels, pull boxes, safety switches, etc. Conduit terminations in service equipment shall have grounding bushings with ground wire connections between the bushing and the ground bus.
- J. Run exposed conduits parallel with respective walls or supporting structure and at right angles to the respective building, vault, etc., not diagonally. Make bends and turns with pull boxes or hot-dipped galvanized malleable iron fittings and covers.
- K. Conduit terminations shall include bushings to protect cables and wires from damage from conduit.
- L. Set screw type fittings are prohibited.
- M. Use only screws, bolts, washers, etc. fabricated from rust resisting metals for



the supporting of boxes.

- N. Schedule 40 PVC conduit and/or sleeves shall be used for grounding electrode conductors.
- O. Metal conduit in direct contact with earth or concrete shall be PVC-coated GRSC or PVC coated rigid aluminum conduit.
- P. Per Illinois Environmental Protection Agency Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter II: Environmental Protection Agency Part 370: Illinois Recommended Standards for Sewage Works all electrical equipment installed in a sewage pump station wet well shall be suitable for Class I, Division 1, Group D hazardous location. In addition equipment located in a sewage wet well shall be suitable for use under corrosive conditions. All electrical installations associated with a sewage pump station shall conform to the applicable sections of NEC 500, 501, and 504 in addition to the other applicable sections of NEC. Where electrical equipment is installed in a classified hazardous location it shall be UL-listed, Factory Mutual-listed, or ETL- listed suitable for use in the respective classified hazardous location.
- Q. Perform all work in classified hazardous locations as defined by the NEC in strict accordance with the NEC for the particular "Class", "Division", and "Group" of hazardous locations involved or indicated on the drawings. Provide conduit and cable seals in accordance with the NEC.
- R. All conduits installed in classified hazardous locations (including Class I, Division 1 or 2, Group D) shall be suitable for the respective location. All boxes and fittings installed in Class I, Division 1 locations shall be approved (FM approved or UL listed) suitable for Class I, Division 1 locations. All boxes and fittings installed in Class I, Division 2 locations shall conform to the requirements of NEC 501.10 (B)(4).
- S. Per Article 501.15 (C) (6) of the NEC and UL Standard 886, the cross sectional area for conductors installed in a conduit seal off fitting shall not exceed 25 percent, unless the conduit seal off fitting has been specifically approved for a higher percentage of fill.
- T. Install explosion proof conduit sealing fittings in conformance with the respective manufacturer's instructions. Contact the respective seal off manufacturer if assistance is required for direction of installing packing fiber to form a dam and pouring the sealing compound.
- U. All conduits between the sewage pump station wet well and control panel shall be PVC coated rigid aluminum. No substitutions.
- V. Aluminum rigid conduit may be used for conduits entering the wet well (between the pump control panel and the wet well of the pump station),

provided it has corrosion protection (PVC coating) as detailed on the Plans and as specified herein.

- W. Underground conduits shall be minimum 24-in. below finish grade to the top of conduit where located in areas not subject to vehicular traffic. Underground conduits shall be minimum 36-in. below grade where located in areas subject to vehicular traffic. Where shown on the Plans or where required to avoid obstructions and/or interferences with other underground utilities, deeper burial depths may be required.
- X. Conduits shall be kept clean of concrete, dirt, or foreign substances during storage and construction. After conduit installation, a standard flexible mandrel shall be used for cleaning followed by a brush with stiff bristles. Mandrel shall be at least 12-in. long and have a diameter 1/4 in. less than the inside diameter of the conduit being cleaned. All obstructions in conduits shall be removed prior to pulling wires or final acceptance. Conduits unable to pass mandrel shall be replaced. All unused conduits shall be capped.
- Y. Trench widths shall be held to a minimum.
- Z. Examine all available site utility information in regard to existing utility lines and locate and protect existing lines. Repair all existing utility lines that are damaged by this construction.
- AA. All excavations shall be barricaded, lighted (where applicable) and protected during construction.
- AB. Contractor shall backfill all excavations.

#### Installation of Wire and Cable

- A. Wire and cable shall be installed using accepted industry methods to prevent damage to conductors and insulation. Installation shall comply with all applicable sections of the NEC regarding conduit fill.
- B. No splices shall be permitted in conduit bodies. All splices shall be made in junction boxes provided for that purpose as detailed or required by need.
- C. All conduits shall be swabbed until all moisture and grit is removed before any wires are pulled.
- D. Manufacturers recommended pulling tension shall not be exceeded during conductor installation. Use approved pulling lubricant on long pulls or when pulling No. 4 or larger wire.
- E. Neatly train and lace wiring inside boxes, equipment and panelboards.

- F. Color code conductor insulation for #6 AWG and smaller. Color code conductors with tape or colored insulation for #4 AWG and larger. Where conductors are color coded with tape, they shall be identified (color coded) at all points of access. Insulated ground wires shall have green colored insulation for all conductor AWG and/or Kcmil to comply with NEC 250.119. Neutral conductors shall have white colored insulation for No. 6 AWG and smaller to meet the requirements of NEC 200.6. Color coding shall be as follows:

240 VAC, THREE-PHASE, 3-WIRE

Phase A – Brown  
Phase B – Orange  
Phase C – Yellow  
Ground – Green

- G. Intrinsically safe wiring shall be with blue colored insulation per ANSI/ISA RP 12.6 and NEC 504.

- H. Splicing 600 volt wire shall be as follows:

1. Wire #8 and smaller:

- a) Ideal “wing nut” type insulated connectors.
- b) Scotchlok R, B, and Y type insulated connectors.
- c) Thomas and Betts, PT-1, PT-2, and PT-3 insulated connectors.

2. Wire #6 and larger:

- a) For straight way connections, use compression connector with rubber shrink type insulating cover.
- b) For tee cable taps, use compression connector with rubber shrink type insulating cover.
- c) For taps in cutout cabinets, gutters, and other close locations, use O.Z., Burndy, or PLM fittings, type “PT” cable tape with type “PTC” insulating cover.

3. Use plastic tape on all uninsulated wire splices manufactured by Scotch, Okonite, Brady Co. or Plymouth.

4. Splice only in accessible junction or outlet boxes.

- I. Connections and Terminations shall be as follows:

1. Identify each conductor in pump/motor control panels, panelboards, junction or pull boxes, or troughs with a permanent pressure sensitive label with suitable numbers or letters for easy recognition. Identify control wiring at each end and in junction boxes with numeric wire number corresponding to control wiring diagram.

2. Thoroughly clean wire before installing lugs and connectors.
  3. Make splices, taps and terminations to carry full ampacity of conductors without perceptible temperature rise.
  4. Terminate spare conductors with electrical tape and roll up in box. Label spare conductors "SPARE."
- J. Inspect wiring for physical damage and proper connection. All wire and cable shall be tested for continuity and short circuits prior to energizing circuits. Verify proper phasing where applicable.

#### Installation Of Supporting Devices

Install products in conformance with manufacturer's instructions and as detailed on the Plans. Provide anchors, fasteners and supports in accordance with NECA Standard of Installation, and as recommended by the equipment manufacturer for the respective application.

Do not fasten/secure supports to pipes, ducts, mechanical equipment, or conduit. Do not use spring steel clips or clamps. Install surface-mounted cabinets, enclosures and panelboards with a minimum of four (4) anchors. Use spring-lock washers under all nuts. All supports installed in the wet well and/or valve vault shall be corrosion resistant. Install supports with stainless steel hardware.

Concrete work associated with support structures shall conform to Section 1020 PORTLAND CEMENT CONCRETE of the Standard Specifications for Road and Bridge Construction and as detailed on the Plans.

#### Installation of Separately Mounted Circuit Breaker

Secure circuit breaker to structure as shown on Plans. Provide stainless steel strut to secure electrical equipment. Mounting hardware shall be corrosion resistant stainless steel. Install equipment enclosures plumb.

Provide weather proof, abrasion resistant, legend plates and for circuit breaker indicating function of the equipment and/or device being fed.

Bond all enclosures to ground with a ground lug or screw and a ground wire. Install grounding bushings with ground wire connections between the bushing and the ground bus at all metal conduit terminations to the enclosures.

Provide NEMA 4 hubs for all conduit entries into equipment enclosures that are rated NEMA 4X to maintain NEMA 4, 4X rating.

Inspect circuit breakers and manual transfer switch for proper operation, tight and secure connections, and correctness. Adjust as necessary to assure proper operation.

### Grounding Requirements

Grounding shall conform to the following as applicable: The Contractor shall furnish and install all grounding shown on the Plans and/or as may be necessary or required to make a complete grounding system as required by the latest National Electrical Code (NFPA 70) in force. The reliability of the grounding system is dependent on careful, proper installation and choice of materials. Improper preparation of surfaces to be joined to make an electrical path, loose joints, or corrosion can introduce impedance that will seriously impair the ability of the ground path to protect personnel and equipment and to absorb transients that can cause noise in communications circuits. The following functions are particularly important to ensure a reliable ground system:

- A. All products associated with the grounding system shall be UL-listed and labeled.
- B. All bolted or mechanical connections shall be coated with a corrosion preventative compound before joining. Sanchem "NO-OX-ID A Special" compound, Burndy Penetrox E is an approved product. Alternate products will be allowed but must meet this specification and be approved by the Engineer.
- C. Metallic surfaces to be joined shall be prepared by the removal of all non- conductive material, per National Electrical Code Article 250-12.
- D. Metallic raceway fittings shall be made up tight to provide a permanent low impedance path for all circuits. Metal conduit terminations in enclosures shall be bonded to the enclosure with UL-listed fittings suitable for grounding. Provide grounding bushings with bonding jumpers (from bushing to the respective ground connection/enclosure frame) for all metal conduits entering service equipment (meter bases, CT cabinet, service disconnects, service panelboards, main service breaker enclosure, etc.). Provide grounding bushings with bonding jumpers for all metal conduits entering an enclosure through concentric or eccentric knockouts that are punched or otherwise formed so as to impair the electrical connection to ground. Standard locknuts or bushings shall not be the sole means for bonding where a conduit enters an enclosure through a concentric or eccentric knockout.
- E. Furnish and install ground fields, and or ground rods at all locations where shown on the Plans or specified herein. Ground rods for electrical installations shall be 3/4 in. diameter by 10 ft long, UL-listed, copper clad with 10 mil. minimum copper coating. Top of ground rods shall be a minimum of 30 in. below finish grade unless otherwise noted on the Plans. Ground rods shall be spaced as detailed on the Plans and in no case spaced less than one (1) rod length apart. All connections to ground rods and/or ground fields shall be made with exothermic weld type connectors, Cadweld by Erico Products, Inc., Solon, Ohio, (Phone 1- 800-248-9353), or Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone 918-663-1440). Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds as required for

each respective application. Bolted connections will not be permitted at ground rods or at buried grounding electrode conductors. Grounding electrode conductors shall be bare stranded copper sized as detailed on the Plans. In addition to the grounding work described herein and shown on the Plans, the Contractor shall test the made electrode ground field with an instrument specifically designed for testing ground field systems. If ground resistance exceeds 10 Ohms, contact the Engineer for further direction. Copies of ground field test results shall be furnished to the Engineer, upon request, for review and record purposes.

- F. All connections, located above grade, between the different types of grounding conductors shall be made using UL-listed double compression crimp-type connectors or UL-listed bolted ground connectors. For ground connections to enclosures, cases and frames of electrical equipment not supplied with ground lugs the Contractor shall drill required holes for mounting a bolted ground connector. All bolted ground connectors shall be Burndy, Thomas and Betts, or equal. Tighten connections to comply with tightening torques in UL Standard 486A to assure permanent and effective grounding.
- G. All metal equipment enclosures, conduits, cabinets, boxes, receptacles, motors, etc. shall be bonded to the respective grounding system.
- H. Each feeder circuit and/or branch circuit shall include an equipment ground wire. The equipment ground wire shall not be smaller than allowed by NEC Table 250- 122 "Minimum Size Conductors or Grounding Raceway and Equipment." When conductors are adjusted in size to compensate for voltage drop, equipment- grounding conductors shall be adjusted proportionately according to circular mil area. All equipment ground wires shall be copper either bare or insulated green in color. Where the equipment grounding conductors are insulated, they shall be identified by the color green and shall be the same insulation type as the phase conductors.
  - (1) Provide all boxes for outlets, switches, circuit breakers, etc. with grounding screws. Provide all control panel, transfer switch, etc. enclosures with grounding bars with individual screws, lugs, clamps, etc. for each of the grounding conductors that enter the respective enclosures. Do not terminate more than one (1) ground wire in ground lug or terminal unless the respective lug or terminal is rated for multiple conductors.
- I. Equipment ground wires shall be identified with green colored insulation for all conductors AWG or Kcmil. Green tape shall not meet this requirement.
- J. All utility transformer bank grounds shall be installed in accordance with the serving utility company's recommendation and in accordance with NEC.
- K. Bond the main electrical service neutral to ground at the main service disconnect. Bond the service neutral to ground at one (1) location only

per the National Electrical Code. A grounding connection shall not be made to any neutral circuit conductor on the load side of the service disconnecting means, except as permitted by NEC 250-24.

- L. All exterior metal conduit, where not electrically continuous because of non-metallic junction boxes, etc., shall be bonded to all other metal conduit in the respective duct run, and at each end, with a copper bonding jumper sized in conformance with NEC 250-102. Where metal conduits terminate in an enclosure (such as a motor control center, switchboard, etc.) where there is not electrical continuity with the conduit and the respective enclosure, provide a bonding jumper from the respective enclosure ground bus to the conduit sized per NEC 250-102.
- M. Install grounding electrode conductors and/or individual ground conductors in Schedule 40 or Schedule 80 PVC conduit. Where grounding electrode conductors or individual ground conductors are run in PVC conduit, Do Not completely encircle conduit with ferrous and/or magnetic materials. Use non-metallic reinforced fiberglass strut support. Where metal conduit clamps are installed, use nylon bolts, nuts, washers and spacers to interrupt a complete metallic path from encircling the conduit.

## INSTALLATION AND TESTING OF PUMP CONTROL PANEL

### Installation

- A. Control panel shall be installed per manufacturer's recommendations as detailed on the Plans and as specified herein.
- B. All conduit entries into the panel enclosure shall have water-tight threaded hubs, UL-listed for the use with the respective NEMA 4, 4X enclosure to maintain the NEMA 4, 4X rating of the panel enclosure.
- C. Seal conduit openings in the panel enclosure with duct seal.
- D. Conduits with intrinsically safe wiring, including level switch cables, shall terminate in the control panel at the intrinsically safe wiring section. Non-intrinsically safe wiring including, but not limited to, power feeder conductors, branch circuit conductors, and pump motor cables shall not enter the control panel at the intrinsically safe wiring section and shall maintain a minimum separation distance inside the control panel from the intrinsically safe conductors as required by NEC 504 and ANSI/ISA RP12.6.
- E. Install explosion-proof conduit seal-off fittings as detailed on the Plans and in conformance with manufacturer's instructions. Contact the respective conduit seal-off manufacturer if assistance is required for direction of installing the packing fiber to form a dam and pouring the sealing

compound.

- F. Install level switches as detailed on the Plans and per manufacturer's directions and recommendations. Verify level elevations with Engineer and Pump Manufacturer's Service Representative and adjust as required. Secure slack level switch cable to cable hangers with corrosion resistant nylon cable ties. Connect equipment ground wires from individual level switches to the respective equipment ground bar in the pump control panel.
- G. Terminate all equipment ground wires on the pump control panel equipment ground bar. Where pump motor cables include an equipment ground wire and an additional "ground check" wire both ground wires shall be terminated on the equipment ground wire. Where level switch cables include an equipment ground wire terminate the respective ground wire on the control panel equipment ground bar.

### Testing

Contractor shall provide services of the pump control panel manufacturer's representative for the purpose of inspection, check-out, testing, start-up, instruction of user personnel, and any other required services to provide a complete and operational system. All tests shall be conducted in the presence of the Engineer. Contractor shall provide water as/if required to test pumps under load. Contractor shall furnish three (3) copies of test results to Engineer. Contractor shall also furnish three (3) copies of Operation and Maintenance Manuals, for operator personnel use, to the Engineer.

Start-up procedure and tests shall include, but not be limited to, the following, as well as other tests and requirements specified herein:

- A. Conduct megger test on each motor, (see Motor Start Up Certification and Testing Report).
- B. Inspect control panel for correct terminal connections and tightness, correct and tighten as required.
- C. Check level switches and corresponding circuitry for proper operation.
- D. Check oil in motors (where applicable).
- E. Check for correct rotation of pump motors, correct as required.
- F. Check for proper pump installation and operation.
- G. Measure voltage at no load (pumps off) and at pumps running under load for each pump motor.
- H. Measure current in each phase with motor running under load for each



pump motor.

- I. Verify proper operation of pump motor thermal sensors (where applicable).
- J. Run the pumps in automatic and manual modes of operation. Verify proper operation of alternator.
- K. Simulate alarm conditions and verify proper annunciation of each alarm on the automatic phone dialer system.
- L. Verify a label is provided on the pump control panel with the name, address, phone number, and emergency phone number of the service representative.
- M. Verify proper operation of all pilot lights and alarm lights.
- N. Test receptacles for proper output power and proper operation.
- O. Instruct user personnel about the operation of the control panel and components; indicating items for routine maintenance check, operation modes, failure modes, alarm conditions, etc.
- P. Conduct any additional tests as recommended or required by the manufacturer.
- Q. Correct any defects or deficiencies and retest after corrective and/or repair work has been performed to confirm proper operation of the system.

#### MARKING AND LABELING

Legend plates shall be provided for all equipment. Legend plates shall be provided to identify the equipment controlled, the power source, and the function of each device. Each individual circuit breaker, control panel, safety switch, shall be furnished with a phenolic engraved legend plate that identifies the respective device, the power source, and the respective voltage, phase, and wire. Furnish additional phenolic engraved legend plates as detailed on the Plans and/or where required by code. Legend plates shall be weatherproof and abrasion resistant phenolic/plastic engraved material and fastened with contact type permanent adhesive, screws, or rivets. Installation shall not break, crack, or deform the legend plate. Lettering shall be 1/4 in. high or larger. Equipment that is powered from a utility power source only (for example the main service disconnect) shall have black lettering on a white background. Equipment that is powered from a emergency source only (for example the generator breaker) shall have black lettering on a yellow background. Equipment that is normally powered from the utility and backed up by portable generator (for example the manual transfer switch) shall have white lettering on a red background.

Furnish and install weatherproof warning label for each meter socket, enclosed circuit breaker, disconnect switch, and control panel to warn persons of potential electric arc flash hazards, per the requirements of NEC 110.16 "Flash Protection." Labels shall also conform

to ANSI Z535.4- 2002 “American National Standard for Product Safety Signs and Labels.” NEC 110.16 requires that switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked to warn qualified persons of potential arc flash hazards. The markings shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment. This new requirement is intended to help reduce the occurrence of serious injury or death due to arcing faults to those working on or near energized electrical equipment. The warning labels are to indicate to a qualified worker who intends to open the equipment for analysis of work that a serious hazard exists and that the worker should follow appropriate work practices and wear appropriate personal protective equipment (PPE) for the specified hazard. Labels shall be as detailed on the Plans or shall include at least the following information: Warning – Potential Arc-Flash Hazards existing while working on this energized equipment. Appropriate PPE Required.”

**Measurement and Payment:** This work will be paid for at the contract lump sum price for PUMP STATION ELECTRICAL WORK which shall include all labor, equipment, materials, associated supports, hardware, concrete work, tools, operational instructions, utility service work, coordination, and testing required to complete the installation of the pump station and to place it into proper working order. The duplex pump control panel shall be furnished by the respective pump manufacturer’s representative and installed by the Electrical Contractor. The furnishing of the duplex pump control panel and pump manufacturer representative’s services shall not be included with this item and shall be included in the contract price for PUMPING STATION. The installation of the Duplex Pump Control Panel and all associated electrical work and coordination shall be included with this item.

**MOTOR START UP CERTIFICATION AND TESTING  
REPORT**

(One (1) form is to be provided for each motor, copy as required)

**Page 1 of 2 pages**

Hanson Professional Services,  
Inc. 1525 South Sixth Street  
Springfield, Illinois 62703  
Phone (217) 788-2450

Project Location: \_\_\_\_\_ Project Name: \_\_\_\_\_  
Client (End User) \_\_\_\_\_ Project Number: \_\_\_\_\_  
Client Site Location: \_\_\_\_\_

Temperature (°F): \_\_\_\_\_

Humidity: \_\_\_\_\_

Time of Day: \_\_\_\_\_

Weather (if outdoors): \_\_\_\_\_

Motor Function/Designation/Location: \_\_\_\_\_

Motor Nameplate Data

1. Manufacturer's Name: \_\_\_\_\_
2. Motor Serial Number: \_\_\_\_\_
3. Manufacturer's type and frame designation \_\_\_\_\_
4. Horsepower \_\_\_\_\_
5. Time Rating (5, 15, 30, 60 minutes, or Continuous) \_\_\_\_\_
6. Maximum ambient temperature for which motor is designed \_\_\_\_\_
7. NEMA Insulation Class Designation \_\_\_\_\_
8. NEMA Torque Design Class \_\_\_\_\_
9. RPM at rated load \_\_\_\_\_
10. Frequency \_\_\_\_\_
11. Number of Phases \_\_\_\_\_
12. Rated Full-Load Amperes \_\_\_\_\_
13. Voltage \_\_\_\_\_
14. Code letter for Locked-Rotor KVA \_\_\_\_\_
15. Service Factor \_\_\_\_\_
16. Efficiency (NEMA Nominal) \_\_\_\_\_
17. Internal motor thermal protected (if required)? (Yes/No) \_\_\_\_\_

Page 2 of 2 pages

Motor Start-Up Certification and Testing Report (Continued)

Motor Start-Up & Commissioning Data

Insulation Resistance Test

Megohms measured to ground @ 500 VDC (60 Second continuous test)

Motor Lead T1 measured to Ground \_\_\_\_\_ Megohms  
Motor Lead T2 measured to Ground \_\_\_\_\_ Megohms  
Motor Lead T3 measured to Ground \_\_\_\_\_ Megohms  
T1-T2-T3 (Tied) measured to Ground \_\_\_\_\_ Megohms

Voltage (at motor)

	Phase A-B	Phase B-C	Phase C-A
No-Load	_____	_____	_____
Full Load	_____	_____	_____

Motor Current (field measured data)

No Load  
Phase A \_\_\_\_\_ Amps  
Phase B \_\_\_\_\_ Amps  
Phase C \_\_\_\_\_ Amps

Full Load  
Phase A \_\_\_\_\_ Amps  
Phase B \_\_\_\_\_ Amps  
Phase C \_\_\_\_\_ Amps

DATA CERTIFIED BY:

Firm: \_\_\_\_\_

Name \_\_\_\_\_

Date: \_\_\_\_\_

## **PUMP STATION MECHANICAL WORK**

**Description:** This work shall consist of the 10-inch ductile iron piping, fittings, valves, steel pipe supports, and the 2" Schedule 40 drain with check valve in the valve vault and Drainage Structures, No. 2. It shall also consist of relocation of a 6-in drain line from an oil/water separator and a 4-in drain line from an area storm inlet.

### **Ductile Iron Piping**

The 10-inch ductile iron piping with flanged joints shall conform to ANSI/AWWA C115/A21.15. The pipe shall have a cement mortar lining with asphaltic coating inside and out conforming to ANSI/AWWA A21.4 Gaskets shall be constructed of molded SBR rubber meeting ANSI/AWWA C111/A21.11. Fastening hardware shall be low carbon steel conforming to ASTM A307.

All pressure main fittings shall be flanged joint (FL.) ductile iron, unless otherwise indicated on the Plans. All fittings shall conform to ANSI A21.10 (AWWA C110), or ANSI A21.53 (AWWA C153), where possible. Minimum pressure rating shall be 350 psi. If shown or specified fittings are unavailable in the above standards, the manufacturer's standard may be used upon approval of the ENGINEER. All rubber gaskets shall conform to ANSI A21.11 (AWWA C111). All fittings shall have cement mortar lining and seal coat per ANSI A21.40 (AWWA C104).

### **Swing Check Valve**

Swing check valves shall be flanged with a weighted lever arm and shall be the end product of one manufacturer. The swing check valves shall be installed per the valve manufacturer's instructions.

Swing check valves shall conform to ANSI/AWWA C508, Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) MMS-SP-71 and MMS-SP-80, and ASTM D- 1784.

The swing check valve shall utilize a thru-valve disc hinge shaft, with outside lever and weight. The valve shall be designed for either horizontal or vertical installation, as shown on the drawings. The valve shall provide a resilient material to metal seat, and a full waterway design, as defined in AWWA C508.

Swing check valve body shall be ASTM A126 Class B cast iron. The valve body shall be flanged and of one-piece construction and constructed in a globe pattern. The valve outlet flange shall be integrally cast with the valve body and shall be one nominal pipe size larger than the valve inlet flange. Valve body shall be full waterway type, designed to provide a net flow area not less than the nominal inlet pipe size area when swung open no more than 25 degrees. Valve shall have a replaceable bronze body seat. Body seat materials shall be either cast bronze meeting AWWA C508.

Swing check valve shall provide full pipeline flow area with disc at 25 degrees open, and shall allow for 45 degrees total disc rotation. The disc shall be stopped in its full open position by a built-in stop in the valve body. The disc shall be constructed of cast or

ductile iron with a minimum strength of 30,000 psi. The disc seat ring (resilient seal) shall be a rubber like material, and shall be selected by the manufacturer in accordance with potable water requirements, as given in AWWA C508. The disc attachment arm shall be constructed of ductile iron or steel with a minimum strength of 65,000 psi. The disc attachment arm shall be prevented from rotation on the disc hinge shaft by a machined keyway and stainless steel key.

The counterweight arm(s) shall be constructed of steel, and shall be secured to the disc hinge shaft by a stainless steel key. The counterweight shall be constructed of cast iron, and shall be secured in position on the counterweight lever by a stainless steel lock screw.

The swing check valve body assembly shall incorporate a circular flanged cover of the same construction as the valve body. The cover shall be of adequate size to permit field inspection, maintenance and replacement of all internal valve components. The valve seat, disc seal ring, and mating surface shall be field removable and replaceable without removing the valve from the pipeline.

The Contractor, in conjunction with the swing check valve manufacturer, shall make adjustments in the position of the lever weight to achieve optimum no-slam operation.

### **Plug Valves**

Plug valves shall be flanged with gear operators and hand wheel, and shall be the end product of one manufacturer. The plug valves shall be installed per the valve manufacturer's instructions. Plug valves shall be of the non-lubricating, eccentric type and shall be designed for a working pressure of 150 psi. Valves shall provide tight shut-off at rated pressure.

The valve shall have a 100% port design. The valve body shall be cast iron ASTM A126 Class B with welded in overlay of 99 percent nickel allow content on all surfaces contacting the face of the plug. The valve plug shall be ductile iron ASTM A-536, Grade 65-45-12 with Buna N resilient seating surface to mate with the body seat.

The plug valves shall be furnished with permanently lubricated sleeve type bearings conforming to AWWA C517. Bearings shall be of sintered oil impregnated type 316 stainless steel ASTM A-743 Grade CF-8M or bronze ASTM B-127.

Valve shaft seals shall be of the "U" cup type, in accordance with AWWA C517. Seals shall be self-adjusting and re-packable without moving the bonnet from the valve.

### **Steel Pipe Supports**

Steel pipe supports shall be utilized within the valve vault for the 10" fittings, and valves. Pipe supports shall be bolted to the floor of the vault and shall be designed to cradle the diameter of pipe they are supporting.

### **Valve Vault Drain**

2-inch Polyvinyl Chloride (PVC) pipe shall be ASTM D2665 drain, waste, vent pipe. The drain shall be furnished and installed in accordance with Section 20 of the Standard Specifications for Water & Sewer Main Construction in Illinois, as shown on the Plans and

as specified herein.

The backfill for the piping shall be controlled low strength material, mix 2 when in the vicinity of the Drainage Structures No. 2 and the valve vault. The Contractor is responsible for any additional fittings required to plumb the drain from the valve vault to the Drainage Structures No. 2.

The annular space around the pipe shall be sealed with non-shrink grout where it penetrates the walls of the valve vault and drainage structure.

The 2-inch check valve shall be a 2-inch ball check with integral unions to connect to the 2 inch drain pipe. The check valve shall be able to be installed in a vertical or horizontal position and still function.

### **Storm Sewer**

The storm sewer pipe shall be PVC conforming to ASTM D2665, Drain, Waste, Vent pipe. Fittings shall also conform to ASTM D2665. The joints shall be push on solvent weld. The primer shall conform to ASTM F-656. The solvent cement shall conform to ASTM D2564. Once the storm drain pipes have been located and invert elevations established, the Contractor shall core into the wet well and install the 4-in and 6-in storm drains. The pipe shall be laid at 1% grade. The Contractor shall use long sweep fittings for the 90 degree bends or use two 45 degree bends. The excavation shall be backfilled with FA-6.

**General:** This work includes all excavation, labor, materials and equipment required to furnish, and install the 10-inch ductile iron pipe both flanged and push on, fittings, valves, steel pipe supports, 2-inch Schedule 40 drain pipe, 2-inch check valve, pipe and rail supports, 4-in and 6-in line relocations, backfilling, accessories, testing, and other incidental items as shown on the plans.

**Basis of Payment:** This work will be paid for at the contract lump sum price for PUMP STATION MECHANICAL WORK.

### **PUMPING STATION**

Pumping station consists of the pumping equipment and accessories and testing as well as the valve vault.

The valve vault shall be precast reinforced concrete conforming to ASTM C913. A sump pit shall be cast in the base of the valve vault as shown on the plans. The Contractor shall submit plans and calculations for the valve vault that are signed and sealed by a licensed structural engineer prior to ordering or manufacturing the valve vault. The structure shall be designed for earth loads, an HL-93 live load for vehicle traffic, and railroad live load surcharging (based on Cooper's E-80 Live Load and in accordance with AREMA and railroad requirements) by the Norfolk Southern shoofly track.

Once the vault is installed and piping in place, the space between the valve vault and the

limits of excavation shall be backfilled with controlled low strength material, mix 2.

The lid of the valve vault shall be flat and shall be sealed to the top of the valve vault with a double row of butyl mastic. The lid shall have a cast in place aluminum access frame and hatch. The hatch shall be hinged with a flush locking mechanism and a 36-inch by 36-inch minimum clear opening. The top of the hatch shall be a minimum one-fourth-inch aluminum diamond tread plate. The access frame and hatch shall be HL93 load rated. Contractor shall coordinate hatch fabrication with the pump manufacturer.

Openings in the structure for pipes shall be sealed water-tight with a flexible resilient type gasket such as A-Lok, Inc., Press Seal, Kor-N-Seal or equal.

After installation is complete, if there are water leaks at joints, the Contractor shall waterproof the leaks using drilled ports around the leak and a hydrophilic grout.

### **Submersible Pumps and Accessories**

Two (2) submersible wastewater pumps each with "K" single vane non-clogging impellers. Each pump shall be equipped with a submersible electric motor connected for operation on existing electrical service with 75-feet of submersible cable (SUBCAB) suitable for submersible pump applications. The power cable shall meet NEC and ICEA standards for submersible pumps and have P-MSHA Approval. The pump shall be supplied with a discharge. Each pump shall be fitted with minimum 50-feet of stainless steel chain. The working load of the lifting system shall be 50% greater than the pump unit weight.

Submersible pumps and motors shall be designed specifically for raw stormwater use, including totally submerged operation during a portion of each pumping cycle and shall meet the requirements of National Electrical Code (NEC) for such units. Pump motor cords shall be designed for flexibility and serviceability under conditions of extra hard usage and shall meet the requirements of the NEC for flexible cords in sewage pumping stations. Ground fault interruption protection shall be used to de-energize the circuit in the event of any failure in the electrical integrity of the cable.

The Contractor shall furnish and install totally submersible electric operated stormwater pumps of the sizes, number, and capacities shown below. The motors shall be non-overloading at any point on the pump curve, from shut-off to zero head conditions, and shall be of the specified horsepower, operating at 480 volt, 3 phase. The pumps, discharge elbows, and associated mounting hardware shall be as manufactured by the pump manufacturer. Information associated with the equipment from Fairbanks Nijhuis was used as the basis for the design as specified herein and shown on the drawings. Equivalent pumps from other manufacturers meeting the performance specifications of this special provision shall be deemed "as-equal".

The services of a manufacturer's representative are required at the time of start-up.

### **Pump Design**

The pumps shall be furnished as one complete pump system, all of the system components supplied by one manufacturer. The pumps shall be vertical, submersible, solids handling type pump, designed to handle gritty sludge and raw stormwater, and shall



be capable of passing 6-in. spherical solids. The pump base shall have 10-in. flanged outlet connection. The design shall be such that the pump unit will be automatically connected to the discharge piping when lowered into place on its mating discharge connection, permanently installed in the manhole. The pump shall be easily removable for inspection or services, requiring no bolts, nuts, or other fastenings to be disconnected. For this purpose, there shall be no need for personnel to enter the manhole. It shall be fitted with a lifting hoop of adequate strength to permit raising and lowering the pump for inspection or removal. A stainless steel chain or cable shall be attached to this lifting hoop and extended to the top of the manhole. A stainless steel hook rack shall be installed just below the frame and access hatch in Drainage Structures, No. 2 and shall have at least three hooks per pump (min. 6 hooks). The pump, with its appurtenances and cable, shall be capable of continuous submergence underwater without loss of water-tight integrity to a depth of 100-feet.

### **Pump Construction**

All major parts, such as the stator casing, oil casing, sliding bracket, volute and impeller shall be gray iron. All exposed bolts and nuts shall be of stainless steel.

A wear ring system shall be installed to provide efficient sealing between the volute and impeller. The impeller shall be gray cast iron of non-clogging design coated with acrylic dispersion zinc phosphate primer, capable of handling solids, fibrous material, and other matter found in normal stormwater applications. The impeller shall be dynamically balanced. Static and dynamic balancing operations shall not deform or weaken it. The impeller shall be retained with a non-corroding Allen head bolt.

The pump shall be provided with a mechanical rotating shaft seal system running in an oil reservoir having separate lubricated seal faces. No seal damage shall result from operating the pumping unit out of its liquid environment. The seal system shall not rely upon the pumped media for lubrication. Provision for determining the condition of the lower seal unit without disassembly of the pump shall be provided.

Pump shall be a standard production pump with attached rail guides and discharge elbow. Rail guides shall be fastened to pump so that all lifting loads will come on the guide supports and not on the pump or motor housing. Guide mechanism on the pump shall be constructed of bronze, shall be non-sparking and UL-Listed.

Installation of the pump unit to the discharge connection shall be the result of a simple linear downward motion of the pump unit guided by no less than two guide bars. No other motion of the pump unit, such as tilting or rotating, shall be required.

The discharge flange of each pump shall be designed to automatically seal with the discharge elbow when the pump is lowered into place and the pump is in operation. The seal shall be capable of remaining reliable for water-tightness in the environment into which it will be located. Discharge elbow shall have 125 lb. standard flanges.

If a pump mounting base is furnished, these plates shall include adjustable guide rail supports and discharge elbow with flange to align the pumps with the flange. Plates and fitting shall be coated with tar base epoxy paint.

The motor cable entry water seal design shall be such that it precludes specified torque requirements to insure a water-tight and submersible seal. Pump motor cable shall be suitable for submersible pump applications and this shall be indicated by a code or legend permanently embossed on the cable. Cable sizing shall conform to NEC Specifications for pump motors and shall be of adequate size to allow motor voltage conversion without replacing the cable. Pump power cable shall be continuous without splices from the pump to the control cabinet. The cable shall be at least 75-feet in length.

All mating surfaces of major parts shall be machined and fitted with nitrile O-rings where water-tight sealing is required. No other sealing compounds shall be required nor used.

Each pump shall have a low flow capacity of 1250 GPM at a total head of 49-feet when operating at 900 RPM with a pump efficiency of 52% or greater and have a high flow capacity of 1922 GPM at a total head of 39-feet when operating at 900 RPM with a pump efficiency of 58% or greater. Pump motor shall be a minimum of 50 horsepower. The pump and motor shall be UL-listed, FM-listed, or ETL-listed suitable for Class I Division 1 Group D hazardous location. A Fairbanks 10" 5435 MVK meets the requirements of this special provision.

#### **Pump Assembly Configuration**

Cooling System - Motors are cooled by the surrounding environment or pumped media. Pumps requiring jackets for recirculation of either pumped media or internally reticulated cooling fluid of any type are not acceptable

Cable Entry Seal - The cable leads are to allow the connection of a cable to the motor, to be accomplished in the field without soldering cable. All leads are to be sealed with a grommet and an epoxy compound system with strain relief to prevent cable-wicking to conduit box location in the top of the motor. Leads are connected to a water-tight fully O-ringed terminal board with brass lugs.

Total grommets or other similar sealing systems are not acceptable. Motor shall be supplied with 75 feet of multi-conductor type RHW or Re Neoprene power cable and control cable. Cable sizing shall conform to NEC specifications.

Separate terminal board, which is fully o-ringed and each terminal individually o-ringed, to form a water tight barrier.

#### **Electric Motor**

Motors shall be rated for Class I, Division I, Group D.

The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class F insulation. The stator-winding and lead shall be insulated with moisture-resistant Class F insulation for continuous duty in 40 C rise liquids. The motor shall be designed for continuous duty capable to minimum of ten (10) starts per hour. Motor shaft shall be 416 stainless steel: the rotor and shaft together is to be dynamically balance to meet NEMA vibration limits: all hardware to be stainless steel.

Thermal switches set to open at 311F shall be embedded in the stator end coils to monitor the temperature of each phase winding. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the control panel. The motor and the pump shall be produced by the same manufacturer.

The combined service factor shall be a minimum of 1.15. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be designed for operation up to 40°C (104°F) ambient and with a temperature rise not to exceed 80°C. A performance chart shall be provided showing curves for torque, current, power factor, input/output kW and efficiency. This chart shall also include data on starting and no-load characteristics.

The power cable shall be sized according to the NEC and ICEA standards and shall be of sufficient length to reach the junction box without the need of any splices. The outer jacket of the cable shall be oil resistant chlorinated polyethylene rubber. The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.

The motor horsepower shall be adequate so that the pump is non-overloading throughout the entire pump performance curve from shut-off through run-out. Pumps shall be sized based on the total hydraulic capacity based on test data, reduction in the head range or chopped pump curves are not acceptable.

Bearings - The pump shaft shall rotate on two sets of bearings. Motor bearings shall be permanently grease lubricated. The lower bearing shall compensate for axial thrust and radial forces. The lower shaft bearing shall be locked on place to prevent shaft movement and to take thrust loads. Bearing shall be prelubricated at the factory.

Mechanical Seal - Each pump shall be provided with a tandem mechanical shaft seal system. The seals shall require neither maintenance nor adjustment nor depend on direction of rotation for sealing. The mechanical seals must be commercially available and manufactured by a major seal manufacturer. Seal shall be constructed of a polymeric body with SC/TC faces for the lower and carbon/ni-resist for the upper. Seal body shall be designed such it will not snap debris when in operation.

The motor shall be able to operate unsubmerged up to 15 minutes without damage while pumping under load.

Seal lubricant shall be FDA Approved, nontoxic.

Pump Shaft - Pump and motor shaft shall be the same unit. The shaft shall be 416 stainless steel. The use of stainless steel sleeves will not be considered equal to stainless steel shafts.

Impeller - The impeller shall be one piece, single suction, enclosed single-vane, radial flow design with well-rounded leading vane edges and thick hydrofoil shape which prevents the accumulation of solids and stringy material through the impeller. It is to be dynamically balanced and secured to the shaft by means of a key and fastener. Wiper vanes are not allowed. The impeller waterways and clearance between the impeller

periphery and volute cutwater shall be capable of passing a 6" spherical solid. There shall be provisions for adjustable shims behind the impeller to maintain clearance between the impeller and suction head wear rings. Semi open impellers or impellers without hard metal wear rings are not acceptable. Coated wear rings are not acceptable. Impeller shall be designed to be fully trimmable. Semi open type impellers or impellers that will not accept wear rings are not allowed.

The impeller shall be capable of handling solids, fibrous materials, heavy sludge and other matter normally found in storm water up to 3%.

Axial wear rings constructed of 416 stainless steel shall be provided for both impeller and volute. Wear rings shall be the axial design and fully adjustable. Radial type rings are not allowed.

Volute-Suction Cover - The pump volute shall be a single piece with smooth passages of sufficient size to pass any solids that may enter the impeller. Inlet and discharge size shall be as specified. Spiral grooved suction volute insert plates that act as the impeller enclosing shroud and wear surface are not acceptable.

The volute shall be provided with a replaceable hard metal insert/wear ring, which shall be fully axially field adjustable. Ensure effective sealing between the impeller and volute housing. Non-hardened or elastomer or rubber coated metal or stainless steel wear rings are not acceptable.

The pump discharge shall be provided with an integrally cast flange. The seal between the pump discharge and discharge piping shall be watertight.

Guide/Bracket - Guide rails shall be provided by the general contractor on which the pump rides when being raised or lowered in the sump and mount on the discharge base/elbow. The rails shall align the pump with the discharge elbow as it is lowered into place. An upper rail guide shall be furnished to support and align the rails at the top of the sump. Intermediate guide bracket support shall be provided every 5-feet vertically and shall be coordinated through the pump manufacturer. The guide brackets shall also support the discharge pipe with both the pipe and guide rail supports affixed to the pump station walls.

Guide rails shall be provided on which the pump rides when being raised or lowered in the sump and mounted on the discharge base/elbow. The rails shall align the pump with the discharge elbow as it is lowered into place.

Guide bars shall be stainless steel and the diameter shall be as recommended by the pump manufacturer.

An upper rail guide shall be furnished to support and align the rails at the top of the sump.

The guide rail system shall be non-sparking and approved for use in Class 1, Division 1, Group D hazardous locations.

Discharge Base - A rigid discharge straight thru discharge/base to support the total weight of

the pumping unit shall be provided. The base is to be bolted directly to the floor with the 90 degree 125lb. ANSI flange discharging horizontally.

Protection - All stators shall incorporate thermal switches in series to monitor the temperature of each phase winding. The thermal switches shall open at 311F, stop the motor and activate an alarm.

A leakage sensor shall be available to detect water below the upper seal and in the stator housing. Spare Parts (for each pump unit provided) - 2 sets of all gaskets. Mechanical seal set. Complete replacement bearing set. Any special tools required for pump disassembly.

### *Materials of Construction*

Impeller	Cast Iron A48-CL30
Impeller Bolt	Steel SAE Bolt Steel GR-8
Impeller Nut	SAE Bolt Steel
Impeller Washer	A108 GR12L14
Volute	Cast Iron A48-CL30
Fronthead	Cast Iron A48-CL30
Impeller wearing ring	416 stainless steel (300-350BHN)
Volute wearing ring	416 stainless steel (300-350BHN)
Discharge Base Elbow	Cast Iron A48 CL-30
Impeller Key	Steel A108 GR1018
Guide Bracket	Brass B584 AL836
Volute Gasket	Tagboard F104
Bearing Shims	Steel A108 Commercial
Volute Handhole Cover	Cast Iron A48-CL30
Volute Handhole Cover Gasket	Tagboard F104
Upper Guide Bracket	Steel
Upper Guide Bracket Bushing	Rubber
Guide Mechanisum	Bronze / non-sparking
Discharge Coupling	Non-Sparking
Lower Mechanical Seal	Silicon Carbide vs. Tungsten Carbide
Seal	Carbon vs. Ni-Resist

### **Installation**

The Contractor shall install the pump assemblies in the permanent locations as shown on the drawings and in accordance with the manufacturer's instructions.

Contractor shall install interconnecting electrical wiring, conduit, etc. between submersible pumps and control equipment so that when power and control wiring is brought to the control equipment, the submersible pump system will be a complete operational system.

### **Testing**

The pump manufacturer shall perform the following inspections and tests on the pump before shipment from factory.

1. Impeller motor rating and electrical connections shall first be checked for compliance

- to the customer's purchase order.
2. A motor and cable insulation test for moisture content or insulation defects.
  3. Prior to submergence, the pump shall be run dry to establish correct rotation and mechanical integrity.
  4. The pump shall be run for 30 minutes submerged, a minimum of 6 ft under water.
  5. After operational test No. 4, the insulation test (No. 2) is to be performed again.
  6. Each pump shall be tested for flow versus head at the design conditions in accordance with the latest edition of the Hydraulic Institute Standards.

A written report with certified flow versus head curves stating the foregoing items have been done shall be supplied with the pump at the time of shipment. The curves indicated shall include head, capacity, horsepower, efficiency and input KW.

Manufacturer shall be certified ISO 9001

Prior to system operation, all equipment shall be inspected for proper alignment, quiet operation, proper connection and satisfactory performance by means of a functional test.

#### Field Testing

Functional Test - required. Performance Test - required.

Before final acceptance of the pumps specified herein, the Contractor shall submit five (5) copies of certified and properly identified performance curves which shall reflect the operating characteristics of each pump model and impeller combination being supplied. The curves shall indicate head, capacity, horsepower, efficiency and input KW.

#### Finishes

Shop - All pump assemblies supplied under this section shall receive finishes that are in accordance with the pump manufacturer's standard finish.

Field - All pump assemblies shall be touch-up painted with matching paint supplied by the pump manufacturer.

Drive Motors - All pump drive motors furnished under this section shall only receive finishes that are in accordance with the motor manufacturer's standard finish. DO NOT apply shop or field coatings to the drive motors.

#### Manufacturer's Services

The Contractor shall include with his bid the services of the equipment manufacturer's field service technician for a period of one (1) trip for a period of two (2) 8-hour days at the site. This service shall be for the purpose of check-out, initial start-up, certification, and instruction of plant personnel. A written report covering the technician's findings and installation certification shall be submitted to the Engineer covering all inspections and outlining in detail any deficiencies noted.

**General:** This work includes all excavation, backfill, temporary shoring, labor, materials

and equipment required to manufacture, furnish, and install the valve vault, lid, access frame and hatch, butyl rubber sealant, pumps, pump bases, rails, lift chain, cable and chain brackets, pump rail brackets, testing, and other incidental items as shown on the plans.

**Basis of Payment:** This work will be paid for at the contract lump sum price for PUMPING STATION.

**OC/OA OF CONCRETE MIXTURES - APPLICABLE ITEMS**

The Special Provision for "Quality Control/Quality Assurance of Concrete Mixtures" (Recurring Special Provision Check Sheet Item #31 and BDE 80281) shall only apply to the following:

Pay Item:	All Items Utilizing Self-Consolidating Concrete
Location:	All Applicable
Pay Item:	Superstructure Concrete
Location:	Bridge Decks

All other Portland Cement Concrete utilized in the construction of this project shall be produced in accordance with Check Sheet item #30 for "Quality Control of Concrete Mixtures at the Plant."

**SAWING PAVEMENT (FULL DEPTH)**

**Description:** This work shall be used in the removal of driveway pavement, sidewalk, pavement, curb, gutter and combination curb and gutter to ensure a satisfactory transition between replacements and the portion remaining in place. The contractor shall saw cut a joint between the portion of the driveway pavement, sidewalk, pavement and curb and gutter to be removed and that to be left in place in order to prevent the surface from spalling when the concrete is broken out. This work shall be done in such a manner that a straight joint will be secured.

**Basis of Payment:** This work will not be measured separately but shall be included in the contract unit price for the item to be removed.

**SIGN REMOVAL**

**Description:** This work consists of the removal and disposal of the two existing specialty signs along Carpenter Street. Specifically, the St. John's Hospital Parking Lot sign on the south side of Carpenter Street mid-block between 9<sup>th</sup> Street and the railroad tracks, and the Benmar Sign on the north side of Carpenter Street mid-block between 9<sup>th</sup> Street and the railroad tracks.

**General:** This work shall include the removal of the sign panels, footings, foundations,

and hardware associated with the existing signs. Disposal shall be in accordance with Section 202.03. The void caused by removal shall be backfilled with embankment.

**Basis of Payment:** This work will be paid for at the contract unit price per each for SIGN REMOVAL.

### **STEEL CASINGS 36"**

**Description:** This work shall consist of installing a 36-in diameter split steel casing around an existing 24-in concrete sewer, welding the seams, and installing casing spacers and casing end seals. Pavement removal, excavation, shoring, backfilling and pavement restoration is being paid for under Pavement Replacement, Special.

**Materials:** Steel casing shall conform to the requirements of AWWA C200 and ASTM A139, Grade "B" with a minimum yield strength of 35,000 psi and be a minimum 0.5625" thick. The pipe shall be coated externally with coal tar epoxy or bituminous asphalt. The casing shall be shop cut and split with ends square with centerline, leveled and welded so that the entire length of the casing shall be straight and true. Weld seams in the field shall be field applied with coal tar epoxy or bituminous asphalt.

Welding requirements shall be in accordance with ANSI/AWWA C206. Welding procedures shall be required for, at a minimum, longitudinal and girth or special welds for pipe cylinders, casing joint welds, reinforcing plates, and grout coupling connections.

Welding shall be done by skilled welders, welding operators, and tackers who have had adequate experience in the type of materials to be used. Welders shall be qualified under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to commencing work on the casing or pipeline. Machines and electrodes similar to those used in the Work shall be used in qualification tests. The Contractor shall be responsible for all material and bear the expense of qualifying welders.

The carrier pipe shall be center restrained by the use of casing spacers. The casing spacers shall be constructed of non-reactive material designed specifically for that purpose. The spacers shall be positioned within 6 in. from the end of the casing, on each side of joint in the carrier pipe, and at the midpoint of each pipe length. The spacers shall be constructed of non-flammable materials or positioned such that the welding operations will not affect them.

End seals shall be made of synthetic rubber, conical shape, pull-on or wrap-around style with Type 304 stainless steel bands. For carrier pipe greater than 24 inches in nominal diameter the annular space between the carrier pipe and the casing pipe at the ends shall be bricked in conjunction with the end seals.

**Execution:** The existing 24-in sewer shall be continuously supported during the casing operation. Casing spacers shall be installed around the exposed pipe. The spacers shall be sized such that they rest against the lower half of the casing. The casing sections shall be continuously welded forming a water tight seal around the pipe. Should there be a misalignment



between the casings; a 3-in wide steel band shall be utilized to bridge the misalignment. The band shall be continuously welded to maintain the water tight seal. The end of the casing shall be sealed with a casing end seal. As each section is completed, the excavation shall be backfilled with CLSM to the springline of the casing. Once cured, the remaining excavation shall be backfilled with trench backfill per Pavement Replacement, Special.

**General:** This work includes all labor, materials and equipment required to furnish, and install the 36-inch split steel casing, casing spacers, casing end seal, welding, coating system, pipe support, and other incidental items as shown on the plans.

**Basis of Payment:** This work will be paid for at the contract price per foot for STEEL CASINGS 36”:

### **STORM SEWER CONNECTION**

**Description:** This work shall consist of furnishing and installing 36-inch diameter ductile iron pipe, tunnel excavation, and grout with fill and vent pipes. The Storm Sewer Connection shall be constructed after Drainage Structures, No. 1 and No. 2 have been installed and backfilled.

Drainage Structures, No. 1 and No. 2 shall be connected by a 36-inch diameter ductile iron pipe. Drainage Structures No. 1 and No. 2 will have block-outs for the pipe cast into the base sections. The block-outs should be a minimum of 2-inches larger than the outside diameter of the ductile iron pipe. The 36-inch diameter pipe shall be installed by short tunnel excavation or micro-tunneling to remove the rock and grout between the two Drainage Structures. The excavation limits shall extend just beyond the outside diameter of the 36-inch diameter ductile iron pipe. The 36-in class 52 ductile iron pipe shall meet AWWA C151.

The grout shall meet the requirements of Section 1024 of the Standard Specifications and shall have a minimum strength of 5000 psi at 28 days.

Once the tunnel has been excavated, and the 36-inch diameter ductile iron pipe has been installed, the pipe shall be sealed to Drainage Structures, No. 1 and No. 2 with a non-shrink grout and 2-inch diameter grout fill and vent ports.

Once the sealing grout has cured, the annular space between the rock and the pipe shall be grouted with a non-shrink low density, high flow grout until the material exits the vent. Once the grout has cured, the grout pipes shall be cut off flush with the interior of Drainage Structures, No. 1 and No. 2.

All rock, dirt, and debris in the Drainage Structures shall be completely removed and disposed of in accordance with Section 202.03 of the Standard Specifications.

**General:** This work includes the excavation, labor, materials and equipment required to furnish and install the 36-inch diameter ductile iron pipe, grout, vent and fill ports, and other incidental items as shown on the plans.

**Basis of Payment:** This work will be paid for at the contract unit price per each for STORM SEWER CONNECTION.

**STORM SEWERS JACKED IN PLACE, 24”**

**Description:** This work shall be in accordance with Section 552.04 of the Standard Specifications and as specified in this Special Provision.

Steel casing shall conform to the requirements of AWWA C200 and ASTM A139, Grade “B” with a minimum yield strength of 35,000 psi and be a minimum 0.595” thick. The pipe shall be coated externally with coal tar epoxy or bituminous asphalt. The casing shall be shop cut with ends square with centerline, leveled and welded so that the entire length of the casing shall be straight and true. Weld seams in the field shall be field applied with coal tar epoxy or bituminous asphalt.

The 24-in diameter carrier pipe shall be solid wall PVC PS46 pipe meeting ASTM F679. The pipe shall have push on joints with gaskets meeting ASTM F477. The joint design shall meet the requirements of ASTM D3212.

The carrier pipe shall be center restrained by the use of casing spacers. The casing spacers shall be constructed of non-reactive material designed specifically for that purpose. The spacers shall be positioned within 6 in. from the end of the casing, on each side of joint in the carrier pipe, and at the midpoint of each pipe length. Spacers constructed of wood and steel banding are not acceptable.

End seals shall be made of synthetic rubber, conical shape, pull-on or wrap-around style with Type 304 stainless steel bands.

The steel casing alignment falls between two tangent piles of the bridge structure. The Directional Boring shall not penetrate a tangent pile. If a tangent pile is hit during jacking and boring operations, the Owner shall be contacted immediately and boring operations shall cease until permission to proceed from the structural engineer.

Upon completion of the bore the Contractor shall backfill the bore pit with granular embankment in accordance with Section 206 of the Standard Specifications. The granular embankment will not be paid for per Section 206 but shall be included in the cost of Storm Sewers Jacked in Place, 24”.

All spoils and debris shall be removed and disposed of from the jacking pit the underpass and Drainage Structures, No. 1 in accordance with Section 202.03 of the Standard Specifications once jacking and boring operations are complete.

**General:** This work will include all excavation, shoring, labor, materials and equipment required to furnish, and install the 36” steel jacking pipe via jacking operations, welding, 24-in PVC carrier pipe, casing spacers, casing end seals, excess material removal, granular embankment and other incidental items as shown on the plans.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for STORM SEWERS JACKED IN PLACE, 24”.

### **TEMPORARY CHAIN LINK FENCE (PORTABLE)**

**Description:** This work shall consist of furnishing, installing, maintaining and removing temporary chain link fence to control pedestrian traffic along the work area at locations shown on the plans or as directed by the Engineer.

**General:** The temporary fence shall be chain link fence and a minimum of 6 feet high with posts placed a maximum of 10 feet apart. The posts shall be self-standing and fixed to the ground with sand bags to ensure that the fence will not move or fall over.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for TEMPORARY CHAIN LINK FENCE (PORTABLE.)

### **TRANSVERSE DRAINS COMPLETE**

**Description:** This work consists of constructing transverse drains at locations shown in the plans or directed by the Engineer. Transverse drains shall be constructed according to the details shown in the plans and applicable portions of Section 601 of the Standard Specifications.

Perforated pipe shall be corrugated polyethylene pipe with a smooth interior meeting the requirements of Article 1040.04. All pipes shall have a 4 in. inside diameter.

Backfill and bedding aggregate shall consist of CA-16 gravel or crushed gravel or FA-4 natural sand. All aggregate shall be reasonably free of objectionable deleterious material. Limestone CA-16 or sand shall not be allowed. Backfill aggregate shall be compacted in separate operations to the satisfaction of the Engineer.

**General:** This work shall be applied to the transverse drains beneath the Carpenter Street pavement at the locations shown in the plans. Included in this pay items is the excavation for the trench, the granular backfill needed to fill the trench, the 4" pipe underdrain, and the pipe connection to the specified drainage structure.

**Basis of Payment:** This work shall be paid for at the contract unit price per each for TRANSVERSE DRAINS COMPLETE.

### **WATER MAIN REMOVAL**

**Description:** This work consists of removal of existing water main underneath Carpenter Street. CWLP will specify locations in which to terminate the existing water line. After these locations are determined, the contractor will remove the remaining existing water line. The excavation should be according to relevant procedures found in section 550.04. Disposal shall be according to section 202.03.

**Basis of Payment:** This work, including any necessary excavation, shall be paid for at the contract unit price per foot of WATER MAIN REMOVAL of the size specified.

## **RAILWAY**

### **AGGREGATE BASE COURSE, TYPE B 12”**

**Description:** This work shall consist of furnishing and placing aggregate on a prepared subgrade for the railroad shoofly as shown on the plans. This work shall be in accordance with Section 351 of the SSRBC except that the gradation shall be CA-7 and the material shall be crushed stone in accordance with Article 1004.04 of the SSRBC.

**Basis of Payment:** This work will be paid for at the contract unit price per square yard for AGGREGATE BASE COURSE, TYPE B 12”.

### **ARCHAEOLOGICAL PHASE II SURVEY**

Upon commencement of construction activities, the Contractor, working with the project archaeologist, shall remove portions of the existing St. John’s parking lot pavement and subsurface gravels and/or underlayment to a depth at or near the base of the parking lot gravels. The portion of this pavement removal shall begin at the midpoint of the block north of Mason Street, and extend south to Madison Street. Pavement removal should extend west from the existing Norfolk Southern Railroad right-of-way to the proposed project construction limits. The Contractor shall allow this area to remain open for a period of time sufficient for the project archaeologist to conduct subsurface trenching and subsequent archaeological investigations, if required by the Illinois Historic Preservation Agency. It is estimated that the time needed by the archaeological crew to conduct this work will be approximately three weeks. The excavated material from the archaeologist/trenching will be deposited adjacent to their trenches, within the same parcel. Upon approval by the archaeologist, the Contractor shall backfill the excavated areas with the same material removed by the archaeologists. The cost of subsurface trenching and archaeological investigation will be paid by the Department. The pavement removal work will be paid for at the contract unit price per square yard for PAVEMENT REMOVAL which shall include removal of the aggregate base in the areas indicated. Backfilling and compacting the excavated areas will not be paid for separately but will be included in the contract unit price per cubic yard for EARTH EXCAVATION.

### **BOLLARD REMOVAL**

**Description:** This work shall consist of removal of bollards at locations shown on the plans.

**General:** Bollards and any attached concrete shall be removed and disposed of according to Article 202.03. The void caused by the removal shall be backfilled with compacted embankment.

**Basis of Payment:** Removal of bollards shall be paid for at the contract unit price each for BOLLARD REMOVAL which shall include the cost of furnishing and placing the backfill.

### **CHAIN LINK FENCE (SPECIAL)**

**Description:** This work shall consist of furnishing and constructing chain link fence with a barbed wire top, gates and accessories at the locations shown on the plans or as directed by the Engineer.

**General:** Except as modified below, the work and materials shall conform to the requirements of Section 664 and Article 1006.27 of the SSRBC. Barbed wire top shall conform to Article 1006.28 of the SSRBC, except that the wire shall consist of three strands. The materials including all fabric, posts, fasteners, wires, braces, tops, support arms, and 3-strand barbed wire shall be included in the cost of the work. All labor, materials, and equipment shall be included in the cost of CHAIN LINK FENCE (SPECIAL) of the height specified, and CHAIN LINK GATES (SPECIAL) of the opening sizes and types specified.

Barbed wire support arms shall be pressed steel, cast iron, or cast aluminum alloy fitted with clips or slots for attaching three strands of barbed wire. Arms shall be set outward on a 45° angle and be capable of supporting a 250 pound load at outer barbed wire connecting point without causing permanent deflection.

**Basis of Payment:** This work shall be paid for at the contract unit price per foot for CHAIN LINK FENCE (SPECIAL) of the height specified, and at the contract unit price per each for CHAIN LINK GATES (SPECIAL) of the opening sizes and types specified.

### **CONCRETE PAD REMOVAL**

**Description:** This work shall consist of completely removing the concrete pad under railroad signal cabinets at Miller, Carpenter, and Reynolds Streets.

**General:** After NSRR removes the railroad signal cabinets, Contractor shall remove all existing concrete, steel and attachments. Material resulting from removal shall be disposed of according to Article 202.03. The void caused by removal shall be backfilled with embankment or subballast.

**Method of Measurement:** This item will be measured for payment in place at the top surface of the concrete pad and the area computed in square feet.

**Basis of Payment:** The work will be paid for at the contract unit price per square foot for CONCRETE PAD REMOVAL.

### **CONCRETE SLAB REMOVAL**

**Description:** This work shall consist of completely removing the concrete scale where shown on the plans.

**General:** All existing concrete, steel and attachments shall be completely removed.

Material resulting from the removal shall be disposed of according to Article 202.03. The void caused by removal shall be backfilled with embankment or subballast as shown on the plans.

**Method of Measurement:** Slab removal will be measured for payment in place at the top surface and the area computed in square yards.

**Basis of Payment:** The work will be paid for at the contract unit price per square yard for CONCRETE SLAB REMOVAL.

### **DIRECTIONAL BORING**

**Description:** This work shall consist of furnishing and installing, by jacking, pipe of the required diameter at locations shown on the plans. This method of installation consists of pushing the pipe into the earth with a boring auger rotating within the pipe to remove the spoil.

**General:** Installations shall have a bore hole essentially the same as the outside diameter of the pipe plus the thickness of the protective coating.

The use of water or other liquids to facilitate casing emplacement and spoil removal is prohibited.

If during installation an obstruction is encountered which prevents installation of the pipe in accordance with this specification, the pipe shall be abandoned in place and immediately filled with grout. The abandoned pipe shall be completely filled with a sand and cement grout mixture consisting of 4 parts sand to 1 part cement and enough clean water to facilitate pumping. A new installation procedure and revised plans must be submitted to, and approved by, the Engineer, who will forward to the Railroad Engineer, before work can resume.

If the grade of the pipe at the jacking or boring end is below the ground surface, suitable pits or trenches shall be excavated for the purpose of conducting the jacking or boring operation and for placing end joints of the pipe. The pits shall be outside of the shoring zone defined as a 2h:1v line that begins 14' horizontally from track center and 3.6' below the top of rail. Temporary guard rail shall be provided for protection of the pit or trench when specified by the Engineer.

Excavations greater than 5' in depth shall be protected in accordance with OSHA Trench Safety Guidelines.

### **Materials:**

- A. Pipe installed by the Jack and Bore method shall be limited to Smooth Steel Pipe.
- B. The steel pipe shall conform to ASTM Specifications A 139 Grade B (No Hydro). The minimum yield strength of this pipe shall be 35,000 psi. The minimum wall thickness is as follows:

Nominal Size (Inches)	Minimum Wall Thickness (Inches)
12	0.250

- C. The pipe shall be coated externally with coal tar epoxy or bituminous asphalt. The pipe shall be shop cut with ends square with centerline, leveled and welded so that the entire length of the pipe shall be straight and true. Weld seams in the field shall be field applied with coal tar epoxy or bituminous asphalt.

### PIPE CONNECTIONS

Smooth steel pipe shall be connected by welding using a full depth, single "V" groove butt weld. Welding shall be performed by skilled welders, welding operators, and tackers who have had adequate experience in the type of materials to be used. Welders shall be qualified under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to commencing work on the pipe. Machines and electrodes similar to those used in the work shall be used in qualifications tests. The Contractor shall be responsible for all material and bear the expense of qualifying welders.

### SUBMITTALS

Plans and description of the jack and bore arrangement to be used shall be submitted to the Engineer, who will forward to the Railroad Engineer, for approval and no work shall proceed until such approval is obtained.

### DEWATERING

- A. When water is known or expected to be encountered, pumps of sufficient capacity to handle the flow shall be maintained at the site, provided the contractor has received approval from the Railroad Engineer to operate them.
- B. Pumps in operation shall be constantly attended on a 24-hour basis until, in the sole judgment of the Railroad Engineer, the operation can be safely halted.
- C. When dewatering, close observation shall be maintained to detect any settlement or displacement of railroad embankment, tracks, and facilities.

### INSTALLATION

- A. Directional boring of the pipe shall be accomplished by the dry auger boring method without jetting, sluicing, or wet boring. The hole shall be bored and cased through the soil by a cutting head on a continuous auger mounted inside the pipe. The boring of the hole and installation of the pipe shall be simultaneous.
- B. Unless otherwise approved by the Railroad Engineer, The boring operation shall be progressed on a 24- hour basis without stoppage (except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit.

- C. The Contractor shall inspect the site where the pipe is to be installed and familiarize himself with the conditions under which the work will be performed and with all necessary details as to the orderly prosecution of the work. The omission of any details for the satisfactory installation of the work in its entirety, which may not appear herein, shall not relieve the Contractor of full responsibility.
- D. The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe.
- E. The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. If the obstruction cannot be removed without excavation in advance of the pipe, procedures as outlined in Section 1.D of this specification must be implemented immediately.
- F. The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than 1/2 inch. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe (plus coating) by more than approximately 1 inch, grouting or other methods approved by the Railroad Engineer, shall be employed to fill such voids. The face of the cutting head shall be arranged to provide a reasonable obstruction to the free flow of soft or poor material.
- G. Construction shall be carried on in such a manner that settlement of the ground surface above the pipe line shall be held to an absolute minimum. The installation of the pipe line shall follow the heading or boring excavation as soon as possible.
- H. If, in the opinion of the Railroad Engineer, the installation of the pipe is being conducted in an unsafe manner, the Contractor will be required to stop work and bulkhead the heading until suitable agreements are reached between the Contractor and the Railroad Engineer. The Railroad will not be responsible and shall be saved harmless in the event of delays to the Contractor's work resulting from any cause whatsoever.
- I. Immediately upon completion of the pipe installation, the pits or trenches excavated to facilitate jacking or boring operations shall be backfilled with granular embankment in accordance with Section 206 of the SSRBC.

### TRACK MONITORING

For all Jack and Bore Operations, Track Monitoring will be required in accordance with Norfolk Southern's Special Provisions for Protection of Railway Interests, Section 5.I.

### SAFETY REQUIREMENTS

At all times when the work is being progressed, a field supervisor for the work with no less than twelve (12) months experience in the operation of the equipment being used shall be present. If boring equipment or similar machines are being used, the machine operator also shall have no less than twelve (12) months experience in the operation of the equipment being used.



**Method of Measurement:** This work will be measured for payment in place in feet.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for DIRECTIONAL BORING.

Excavation in rock will be paid for according to Article 502.13 of the SSRBC.

### **EMBANKMENT AND SUBGRADE PREPARATION**

**Description:** This work shall consist of the construction of embankments underneath railroad track by depositing, placing and compacting earth, stone, gravel, or other materials of acceptable quality above the natural ground or other surface and shall consist of preparing the completed or existing earthwork underneath railroad track as an unimproved subgrade prior to constructing the subballast.

**General:** Except as modified below, the work and materials shall conform to the requirements of Sections 205 and 301 of the SSRBC.

For embankments:

1. All lifts between 0 ft. and 3 ft. below the top of the subgrade shall be compacted to not less than 100 percent of the standard laboratory density and all lifts more than 3 ft. below the top of the subgrade shall be compacted to not less than 95 percent of the standard laboratory density.
2. The moisture content of the soil shall be between 0 and 6 percentage points above the optimum moisture determined according to AASHTO T-99 (Method C).

In locations beneath the subballast:

1. The contractor shall scarify the top 12 inches of subgrade, adjust the moisture content to between 0 and 6 percentage points above the optimum moisture determined according to AASHTO T-99 (Method C), and compact to not less than 100 percent of the standard laboratory density.

Suitable material taken from drilled shafts, drainage structure excavation, or structure excavation may be used for construction of embankment.

Existing ballast and clean subballast material may be used within the core of the embankment only if the coarse material is thoroughly mixed with fine material. The mixed coarse material shall be homogenous and contain at least 35 percent finer than the No. 200 sieve.

**Method of Measurement:** This work will not be measured for payment.

**Basis of Payment:** Subgrade preparation, embankment and any additive or water applied will not be paid for directly but shall be considered as included in the various items of excavation, and their construction shall be included in the unit prices for these items

**PIPE DRAINS (SPECIAL)**

**Description:** This work shall consist of constructing pipe drains of the required diameter according to Sections 601 of the SSRBC at locations shown on the plans or as directed by the Engineer.

**General:** The materials shown in the plans, including all elbows, tees, wyes and backfill shall be included in the cost for the work. All excavation, labor, connection to existing manholes, equipment and materials necessary for completing the work shall be included in the cost for PIPE DRAINS (SPECIAL).

Smooth steel pipe shall be connected by welding in accordance with Directional Boring.

**Basis of Payment:** This work shall be paid for at the contract unit price per foot for PIPE DRAINS (SPECIAL) of the diameter specified.

**PIPE UNDERDRAIN CLEANOUT, COMPLETE**

**Description:** This work shall consist of constructing cleanouts to proposed underdrains to be connected to the combined sewer system according to Sections 601 of the SSRBC at locations shown on the plans or as directed by the Engineer.

**General:** The materials shown in the plans, including all elbows, tees, wyes, frame and covers, shall be included in the cost for the work. All excavation, labor, equipment and materials necessary for completing the work shall be included in the cost for PIPE UNDERDRAIN CLEANOUT, COMPLETE.

**Basis of Payment:** This work shall be paid for at the contract unit price per each for PIPE UNDERDRAIN CLEANOUT, COMPLETE.

**PIPE UNDERDRAINS, FABRIC LINED TRENCH**

**Description:** This work shall consist of constructing pipe underdrains of the required diameter within a fabric lined trench filled with aggregate according to Section 601 of the SSRBC at locations shown on the plans or as directed by the Engineer.

The impervious geotechnical fabric shall be 30 mil PVC geomembrane with the following properties:

- Tensile strength at break                      73 lbs/in
- Elongation    380%
- Modulus at 100% tensile strength      32 lbs/in
- Tear strength    8 lbs
- Specific gravity    1.2 g/cc

**General:** The materials shown in the plans, including all elbows, tees, wyes, geotechnical fabric, impervious geotechnical fabric, and backfill shall be included in the cost for the work. All excavation, labor, equipment and materials necessary for completing the work shall be included in the cost for PIPE UNDERDRAINS, FABRIC LINED TRENCH of the diameter specified.

**Basis of Payment:** This work shall be paid for at the contract unit price per foot for PIPE UNDERDRAINS, FABRIC LINED TRENCH of the diameter specified.

### **NS SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTEREST**

**Description:** All work to be done by the contractor on the Railroad's right-of-way shall be performed in a manner satisfactory to the Railroad Engineer. Contractor shall comply with Articles 104.02, 105.02, 107.10, 107.11 and 107.12 of the SSRBC and this specification.

#### **General:**

##### **1. AUTHORITY OF RAILROAD ENGINEER AND DEPARTMENT ENGINEER:**

Norfolk Southern Railway Company, hereinafter referred to as "Railroad", and their authorized representative shall have final authority in all matters affecting the safe maintenance of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks. For Public Projects impacting the Railroad, the Railroad's Public Projects Engineer, hereinafter referred to as "Railroad Engineer", will serve as the authorized representative of the Railroad.

The authorized representative of the Project Sponsor ("Department"), hereinafter referred to as the "Department's Engineer", shall have authority over all other matters as prescribed herein and in the Project Specifications.

The Department's Prime Contractor, hereinafter referred to as "Contractor" shall be responsible for completing any and all work in accordance with the terms prescribed herein and in the Project Specifications.

##### **2. NOTICE OF STARTING WORK:**

A. The Contractor shall not commence any work on railroad rights-of-way until he has complied with the following conditions:

1. Signed and received a fully executed copy of the required Norfolk Southern Construction Right of Entry Agreement.
2. Given the Railroad written notice in electronic format to the Railroad Engineer, with copy to the Department's Engineer who has been designated to be in charge of the work, at least ten days in advance of the date he proposes to begin work on Railroad rights-of-way.
3. Obtained written approval from the Railroad of Railroad Protective

Liability Insurance coverage as required by paragraph 14 herein. It should be noted that the Railroad does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects systemwide, it typically takes a minimum of 30-45 days for the Railroad to review.

4. Obtained Railroad's Flagging Services as required by paragraph 7 herein.
  5. Obtained written authorization from the Railroad to begin work on Railroad's rights-of-way, such authorization to include an outline of specific conditions with which Contractor must comply.
  6. Furnished a schedule for all work within the Railroad's rights-of-way as required by paragraph 7.B.1.
- B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

### 3. INTERFERENCE WITH RAILROAD OPERATIONS:

- A. The Contractor shall so arrange and conduct his work that there will be no interference with Railroad's operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad or to poles, wires, and other facilities of tenants on the rights-of-way of the Railroad. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service shall be deferred by the Contractor until the flagging service or inspection service required by the Railroad is available at the job site.
- B. Whenever work within Railroad's rights-of-way is of such a nature that impediment to Railroad's operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.
- C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Railroad's Division

Engineer, such provisions is insufficient, either may require or provide such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the Department.

- D. "One Call" Services do not locate buried Railroad utilities. The contractor shall contact the Railroad's representative 2 days in advance of work at those places where excavation, pile driving, or heavy loads may damage the Railroad's underground facilities. Upon request from the Contractor or Department, Railroad forces will locate and paint mark or flag the Railroad's underground facilities. The Contractor shall avoid excavation or other disturbances of these facilities. If disturbance or excavation is required near a buried Railroad facility, the contractor shall coordinate with the Railroad to have the facility potholed manually with careful hand excavation. The facility shall be protected by the Contractor during the course of the disturbance under the supervision and direction of the Railroad's representative.

#### 4. TRACK CLEARANCES:

- A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.
1. A minimum vertical clearance of 22'-0" above top of highest rail shall be maintained at all times.
  2. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions. This additional clearance will be as determined by the Railroad Engineer.
  3. All proposed temporary clearances which are less than those listed above must be submitted to Railroad Engineer for approval prior to construction and must also be authorized by the regulatory body of the State if less than the legally prescribed clearances.
  4. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked equipment, placement or driving of piles, and bracing or other construction supports.
- B. Before undertaking any work within Railroad right-of-way, and before placing any obstruction over any track, the Contractor shall:
1. Notify the Railroad's representative at least 72 hours in advance of the work.

2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as may be necessary.
3. Receive permission from the Railroad's representative to proceed with the work.
4. Ascertain that the Department's Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

## 5. CONSTRUCTION PROCEDURES:

### A. General:

1. Construction work and operations by the Contractor on Railroad property shall be:
  - a. Subject to the inspection and approval of the Railroad Engineer or their designated Construction Engineering Representative.
  - b. In accordance with the Railroad's written outline of specific conditions.
  - c. In accordance with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
  - d. In accordance with these Special Provisions.
2. Submittal Requirements
  - a. The Contractor shall submit all construction related correspondence and submittals electronically to the Department's Engineer who will forward to the Railroad Engineer.
  - b. The Contractor shall allow for an additional 30 days for all submittals that require the Railroad's review and response.
  - c. All work in the vicinity of the Railroad's property that has the potential to affect the Railroad's train operations or disturb the Railroad's Property must be submitted and approved by the Railroad prior to work being performed.
  - d. All submittals and calculations must be signed and sealed by a registered engineer licensed in the state of the project work.

- e. All submittals shall first be approved by the Department Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.
- f. For all construction projects, the following submittals, but not limited to those listed below, shall be provided for review and approval when applicable:
  - i. General Means and Methods
  - ii. Ballast Protection
  - iii. Construction Excavation & Shoring
  - iv. Pipe, Culvert, & Tunnel Installations
  - v. Demolition Procedure
  - vi. Erection & Hoisting Procedure
  - vii. Debris Shielding or Containment
  - viii. Blasting
  - ix. Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
  - x. Bent Cap Falsework. A lift plan will be required if the contractor want to move the falsework over the tracks.
- g. For Undergrade Bridges (Bridges carrying the Railroad) the following submittals in addition to those listed above shall be provided for review and approval:
  - i. Shop Drawings
  - ii. Bearing Shop Drawings and Material Certifications
  - iii. Concrete Mix Design
  - iv. Structural Steel, Rebar, and/or Strand Certifications
  - v. 28 day Cylinder Test for Concrete Strength
  - vi. Waterproofing Material Certification
  - vii. Test Reports for Fracture Critical Members
  - viii. Foundation Construction Reports

Fabrication may not begin until the Railroad has approved the required shop drawings.
- h. The Contractor shall include in all submissions a detailed narrative indicating the progression of work with the anticipated timeframe to complete each task. Work will not be permitted to commence until the Contractor has provided the Railroad with a satisfactory plan that the project will be

undertaken without scheduling, performance or safety related issues. Submission shall also provide a listing of the anticipated equipment to be used, the location of all equipment to be used and insure a contingency plan of action is in place should a primary piece of equipment malfunction.

B. Ballast Protection

1. The Contractor shall submit the proposed ballast protection system detailing the specific filter fabric and anchorage system to be used during all construction activities.
2. The ballast protection is to extend 25' beyond the proposed limit of work, be installed at the start of the project and be continuously maintained to prevent all contaminants from entering the ballast section of all tracks for the entire duration of the project.
3. Ballast protection will not be measured for payment but will be included in the contract unit price for EARTH EXCAVATION.

C. Excavation

1. The subgrade of an operated track shall be maintained with edge of berm at least 10'-0" from centerline of track and not more than 24-inches below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.
2. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way. This work shall be paid for at the contract unit price per foot for TEMPORARY CONSTRUCTION FENCE.

D. Excavation for Structures and Shoring Protection:

1. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material.
2. All plans and calculations for shoring shall be prepared, signed, and sealed by a Registered Professional Engineer licensed in the state of the proposed project, in accordance with Norfolk Southern's Overhead Grade Separation Design Criteria, subsection H.1.4.E-Construction Excavation (Refer to Norfolk Southern Public Projects Manual Appendix H). The Registered Professional Engineer will be responsible for the



accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.

3. The Contractor shall provide a detailed installation and removal plan of the shoring components. Any component that will be installed via the use of a crane or any other lifting device shall be subject to the guidelines outlined in section 5.G of these provisions.
4. The Contractor shall be required to survey the track(s) and Railroad embankment and provide a cross section of the proposed excavation in relation to the tracks.
5. Calculations for the proposed shoring should include deflection calculations. The maximum deflection for excavations within 18'-0" of the centerline of the nearest track shall be 3/8". For all other cases, the max deflection shall not exceed 1/2".
6. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way. This work shall be paid for at the contract unit price per foot for TEMPORARY CONSTRUCTION FENCE.

#### E. Pipe, Culvert, & Tunnel Installations

1. Pipe, Culvert, & Tunnel Installations shall be in accordance with the appropriate Norfolk Southern Design Specification as noted below:
  - a. For Open Cut Method refer to Norfolk Southern Public Projects Manual Appendix H.4.6.
  - b. For Jack and Bore Method refer to Norfolk Southern Public Projects Manual Appendix H.4.7.
  - c. For Tunneling Method refer to Norfolk Southern Public Projects Manual Appendix H.4.8.

#### F. Demolition Procedures

##### 1. General

- a. Demolition plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of the boom length plus 15'-0" from the centerline of track.
- b. Railroad tracks and other Railroad property must be protected

from damage during the procedure.

- c. A pre-demolition meeting shall be conducted with the Department, the Railroad Engineer or their representative, and the key Contractor's personnel prior to the start of the demolition procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire demolition procedure period.
- e. Existing, obsolete, bridge piers shall be removed to a sufficient depth below grade to enable restoration of the existing/proposed track ditch, but in no case less than 2'-0" below final grade.

## 2. Submittal Requirements

- a. In addition to the submittal requirements outlined in Section 5.A.2 of these provisions, the Contractor shall submit the following to the Department Engineer who will forward it to the Railroad Engineer for approval:
  - i. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other Railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
  - ii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
  - iii. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing structure showing complete and sufficient details with supporting data for the demolition the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
  - iv. The Contractor shall provide a sketch of all rigging

components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Department and the Railroad.

- v. A complete demolition procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- vi. Design and supporting calculations for the temporary support of components, including but not limited to the stability of the superstructure during the temporary condition, temporary girder tie-downs and falsework.

### 3. Overhead Demolition Debris Shield

- a. The demolition debris shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure over the track area to catch all falling debris.
- b. The demolition debris shield shall provide a minimum vertical clearance as specified in Section 4.A.1 of these provisions or maintain the existing vertical clearance if the existing clearance is less than that specified in Section 4.A.1.
- c. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Demolition procedure submission.
- d. The Contractor shall submit the demolition debris shield design and supporting calculations to the Department's Engineer who will forward it to the Railroad Engineer for approval.
- e. The demolition debris shield shall have a minimum design load of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.
- f. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris

generated by the procedure does not exceed the shield design loads.

- g. The Contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Railroad Engineer.

#### 4. Vertical Demolition Debris Shield

- a. A vertical demolition debris shield may be required for substructure removals in close proximity to the Railroad's track and other facilities, as determined by the Railroad Engineer.

### G. Erection & Hoisting Procedures

#### 1. General

- a. Erection plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of the boom length plus 15'-0" from the centerline of track.
- b. Railroad tracks and other Railroad property must be protected from damage during the erection procedure.
- c. A pre-erection meeting shall be conducted with the Department, the Railroad Engineer or their representative, and the key Contractor's personnel prior to the start of the erection procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire erection procedure period.
- e. For field splices located over Railroad property, a minimum of 50% of the holes for each connection shall be filled with bolts or pins prior to releasing the crane. A minimum of 50% of the holes filled shall be filled with bolts. All bolts must be appropriately tightened. Refer to Norfolk Southern's Overhead Grade Separation Design Criteria for additional splice details (Norfolk Southern Public Projects Manual Appendix H.1, Section 4.A.3.).

#### 2. Submittal Requirements

- a. In addition the submittal requirements outlined in Section 5.A.2 of these provisions, the Contractor shall submit the

following to the Department's Engineer who will forward it to the Railroad Engineer for approval:

- i. As-built beam seat elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Department Engineer, who will forward it to the Railroad Engineer for review and verification, at least 30 days in advance of the erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
- ii. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or staging locations shown. The location of all tracks and other Railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
- iii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
- iv. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the proposed structure showing complete and sufficient details with supporting data for the erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
- v. The Contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field

shall not differ from what is shown on the final plan without prior review from the Department and the Railroad.

- vi. A complete erection procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- vii. Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tie-downs and falsework.

#### H. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Department Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:
  - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.
  - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.
  - c. No blasting shall be done without the presence of the Railroad Engineer or his authorized representative. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed (see paragraph 2.B) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.
  - d. Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.
  - e. The blasting Contractor shall have a copy of the approved blasting plan on hand while on the site.

- f. Explosive materials or loaded holes shall not be left unattended at the blast site.
  - g. A seismograph shall be placed on the track shoulder adjacent to each blast which will govern the peak particle velocity of two inches per second. Measurement shall also be taken on the ground adjacent to structures as designated by a qualified and independent blasting consultant. The Railroad reserves the option to direct the placement of additional seismographs at structures or other locations of concern, without regard to scaled distance.
  - h. After each blast, the blasting Contractor shall provide a copy of their drill log and blast report, which includes number of holes, depth of holes, number of decks, type and pounds of explosives used per deck.
  - i. The Railroad may require top of rail elevations and track centers taken before, during and after the blasting and excavation operation to check for any track misalignment resulting from the Contractor's activities.
2. The Railroad representative will:
- a. Determine approximate location of trains and advise the Contractor the appropriate amount of time available for the blasting operation and clean up.
  - b. Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these special provisions.
3. The Contractor must hire, at no expense to the Railroad, a qualified and independent blasting consultant to oversee the use of explosives. The blasting consultant will:
- a. Review the Contractor's proposed drilling and loading patterns, and with the blasting consultant's personnel and instruments, monitor the blasting operations.
  - b. Confirm that the minimum amounts of explosives are used to remove the rock.
  - c. Be empowered to intercede if he concludes that the Contractor's blasting operations are endangering the Railway.
  - d. Submit a letter acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.

- e. Furnish copies of all vibration readings to the Railroad representative immediately after each blast. The representative will sign and date the seismograph tapes after each shot to verify the readings are for that specific shot.
  - f. Advise the Railroad representative as to the safety of the operation and notify him of any modifications to the blasting operation as the work progresses.
4. The request for permission to use explosives on the Railroad's Right-of-Way shall include a blasting proposal providing the following details:
- a. A drawing which shows the proposed blasting area, location of nearest hole and distance to Railway structures, all with reference to the centerline of track.
  - b. Hole diameter.
  - c. Hole spacing and pattern.
  - d. Maximum depth of hole.
  - e. Maximum number of decks per hole.
  - f. Maximum pounds of explosives per hole.
  - g. Maximum pounds of explosives per delay.
  - h. Maximum number of holes per detonation.
  - i. Type of detonator and explosives to be used. (Electronic detonating devices will not be permitted). Diameter of explosives if different from hole diameter.
  - j. Approximate dates and time of day when the explosives are to be detonated.
  - k. Type of flyrock protection.
  - l. Type and patterns of audible warning and all clear signals to be used before and after each blast.
  - m. A copy of the blasting license and qualifications of the person directly in charge of the blasting operation, including their name, address and telephone number.
  - n. A copy of the Authority's permit granting permission to blast on the site.



- o. A letter from the blasting consultant acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.
- p. In addition to the insurance requirements outlined in Paragraph 14 of these Provisions, A certificate of insurance from the Contractor's insurer stating the amount of coverage for XCU (Explosive Collapse and Underground Hazard) insurance and that XCU Insurance is in force for this project.
- q. A copy of the borings and Geotechnical information or report.

#### I. Track Monitoring

- 1. At the direction of the Railroad Engineer, any activity that has the potential to disturb the Railroad track structure may require the Contractor to submit a detailed track monitoring program for approval by the Railroad Engineer. The work shall be included in the contract unit price for EARTH EXCAVATION.
- 2. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.
- 3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Railroad Engineer for analysis.
- 4. If any movement has occurred as determined by the Railroad Engineer, the Department and the Railroad will be immediately notified. Railroad, at its sole discretion, shall have the right to immediately require all Contractor operations to be ceased and determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad including the monitoring of corrective action of the Contractor will be at project expense.

#### J. Maintenance of Railroad Facilities:

- 1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Railroad rights-of-way and repair any other damage to the property of the Railroad or its tenants.
- 2. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches or other drainage facilities shall be installed to maintain adequate drainage, as

approved by the Railroad Engineer. Upon completion of the work, the temporary facilities shall be removed and the permanent facilities restored. This work shall be included in the contract unit price for EARTH EXCAVATION.

3. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

K. Storage of Materials and Equipment:

1. Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.
2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

L. Cleanup:

1. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights-of-way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights-of-way in a neat condition satisfactory to the Railroad Engineer or his authorized representative.

6. DAMAGES:

- A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.
- B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

7. FLAGGING SERVICES:

A. Requirements:

1. Flagging services will not be provided until the Contractor's insurance has been reviewed and approved by the Railroad.
2. Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a Railroad structure or the Railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.
3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed.

B. Scheduling and Notification:

1. The Contractor's work requiring Railroad flagging should be scheduled to limit the presence of a flagman at the site to a maximum of 50 hours per week. The Contractor shall receive Railroad approval of work schedules requiring a flagman's presence in excess of 40 hours per week.
2. Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad right-of-way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.
3. The Contractor will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within Railroad right-of-way in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If

such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen are present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days' notice before flagging service may be discontinued and responsibility for payment stopped.

4. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.

C. Payment:

1. The Department will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction.
2. The estimated cost of flagging is the current rate per day based on a 10-hour work day. This cost includes the base pay for the flagman, overhead, and includes a per diem charge for travel expenses, meals and lodging. The charge to the Department by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.
3. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.
4. Railroad work involved in preparing and handling bills will also be charged to the Department. Charges to the Department by the Railroad shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above

estimates of flagging costs are provided for information only and are not binding in any way.

D. Verification:

1. Railroad's flagman will electronically enter flagging time via Railroad's electronic billing system. Any complaints concerning flagging must be resolved in a timely manner. If the need for flagging is questioned, please contact the Railroad Engineer. All verbal complaints shall be confirmed in writing by the Contractor within 5 working days with a copy to the Department's Engineer. Address all written correspondence electronically to Railroad Engineer.
2. The Railroad flagman assigned to the project will be responsible for notifying the Department Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Department's Engineer will document such notification in the project records. When requested, the Department's Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

8. HAUL ACROSS RAILROAD TRACK:

- A. Where the plans show or imply that materials of any nature must be hauled across Railroad's track, unless the plans clearly show that the Department has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad's track. The Contractor shall be required to bear all costs incidental to such crossings, including flagging, whether services are performed by his own forces or by Railroad personnel.
- B. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal, until a temporary private crossing agreement has been executed between the Contractor and Railroad. The approval process for an agreement normally takes 90-days.

9. WORK FOR THE BENEFIT OF THE CONTRACTOR:

- A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Department and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Department and/or the Railroad.

- B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.

#### 10. COOPERATION AND DELAYS:

- A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.
- B. No charge or claim of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railway traffic, any work done by the Railroad, or other delay incident to or necessary for safe maintenance of railway traffic, or for any delays due to compliance with these special provisions.

#### 11. TRAINMAN'S WALKWAYS:

- A. Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railroad's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with 10'-0" minimum clearance from centerline of track, shall be placed and must conform to AREMA and/or FRA standards.

#### 12. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHT-OF-WAY:

- A. The Contractor and/or the Department's personnel authorized to perform work on Railroad's property as specified in Section 2 above are not required to complete Norfolk Southern Roadway Worker Protection Training; However the Contractor and the Department's personnel must be familiar with Norfolk Southern's standard operating rules and guidelines, should conduct themselves accordingly, and may be removed from the property for failure to follow these guidelines.
- B. All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Wearing of safety boots is strongly recommended. Fluorescent vests in accordance with Article 701.12 of

the SSRBC shall be worn.

- C. No one is allowed within 25' of the centerline of track without specific authorization from the flagman.
- D. All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.
- E. No one is allowed to cross tracks without specific authorization from the flagman.
- F. All welders and cutting torches working within 25' of track must stop when train is passing.
- G. No steel tape or chain will be allowed to cross or touch rails without permission from the Railroad.

### 13. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHT-OF-WAY:

- A. No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from Railroad official and flagman.
- B. No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.
- C. All employees will stay with their machines when crane or boom equipment is pointed toward track.
- D. All cranes and boom equipment under load will stop work while train is passing (including pile driving).
- E. Swinging loads must be secured to prevent movement while train is passing.
- F. No loads will be suspended above a moving train.
- G. No equipment will be allowed within 25' of centerline of track without specific authorization of the flagman.
- H. Trucks, tractors or any equipment will not touch ballast line without specific permission from Railroad official and flagman. Orange construction fencing may be required as directed.
- I. No equipment or load movement within 25' or above a standing train or Railroad equipment without specific authorization of the flagman.
- J. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.

- K. All equipment, loads and cables are prohibited from touching rails.
- L. While clearing and grubbing, no vegetation will be removed from Railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.
- M. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.
- N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.
- O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.
- P. Prior to performing any crane operations, the Contractor shall establish a single point of contact for the Railroad flagman to remain in communication with at all times. Person must also be in direct contact with the individual(s) directing the crane operation(s).

#### 14. INSURANCE:

- A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:
  - 1. Commercial General Liability Insurance having a combined single limit of not less than \$2,000,000 per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include explosion, collapse, and underground hazard (XCU) coverage, shall be endorsed to name Railroad specified in item A.2.c. below both as the certificate holder and as an additional insured, and shall include a severability of interests provision.
  - 2. Railroad Protective Liability Insurance having a combined single limit of not less than \$2,000,000 each occurrence and \$6,000,000 in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate, the insurance limits required are not less than a combined single limit of \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.
  - 3. The standards for the Railroad Protective Liability Insurance are as follows:



- a. The insurer must be rated A- or better by A.M. Best Railroad, Inc.

NOTE: Railroad does not accept from insurers Chartis (AIG or Affiliated Railroad including Lexington Insurance Railroad), Hudson Group or ACE.

- b. The policy must be written using one of the following combinations of Insurance Services Office (“ISO”) Railroad Protective Liability Insurance Form Numbers:

- i. CG 00 35 01 96 and CG 28 31 10 93; or
- ii. CG 00 35 07 98 and CG 28 31 07 98; or
- iii. CG 00 35 10 01; or
- iv. CG 00 35 12 04; or
- v. CG 00 35 12 07.

- c. The named insured shall read:

Norfolk Southern Railway Company  
Three Commercial Place  
Norfolk, Virginia 23510-2191  
Attn: S. W. Dickerson Risk Management

(NOTE: Railroad does not share coverage on RRPL with any other entity on this policy)

- d. The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Department project and contract identification numbers.
- e. The job location must appear on the Declarations and must include the city, state, and appropriate highway name/number.

NOTE: Do not include any references to milepost, valuation station, or mile marker on the insurance policy.

- f. The name and address of the prime Contractor must appear on the Declarations.
- g. The name and address of the Department must be identified on the Declarations as the “Involved Governmental Authority or Other Contracting Party.”
- h. Other endorsements/forms that will be accepted are:

- i. Broad Form Nuclear Exclusion – Form IL 00 21
- ii. 30-day Advance Notice of Non-renewal or cancellation

- iii. Required State Cancellation Endorsement
- iv. Quick Reference or Index Form CL/IL 240

i. Endorsements/forms that are NOT acceptable are:

- i. Any Pollution Exclusion Endorsement except CG 28 31
- ii. Any Punitive or Exemplary Damages Exclusion
- iii. Known injury or Damage Exclusion form CG 00 59
- iv. Any Common Policy Conditions form
- v. Any other endorsement/form not specifically authorized in item no. 2.h above.

B. If any part of the work is sublet, similar insurance, and evidence thereof as specified in A.1 above, shall be provided by or on behalf of the subcontractor to cover its operations on Railroad's right of way.

C. Prior to entry on Railroad right-of-way, the original Railroad Protective Liability Insurance Policy shall be submitted by the Department's Prime Contractor to the Department at the address below for its review and transmittal to the Railroad. In addition, certificates of insurance evidencing the Department's Prime Contractor's and any subcontractors' Commercial General Liability Insurance shall be issued to the Railroad and the Department at the addresses below, and forwarded to the Department for its review and transmittal to the Railroad. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without (30) days advance written notice to Railroad and the Department. No work will be permitted by Railroad on its right-of-way until it has reviewed and approved the evidence of insurance required herein.

DEPARTMENT: RAILROAD:

\_\_\_\_\_ Risk Management  
\_\_\_\_\_ Norfolk Southern Railway Company  
\_\_\_\_\_ Three Commercial Place  
\_\_\_\_\_ Norfolk, Virginia 23510-2191

D. The insurance required herein shall in no way serve to limit the liability of Department or its Contractors under the terms of this agreement.

E. Insurance Submission Procedures

- 1. Railroad will only accept initial insurance submissions via US Mail or Overnight carrier to the address noted in C above. NS will NOT accept initial insurance submissions via email or faxes.

2. Railroad requires the following two (2) forms of insurance in the initial insurance submission to be submitted under a cover letter providing details of the project and contact information:
3. The full original or certified true countersigned copy of the railroad protective liability insurance policy in its entirety inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements.
  - a. The Contractor's commercial general, automobile, and workers' compensation liability insurance certificate of liability insurance evidencing a combined single limit of a minimum of \$2M per occurrence of general and \$1M per occurrence of automobile liability insurance naming Norfolk Southern Railway Company, Three Commercial Place, Norfolk, VA 23510 as the certificate holder and as an additional insured on both the general and automobile liability insurance policy.
4. It should be noted that the Railroad does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects system-wide, it typically takes a minimum of 30-45 days for the Railroad to review.

#### 15. FAILURE TO COMPLY:

- A. In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:
  1. The Railroad Engineer may require that the Contractor vacate Railroad property.
  2. The Department Engineer may withhold all monies due the Contractor on monthly statements.
- B. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

#### 16. PAYMENT FOR COST OF COMPLIANCE:

- A. No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such costs shall be included in prices bid for other items of the work as specified in the payment items.

## 17. PROJECT INFORMATION

- A. Date: \_\_\_\_\_  
B. NS File No.: \_\_\_\_\_  
C. NS Milepost: \_\_\_\_\_  
D. Department's Project No.: \_\_\_\_\_

**Basis of Payment:** The cost of conforming to these requirements 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.

### **STEEL POST REMOVAL**

**Description:** This work shall consist of removal of steel posts at locations shown on the plans.

**General:** Steel posts and any attached concrete shall be removed and disposed of according to Article 202.03. The void caused by the removal shall be backfilled with compacted embankment.

**Basis of Payment:** Removal of steel posts shall be paid for at the contract unit price each for STEEL POST REMOVAL which shall include the cost of furnishing and placing the backfill.

### **SUBBALLAST**

**Description:** This work shall consist of furnishing, placing, and compacting subballast on the prepared subgrade at locations shown on the plans.

**General:** Work and material shall conform to the requirements of Section 311 of the SSRBC for Subbase Granular Material, Type A with the following modifications:

1. The maximum lift thickness shall be 6 inches.
2. The compaction requirement shall be not less than 100 percent of the standard laboratory density.
3. The material shall be crushed stone in accordance with Article 1004.04 of the SSRBC.
4. The gradation shall be CA-6 in accordance with Article 1004.04 of the SSRBC, except that the gradation of the No. 200 sieve shall be 3-8 percent.

**Submittals:** Submittals shall be made in accordance with Section 106 of the SSRBC and the Bureau of Materials and Physical Research's Policy Memorandum "Aggregate Gradation Control System". Weekly stockpile/loadout tests shall be submitted to the Engineer on a weekly basis.

**Basis of Payment:** This work shall be paid for at the contract unit price per cubic yard for SUBBALLAST.

### **WOODEN POLE REMOVAL**

**Description:** This work shall consist of removal of wooden poles or posts at locations shown on the plans.

**General:** Wood poles and any attached concrete shall be removed and disposed of according to article 202.03. The void caused by the removal shall be backfilled with compacted embankment.

**Basis of Payment:** Removal of wood poles and posts shall be paid for at the contract unit price each for WOODEN POLE REMOVAL which shall include the cost of furnishing and placing the backfill.

### **STRUCTURAL**

#### **ANTI-GRAFFITI PROTECTION SYSTEM**

**Description:** This work shall consist of furnishing all labor, materials, and equipment for the application of an anti-graffiti protection system to the retaining walls as shown in the plans.

**General:** The anti-graffiti protection system shall be a water-based polyurethane concrete sealer that forms a high-solids coating with a clear matte finish, provides a chemical-resistant barrier coating that seals and protects the concrete under heavy use conditions, and shall be completed in accordance with this specification, manufacturer's recommendations and applicable sections of Section 587 of the Standard Specifications for Road and Bridge Construction. BRICKFORM UreMax WB is an approved product for the Anti-Graffiti Protection System. Alternate products will be allowed but must meet this specification and be approved by the Engineer.

**Construction Requirements:** The contractor shall provide all necessary equipment for the application of the concrete sealer.

The preparation of the concrete surfaces and application of the concrete sealer shall be done in such a manner as to not damage the concrete and/or the colored cementitious coating and according to the manufacturer's written instructions.

The concrete sealer shall produce a clear matte finish. Before applying product, test the product for desired results in a discrete location on the back face of the retaining walls. The sealer test area shall be approved by the Engineer.

Store the concrete sealant materials not in use indoors away from heat and direct sunlight, and at a minimum ambient temperature of 45°F to protect from freezing.

Prior to application of the concrete sealer, the surface shall be clean and free of laitance,

dirt, films or other foreign matter. Surfaces are to be dry prior to application. The sealer should only be applied after the concrete (minimum of 28 days) and/or colored cementitious coatings have fully cured.

The concrete sealer shall be applied to the manufacturer's written instructions. If a second coat is required, the second coat shall be applied within four to eight hours of the previous coat. Use equipment recommended in writing by the manufacturer for material and texture required, and apply the material at not less than manufacturer's recommended spreading rate.

Mix prepackaged ingredients together according to the manufacturer's written instructions. Mix together with mechanical mixer or by hand to required consistency. Mix proportions of the ingredients vary by manufacturer and application equipment type.

The concrete sealer shall only be applied when the surface or ambient temperature is between 45 and 95°F. Do not apply the sealer if the ambient temperature is expected to fall below 32°F within the curing cycle of the sealer.

The concrete sealer shall be allowed to cure before any foot traffic is allowed adjacent to the retaining wall. Before the sealer dries, clean spattered locations without damaging the concrete, sealer, and/or colored cementitious coating.

Comply with the manufacturer's written instructions for recommendations on curing procedures.

**Method of Measurement:** This work will be measured for payment in units of square feet, at the locations specified.

**Basis of Payment:** This work will be paid for at the contract unit price per square foot for ANTI-GRAFFITI PROTECTION SYSTEM. Price shall be payment in full for all labor, materials, and equipment necessary for the application of the concrete sealer.

## **CONCRETE STRUCTURES**

**General:** Except as otherwise specified hereafter, the current Standard Specifications for Road and Bridge Construction, Section 503 – Concrete Structures, shall apply to all work under this section.

**Material Requirements:** The minimum concrete compressive strength at 14 days shall be 3500 psi and at 28 days shall be 4000 psi.

Fly Ash, Silicafume and/or slag cement and any other admixtures, approved by the Engineer, shall be in addition to the minimum cement content listed in the Standard Specifications for Road and Bridge Construction, Section 1020 – Portland Cement Concrete, not in lieu of cement.

## **CONCRETE SUPERSTRUCTURES**

**General:** Except as otherwise specified hereafter, the current Standard Specifications for Road and Bridge Construction, Section 503 – Concrete Structures, shall apply to all work under this section.

**Material Requirements:** Fly Ash, Silicafume and/or slag cement and any other admixtures, approved by the Engineer, shall be in addition to the minimum cement content listed in the Standard Specifications for Road and Bridge Construction, Section 1020 – Portland Cement Concrete, not in lieu of cement.

## **CONCRETE SURFACE COLOR TREATMENT**

**Description:** This work shall consist of furnishing all labor, materials, and equipment for the application of a concrete surface color treatment to the locations shown on the plans.

**General:** The concrete surface color treatment shall be a two-part, colored cementitious coating. This coating shall be opaque, high-strength, extremely UV-resistant and suitable to apply to vertical surfaces. BRICKFORM Cem-Coat is an approved product for the Concrete Surface Color Treatment. Alternate products will be allowed but must meet this specification and be approved by the Engineer.

**Construction Requirements:** The preparation of the concrete surfaces and application of the concrete coating shall be done in such a manner as to not damage the concrete and according to the manufacturer's written instructions.

The color of the concrete coating should be Blue, Munsell No. 10B 3/6. Submit samples to the Engineer, for approval, on actual substrate in the blue color to verify preliminary selections made under sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

Store the coating materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F to protect from freezing.

Prior to the application of the concrete coating, the surface shall be clean and free of laitance, dirt, films, paint, coatings, or other foreign matter. Surfaces are to be dry prior to application. The coating should only be applied after the concrete has fully cured, at least 28 days.

The contractor shall use the moisture vapor evaporation rate test per ASTM F1869 to ensure that the rate of moisture vapor emission from the concrete surface is not exceeding 5 pounds per 1000 square feet per 24 hours. The contractor shall also perform relative humidity tests per ASTM F2170 to ensure the humidity is below 75%.

The coating shall either be sponge, roll or brush applied to the concrete surfaces. If a second coat is required, the second coat shall be applied after two hours of the previous coat but within twenty four hours. Apply each coat according to the manufacturer's

written instructions. Use equipment recommended in writing by the manufacturer for material and texture required, and apply the material at not less than manufacturer's recommended spreading rate.

Mix prepackaged ingredients together according to the manufacturer's written instructions. Mix together with mechanical mixer or by hand to required consistency. Mix proportions of the ingredients vary by manufacturer and application equipment type.

Apply coating only when temperature of surfaces to be coated and ambient air temperatures are between 55 and 80°F.

The concrete coating should be allowed to cure before the application of the concrete sealer. Clean spattered coating by washing, scraping, or other methods without damaging the concrete or coating.

Comply with the manufacturer's written instructions for recommendations on curing procedures.

**Method of Measurement:** This work will be measured for payment in units of square feet, at the locations specified.

**Basis of Payment:** This work will be paid for at the contract unit price per square foot for CONCRETE SURFACE COLOR TREATMENT. Price shall be payment in full for all labor, materials, and equipment necessary for the application of the coating and sealer.

### **DRAINAGE SYSTEM (SPECIAL)**

**Description:** This work shall consist of furnishing all labor, materials, and equipment for the installation of the drainage system beneath the bridge deck and behind the abutment as shown in the plans, including all piping, fittings, clean outs, support brackets, inserts, bolts, and splash blocks when specified.

**General:** The drainage system shall be a longitudinal collection system capable of disposing runoff without permitting it to enter the compacted granular backfill behind the bridge abutment.

**Construction Requirements:** All pipes, tees, bells, and bends shall be Class 54 ductile iron with 6 in. I.D. A minimum fall of 1% shall be used on all drain pipes.

The drainage system shall be designed with allowance for the differential expansion and contraction from thermal movements and live load longitudinal forces expected between the superstructure and substructure to which the drainage system is attached.

Runs of pipe shall be supported at spacings not exceeding those recommended by the manufacturer of the pipe. Standard slings, clamps, clevis hangers, and shoe supports designed for use with ductile iron pipe may be used. All connections of pipes and fittings shown on the plans shall facilitate future removal and maintenance clean out or flushing.



The drainage system shall be a closed system and tie into the pipe underdrain system behind either abutment.

All ductile iron pipe, fittings, and expansion joints shall be handled and installed according to guidelines and procedures recommended by the manufacturer or supplier of the material.

**Method of Measurement:** This work will be measured for payment in units of lump sum.

**Basis of Payment:** This work will be paid for at the contract unit price lump sum price for DRAINAGE SYSTEM (SPECIAL). Price shall be payment in full for all labor, materials, and equipment necessary for the installation of the drainage system.

### **DRILLED TANGENT PILE RETAINING WALL**

Effective: January 16, 2014

**Description:** This work shall consist of providing all labor, materials, and equipment necessary to install a non-gravity cantilever wall (including walls for bridge abutments) consisting of closely-spaced, reinforced drilled shafts and unreinforced 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, reinforcement bars in the concrete facing, railings, 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 drilled shafts and secant lagging shall satisfy the following requirements:

- (a) Reinforcement bars shall be according to Article 1006.10.
- (b) Concrete shall be Class DS according to Article 516.02.
- (c) The Controlled Low-Strength Material (CLSM) used for backfilling secant lagging excavations shall be according to Section 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.

**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 excavations shall extend to the tip elevation indicated on the plans unless a required embedment in rock is indicated on the contract plans. The Contractor shall satisfy the following requirements:

(a) Drilling Methods. The drilled shaft installation shall be according to Articles 516.06(a), (b), or(c).

No shaft excavation shall be made adjacent to another with concrete that has a compressive strength less than 1500 psi, nor adjacent to secant lagging until the CLSM has reach 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 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 above or below that estimated on the plans, such that the drilled shaft length above rock is decreased or increased by more than 10 percent, the Engineer shall be contacted to determine if any 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) Reinforcement. Work shall be according to Section 508 and the following.

The shaft excavation shall be cleaned and inspected prior to placing the reinforcement cage. The reinforcement cage shall be completely assembled prior to drilling and be ready for adjustment in length as required by the conditions encountered. The cage shall be lifted using multiple point sling straps or other approved methods to avoid cage distortion or stress. Additional cross frame stiffeners may also be required for lifting or to keep the cage in proper position during lifting and concrete placement.

The Contractor shall attach suitable cage centralizers to keep the cage away from the sides of the shaft excavation during placement and to ensure that at no point will the finished shaft have less than the minimum concrete cover(s) shown on the plans. The cage centralizers or other approved non-corrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 10 ft. throughout the length of the shaft) to ensure proper cage alignment and clearance for the entire shaft.

When embedment in rock is indicated on the plans, modification to the length of a drilled shaft may be required to satisfy the required embedment. The reinforcement cage shall be shortened by cutting longitudinal bars and adjusting hoop ties or spirals. The reinforcement cage shall be lengthened by mechanically splicing or lap slicing additional longitudinal bars to the lower end of the cage and adding hoop ties or spirals.

The Contractor shall have additional reinforcement available or fabricate the cages with additional length as necessary to make the required adjustments in a timely manner as dictated by the encountered conditions. Any reinforcement fabricated in advance but not incorporated into the shaft(s) shall remain the property of the Contractor.

- (g) Concrete Placement. Concrete work shall be performed according to Article 516.12.

- (h) Construction Tolerances. The shafts shall be drilled and cages located within the excavation to satisfy the following tolerances:

- (1) The center of the drilled shaft shall be within 2 in. of plan station and -1/2 in. to +2 in. offset at the top of the shaft. (- offset towards C.I.P. facing)
- (2) The out of vertical plumbness of the drilled shaft shall not exceed 1/8 in./ft.
- (3) The top of the drilled shaft shall be within  $\pm 2$  in. of the plan elevation.

- (i) Excavation. Excavation in front of the drilled shafts as necessary to place a concrete facing and complete the roadway work shall be made and paid for according to Section 202. The additional excavation necessary to place geocomposite wall drain between the shafts shall be included in this work.

- (j) Geocomposite Wall Drain. When required by the plans, the geocomposite wall drain shall be installed and paid for according to Section 591 except that the drain shall be fastened to the soil face. The pervious (fabric) side of the drain shall be installed to face

the soil.

**Method of Measurement:** This work will be measured for payment in place and the volume computed in cubic yards. The volume will be computed using the plan diameter of the shaft multiplied by the measured length of the shaft. The length of shaft in soil will be computed as the difference in elevation between the top of the drilled shaft shown on the plans, or as installed as part of the Contractor's installation procedure, and the bottom of the shaft or the top of rock (when present) whichever is higher. The length of shaft in rock will be computed as the difference in elevation between the measured top of rock and the bottom of the shaft.

Drilling and placing CLSM secant lagging shall be measured for payment in cubic feet 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.

Reinforcement furnished and installed will be measured for payment according to Article 508.07.

**Basis of Payment:** The drilling, setting of reinforcement cages, and concrete placement will be paid for at the contract unit price per cubic yard (cubic meter) for DRILLED SHAFT IN SOIL and DRILLED SHAFT IN ROCK.

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.

Reinforcement furnished and installed will be paid for according to Article 508.08.

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.

### **FLOOR DRAINS (SPECIAL)**

**Description:** This work shall consist of furnishing all labor, materials, and equipment for the installation of the floor drains including iron pipe, cast iron grate, and all materials required for the connection of pipe to grate.

**General:** The floor drains shall be capable of collecting runoff from the deck and depositing it into the drainage system.

**Construction Requirements:** The floor drain shall be composed of a 6 in. interior diameter ductile iron pipe and grate. Neenah R-4373-6 Grate is an approved product for

the grate/drain. Alternate products will be allowed but must meet this specification and be approved by the Engineer.

**Method of Measurement:** This work will be measured for payment in units of each.

**Basis of Payment:** This work will be paid for at the contract unit price each for FLOOR DRAINS (SPECIAL). Price shall be payment in full for all labor, materials, and equipment necessary for the installation of the floor drains.

### **FORM LINER TEXTURED SURFACE**

**Description:** This work shall consist of designing, developing, furnishing and installing form liners and forming concrete using reusable, high-strength urethane form liners to achieve the various concrete treatments as shown in the drawings and specifications. Form lined surfaces shall include areas of the wall facing, where shown in the plans. Work shall be performed in accordance with applicable portions of Sections 503 and 504 of the Standard Specifications.

Form liners shall be installed 12” below finish grade unless otherwise shown on the plans. The form liner shall match the exact size of concrete units and adhere to the provisions listed herein and in the Plans.

**Materials:** Form liners shall be 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.

**Formliner Mockup:** The Contractor shall provide a cast concrete mockup containing the form liner surface. The form liner manufacturer's technical representative shall be on-site for technical supervision during the installation and removal operations.

Purpose of the mockup is to select and verify the pattern to be used.

1. Locate mockup on site as directed by the Engineer.
2. The cast-in-place mockup shall be a minimum 4 ft x 4 ft x 6 in. thick.
3. 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.
4. 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.

5. After mockup is determined to be acceptable by the Engineer, construction of project may proceed, using mockup as quality standard.

**Formliner Pattern:** The form liner pattern shall be a large, vertical fractured fin. The uniform spacing between the raised, textured fins shall be not less than 2 inches, nor more than 3 inches. The maximum depth of the pattern shall be not less than 1.5 inches, nor more than 2.0 inches.

The following form liner manufacturers are known manufactures that provide a large fractured fin pattern form liner for use with the cast-in-place concrete units.

- a. Fitzgerald Formliners, Santa Ana, CA, #16957 Harvard Fin
- b. Scott System, Denver, CO, #101 Cleveland Flute

A pattern "exhibit A" is provided below, illustrating the desired appearance.

Scott System #101  
Cleveland Flute

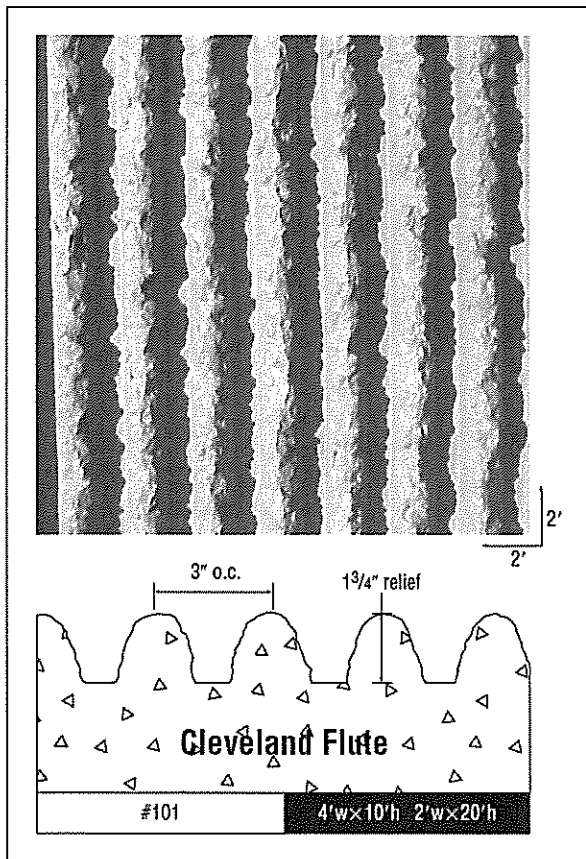


Exhibit A- Cast-in-place Pattern

**Installation:** Form liners shall be installed in accordance with the manufacturer's recommendations to achieve the highest quality concrete appearance possible. 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 manufacturer's recommendations for optimizing the concrete finish, as well as the IDOT Standard 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:** This work will be measured for payment in place and the area computed in square feet.

Required adjustments or corrections needed to address mockup comments and the cost of additional mockups, if required, will not be paid for separately, but shall be included in respective pay item.

**Basis of Payment:** Form lined surfaces will be paid for at the contract unit price per square foot for FORM LINER TEXTURED SURFACE. The unit price bid shall include all labor and material costs associated with designing, developing, furnishing and installing form liners, forming, and disposal of forms, including a satisfactory cast concrete mockup panel to the requirements included herein.

### **FURNISHING AND ERECTING STRUCTURAL STEEL BRIDGE**

**Description:** This work shall consist of furnishing, fabricating, transporting, erecting and painting steel structure or portions thereof for the structures listed below.

SN 084-9952 (UPRR over Carpenter Street) – BRIDGE NO. 1

SN 084-9953 (NSRR over Carpenter Street.) – BRIDGE NO. 2

**General:** Structural steel shall be fabricated to comply with the requirements indicated on the design drawings. The furnishing and erecting of structural steel shall be in accordance with this specification and applicable sections of Section 505 of the Standard Specifications for Road and Bridge Construction.

**Construction Requirements:** All structural steel supplied shall comply with the applicable ASTM standards listed in the plans.

Furnishing and installing the bearings shall comply with Section 521 of the Standard Specifications for Road and Bridge Construction.

The preformed fabric bearing pads, for the bearings, approved for use shall be Shock Pad Style No. 15175 as manufactured by Alert Manufacturing and Supply Company, Chicago, Illinois, or FABREEKA Pads as manufactured by Fabreeka Products Company, 1190 Adams Street, Boston, Massachusetts, or SORBTEX Pads as manufactured by Voss Engineering, Inc., Chicago, Illinois Alternate products will be allowed but must be considered equal and be approved by the Engineer.

**Method of Measurement:** This work will be measured for payment according to Section 505.12 of the Standard Specifications for Road and Bridge Construction.

**Basis of Payment:** This work will be paid for at the lump sum price for FURNISHING AND ERECTING STRUCTURAL STEEL BRIDGE NO. 1 and FURNISHING AND ERECTING STRUCTURAL STEEL BRIDGE NO. 2. Price shall be payment in full for all labor, materials, and equipment necessary for furnishing, erecting, fabricating, transporting, and painting structural steel.



The cost for furnishing and installing the bearings and anchor bolts shall be included in the lump sum price for FURNISHING AND ERECTING STRUCTURAL STEEL BRIDGE, NO. 1 OR NO. 2

## **MECHANICALLY STABILIZED EARTH RETAINING WALLS**

Effective: February 3, 1999

Revised: January 16, 2014

**Description:** This work shall consist of preparing the design, furnishing the materials, and constructing the mechanically stabilized earth (MSE) retaining wall to the lines, grades and dimensions shown in the contract plans and as directed by the Engineer.

**General:** The MSE wall consists of a concrete leveling pad, precast concrete face panels, a soil reinforcing system, select fill and concrete coping (when specified). The soil reinforcement shall have sufficient strength, quantity, and pullout resistance, beyond the failure surface within the select fill, as required by design. 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 MSE retaining wall shall be one of the following pre-approved wall systems:

**Company Name: Wall System**

Earth Tec International, LLC: EarthTrac HA

Sanders Pre-Cast Concrete Systems Company: Sanders MSE Wall

Shaw Technologies: Strengthened Soil

Sine Wall, LLC: Sine Wall

SSL Construction Products: MSE Plus

Vist-A-Wall Systems, LLC: Vist-A-Wall

Tensar Earth Technologies : ARES Wall

The Reinforced Earth Company: GeoMega

System The Reinforced Earth Company:

Reinforced Earth The Reinforced Earth

Company: Retained Earth Tricon Precast: Tricon

Retained Soil

Tricon Precast: Tri-Web Retained Soil

Pre-approval of the wall system does not include material acceptance at the jobsite.

**Submittals:** The wall system supplier shall submit complete design calculations and shop drawings to the Engineer according to Article 1042.03(b) of the Standard Specifications no later than 90 days prior to beginning construction of the wall. 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. 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 soil reinforcement and stations where changes in length and/or size of reinforcement 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 panels. These elevations shall be at or above the top of exposed panel 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. Each panel type, the number, size and length of soil reinforcement connected to the panel shall be designated. The equivalent uniform applied service (unfactored) nominal bearing pressure shall be shown for each designed wall section.
  - (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 limits of the reinforced select fill volume included within the wall system, soil reinforcement, embankment material placed behind the select fill, precast face panels, and their relationship to the right-of-way limits, excavation cut slopes, existing ground conditions and the finished grade line.
  - (5) All general notes required for constructing the wall.
- (b) 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 leveling pad line shall be 3.5 ft. (1.1m) below finished grade line at the front face of the wall, unless otherwise shown on the plans.
- (c) Where concrete coping or barrier is specified, the panels shall extend up into the coping or barrier as shown in the plans. The top of the panels may be level or sloped to satisfy the top of exposed panel line shown on the contract plans. Cast-in-place concrete will not be an acceptable replacement for panel areas below the top of exposed panel line. As an alternative to cast in place coping, the Contractor may substitute a precast coping, the details of which must be included in the shop drawings and approved by the Engineer.
- (d) All panel types shall be detailed. The details shall show all dimensions necessary to cast and construct each type of panel, all reinforcing steel in the panel, and the location of soil reinforcement connection devices embedded in the panels. These panel embed devices shall not be in contact with the panel reinforcement steel.
- (e) All details of the wall panels and soil reinforcement placement around all appurtenances located behind, on top of, or passing through the soil reinforced wall volume such as parapets with anchorage slabs, 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 panel treatment, including color, texture and form liners shall be shown.
- (g) The details for the connection between concrete panels, embed devices, and soil reinforcement shall be shown.
- (h) When pile sleeves are specified, the pile sleeve material, shape, and wall thickness shall be submitted to the Engineer for approval. It shall have adequate strength to withstand the select fill pressures without collapse until after completion of the wall settlement. The annulus between the pile and the sleeve shall be as small as possible while still allowing it to be filled with loose dry sand after wall erection.

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 ten (10) sets of corrected plan prints 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 MSE walls shall conform to the supplier's standards as previously approved by the Department, and the following:

- (a) The soil reinforcing system, which includes the soil reinforcement, and all connection devices, shall be according to the following:
  - (1) Inextensible Soil Reinforcement. Steel reinforcement shall be according ASTM A 572 Grade 65 (450), ASTM A 1011 or ASTM A 463 Grade 50 (345). The steel strips shall be either epoxy coated, aluminized Type 2, or galvanized. Epoxy coatings shall be according to Article 1006.10(a)(2), except the minimum thickness of epoxy coating shall be 18 mils (457 microns). No bend test will be required. Aluminized Type 2-100 shall be according to ASTM A 463. Galvanizing shall be according to AASHTO M 111 or ASTM A 653 with touch up of damage according to ASTM A 780.
  - (2) Extensible Soil Reinforcement. Geosynthetic reinforcement shall be monolithically fabricated from virgin high density polyethylene (HDPE) or high tenacity polyester (HTPET) resins having the following properties verified by mill certifications:

<u>Property for Geosynthetic Reinforcement</u>	<u>Value</u>	<u>Test</u>
Minimum Tensile Strength	**	ASTM D 6637

\*\* as specified in the approved design calculations and shown on the shop drawings.

<u>Property for HDPE</u>	<u>Value</u>	<u>Test</u>
Melt Flow Rate (g/cm)	0.060 – 0.150	ASTM D 1238, Procedure B
Density (g/cu m)	0.941 – 0.965	ASTM D 792
Carbon Black	2% (min)	ASTM D 4218

<u>Property for HTPET</u>	<u>Value</u>	<u>Test</u>
Carboxyl End Group (max) (mmol/kg)	<30	GRI-GG7
Molecular Weight (Mn)	>25,000	GRI-GG8

(3) Panel Embed/Connection Devices. Panel embeds and connection devices shall be according to the following.

- a. Metallic panel embed/connection devices and connection hardware shall be galvanized according to AASHTO M 232 and shall be according to the following.

Mesh and Loop Embeds	ASTM A 706 (A 706M)
Tie Strip Embeds	AASHTO M 270/M 270M Grade 50 (345) or ASTM A 1011 HSLAS Grade 50 (345) Class 2

- b. Non metallic panel embed/connection devices typically used with geosynthetic soil reinforcement shall be manufactured from virgin or recycled polyvinyl chloride having the following properties:

<u>Property for Polyvinyl Chloride</u>	<u>Value</u>	<u>Test</u>
Heat Deflection Temperature (°F)	155 - 164	ASTM D
1896 Notched IZOD 1/8 inch @ 73°F (ft-lb/in)	4 – 12	ASTM D
256 Coefficient of Linear Exp. (in/in/°F)	3.5 – 4.5	ASTM D
696 Hardness, Shore D	79	ASTM D
2240		

<u>Property for Polypropylene</u>	<u>Value</u>	<u>Test</u>
Melt Flow Rate (g/cm)	0.060 – 0.150	ASTM D 1238, Procedure B
Density (g/cu m)	0.88 – 0.92	ASTM D 792

(b) 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. If an epoxy coated reinforcing is used, the coarse aggregate gradations shall be limited to CA 12 thru CA 16. For fine aggregate, gradations FA 1, FA 2, or FA 20 may be used.
- (2) Select Fill Quality. The coarse or fine aggregate shall have a maximum sodium sulfate (Na<sub>2</sub>SO<sub>4</sub>) loss of 15 percent according to Illinois Modified AASHTO T 104.

- (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.
- (4) Select Fill and Steel Reinforcing. When steel reinforcing is used, the select fill shall meet the following requirements.
- a. The pH shall be 5.0 to 10.0 according to Illinois Modified AASHTO T 289.
  - b. The resistivity according to Illinois Modified AASHTO T 288 shall be greater than 3000 ohm centimeters for epoxy coated and galvanized reinforcement, and 1500 ohm centimeters for Aluminized Type 2. However, the resistivity requirement is not applicable to CA 7, CA 8, CA 11, CA 13, CA 14, CA 15, and CA 16.
  - c. The chlorides shall be less than 100 parts per million according to Illinois Modified AASHTO T 291 or ASTM D 4327. For either test, the sample shall be prepared according to Illinois Modified AASHTO T 291.
  - d. The sulfates shall be less than 200 parts per million according to Illinois Modified AASHTO T 290 or ASTM D 4327. For either test, the sample shall be prepared according to Illinois Modified AASHTO T 290.
  - e. The organic content shall be a maximum 1.0 percent according to Illinois Modified AASHTO T 267.
- (5) Select Fill and Geosynthetic Reinforcing. When geosynthetic reinforcing is used, the select fill pH shall be 4.5 to 9.0 according to Illinois Modified AASHTO T 289.
- (6) Test Frequency. Prior to start of construction, the Contractor shall provide internal friction angle and pH test results, to show the select fill material meets the specification requirements. In addition, resistivity, chlorides, sulfates, and organic content test results will be required if steel reinforcing is used. The laboratory performing the Illinois Modified AASHTO T 288 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Resistivity Testing". All test results shall not be older than 12 months. 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 by the department at the jobsite will be one per 40,000 tons (36,300 metric tons) of select fill material. Testing to verify the internal friction angle will be required when the wall design utilizes a minimum effective internal friction angle greater than 34 degrees, or when crushed coarse aggregate is not used.
- (c) The embankment material behind the select fill shall be according to Section 202 and/or Section 204. An embankment unit weight of 120 lbs/cubic foot (1921 kg/cubic meter) and an effective friction angle of 30 degrees shall be used in the wall system design, unless otherwise indicated on the plans.

- (d) The geosynthetic filter material used across the panel joints shall be either a non-woven needle punch polyester or polypropylene or a woven monofilament polypropylene with a minimum width of 12 in. (300 mm) and a minimum non-sewn lap of 6 in. (150 mm) where necessary.
- (e) The bearing pads shall be rubber, neoprene, polyvinyl chloride, or polyethylene of the type and grade as recommended by the wall supplier.
- (f) All precast panels 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 5 1/2 in. (140 mm).
  - (2) The minimum reinforcement bar cover shall be 1 1/2 in. (38 mm).
  - (3) The panels shall have a ship lap or tongue and groove system of overlapping joints between panels designed to conceal joints and bearing pads.
  - (4) The panel reinforcement shall be according to Article 1006.10(a)(2) or 1006.10(b)(1) except the welded wire fabric shall be epoxy coated according to ASTM A884.
  - (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 inches in 5 ft (5 mm in 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).
  - (8) The panel embed/connection devices shall be cast into the facing panels with a tolerance not to exceed 1 in. (25 mm) from the locations specified on the approved shop drawings.

Unless specified otherwise, concrete surfaces exposed to view in the completed wall shall be finished according to Article 503.15(a). The back face of the panel shall be roughly screeded to eliminate open pockets of aggregate and surface distortions in excess of 1/4 in. (6 mm).

**Design Criteria:** The design shall be according to the appropriate AASHTO Design Specifications noted on the plans for Mechanically Stabilized Earth Walls except as modified herein. The wall supplier shall be responsible for all internal stability aspects of the wall design and shall supply the Department with computations for each designed wall section. The analyses of settlement, bearing capacity and overall slope stability will be 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.

The design of the soil reinforcing system shall be according to the applicable AASHTO or AASHTO LRFD Design Specifications for "Inextensible" steel or "Extensible" geosynthetic reinforcement criteria. The reduced section of the soil reinforcing system shall be sized to allowable stress levels at the end of a 75 year design life.

Steel soil reinforcing systems shall be protected by one of the following; epoxy coating, galvanizing or aluminizing. The design life for epoxy and aluminizing shall be assumed to be 16 years. The corrosion protection for the balance of the 75 year total design life shall be provided using a sacrificial steel thickness computed for all exposed surfaces according to the applicable AASHTO or AASHTO LRFD Design Specifications.

Geosynthetic soil reinforcing systems shall be designed to account for the strength reduction due to long-term creep, chemical and biological degradation, as well as installation damage.

To prevent out of plane panel rotations, the soil reinforcement shall be connected to the standard panels in at least two different elevations, vertically spaced no more than 30 in. (760 mm) apart.

The panel embed/soil reinforcement connection capacity shall be determined according to the applicable AASHTO or AASHTO LRFD Design Specifications.

The factor of safety for pullout resistance in the select fill shall not be less than 1.5, based on the pullout resistance at 1/2 in. (13 mm) deformation. 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.

For aesthetic considerations and differential settlement concerns, the panels shall be erected in such a pattern that the horizontal panel joint line is discontinuous at every other panel. This shall be accomplished by alternating standard height and half height panel placement along the leveling pad. Panels above the lowest level shall be standard size except as required to satisfy the top of exposed panel line shown on the contract plans.

At locations where the plans specify a change of panel alignment creating an included angle of 150 degrees or less, precast corner joint elements will be required. This element shall separate the adjacent panels by creating a vertical joint secured by means of separate soil reinforcement.

Isolation or slip joints, which are similar to corner joints in design and function, may be required to assist in differential settlements at locations indicated on the plans or as recommended by the wall supplier. Wall panels with areas greater than 30 sq. ft. (2.8 sq. m) may require additional slip joints to account for differential settlements. The maximum standard panel area shall not exceed 60 sq. ft. (5.6 sq. m).

**Construction:** 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 supporting the structure shall be graded for a width equal to or exceeding the length of the soil reinforcement. 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.

Excavation necessary to construct the reinforced soil mass shall be made and paid for according to Section 202. The additional excavation necessary to place the concrete leveling pad will not be measured for payment but shall be included in this work.

The concrete leveling pads shall have a minimum thickness of 6 in. (150 mm) and shall be placed according to Section 503.

As select fill material is placed behind a panel, the panel shall be maintained in its proper inclined position according to the supplier specifications and as approved by the Engineer. Vertical tolerances and horizontal alignment tolerances shall not exceed 3/4 in. (19 mm) when measured along a 10 ft. (3 m) straight edge. The maximum allowable offset in any panel joint shall be 3/4 in. (19 mm). 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 precast face panels shall be erected to insure that they are located within 1 in. (25 mm) from the contract plan offset at any location to insure proper wall location at the top of the wall. Failure to meet this tolerance may cause the Engineer to require the Contractor to disassemble and re-erect the affected portions of the wall. A 3/4 in. (19 mm) joint separation shall be provided between all adjacent face panels to prevent direct concrete to concrete contact. This gap shall be maintained by the use of bearing pads and/or alignment pins.

The back of all panel joints shall be covered by a geotextile filter material attached to the panels with a suitable adhesive. No adhesive will be allowed directly over the joints.

The select fill and embankment placement shall closely follow the erection of each lift of panels. At each soil reinforcement level, the fill material should be roughly leveled and compacted before placing and attaching the soil reinforcing system. The soil reinforcement and the maximum lift thickness shall be placed according to the supplier's recommended procedures except, the lifts for select fill shall not exceed 10 in. (255 mm) loose measurement or as approved by the Engineer. Embankment shall be constructed according to Section 205.

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 Illinois Modified AASHTO T 99. Select fill compaction shall be accomplished without disturbance or distortion of soil reinforcing system and panels. Compaction in a strip 3 ft. (1 m) wide adjacent to the backside of the panels shall be achieved using a minimum of 3 passes of a light weight mechanical tamper, roller or vibratory system. 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:** Mechanically Stabilized Earth Retaining Wall will be measured for payment in square feet (square meters). The MSE retaining wall will be measured from



the top of exposed panel 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 placement of the select fill within the soil reinforced wall volume shown on the approved shop drawings, precast face panels, soil reinforcing system, concrete leveling pad and accessories will be paid for at the contract unit price per square foot (square meter) for MECHANICALLY STABILIZED EARTH RETAINING WALL.

Concrete coping when specified on the contract plans will be included for payment in this work. Other concrete appurtenances such as anchorage slabs, parapets, abutment caps, etc. will not be included in this work, but will be paid for as specified elsewhere in this contract, unless otherwise noted on the plans.

Excavation necessary to place the select fill for the MSE wall shall be paid for as EARTH EXCAVATION according to Section 202.

Fill placed within the foot print of the reinforced soil mass, above the top layer of soil reinforcement and below the bottom of the subgrade or top soil, shall be included in the cost of the MSE wall.

Embankment placed outside of the select fill volume will be measured and paid for according to Sections 202 and/or 204 as applicable.

### **PRECAST PRESTRESSED CONCRETE FASCIA BEAM**

**Description:** This work shall consist of furnishing all labor, material, and equipment for the fabrication and erection of a precast prestressed concrete fascia beam including the curb on top of the fascia beam.

**General:** Except as otherwise specified hereafter, the current Standard Specifications for Road and Bridge Construction, Section 504 – Precast Concrete Structures and Section 1042 – Precast Concrete Products, shall apply to all work under this section.

**Construction Requirements:** Fly Ash, Slicafume and/or slag cement and any other admixtures, approved by the Engineer, shall be in addition to the minimum cement content listed in the Standard Specifications for Road and Bridge Construction, Section 1020-Portland Cement Concrete, not in lieu of cement.

Lifting loops shall be provided in the detailed locations on the design drawings. The area around all lifting loops shall be recessed so that the loops can be removed to a depth of ¾ in. and grouted.

**Method of Measurement:** This work will be measured for payment by the foot. In determining the total length of beams to be paid for, the specified overall length of the individual beams will be used.

**Basis of Payment:** This work will be paid at the contract unit price per foot for PRECAST PRESTRESSED CONCRETE FASCIA BEAM. Price shall be payment in full for all labor, materials, and equipment for fabrication and erection of the precast prestressed concrete fascia beam.

### **SHOP DRAWING SUBMITTAL**

**Description:** This work shall consist of the submittal of shop drawings to the Engineer for review.

**General:** Shop drawing submittal shall be in accordance with this specification and Sections 105, 504, 505, 509, and 1042 of the Standard Specifications for Road and Bridge Construction.

**Construction Requirements:** The following items will require a shop drawing submittal to the Engineer for review.

- Mechanically Stabilized Earth Retaining Walls
- Structural Steel, Bearings and Anchor Bolts \*
- Precast Prestressed Concrete Fascia Beam\*
- Steel Railing (Special)\*
- Membrane Waterproofing\*

\* The Engineer will forward to the railroad agency for review.

**Basis of Payment:** This work will not be paid for separately but shall be included in the cost of the respective item.

### **STEEL RAILING (SPECIAL)**

**Description:** This work shall consist of furnishing all labor, materials, and equipment for the fabrication and erection of the steel railing.

**General:** The railing shall be fabricated to comply with the requirements indicated on the design drawings. The railing shall be in accordance with this specification and applicable sections of Section 509 of the Standard Specifications for Road and Bridge Construction.

**Construction Requirements:** The contractor shall provide all necessary equipment for the installation of the steel railing.

All members supplied shall comply with the applicable ASTM standards.

HSS – ASTM A500, Grade B (46 ksi) (cold formed)

Plate – ASTM A36/A36M

Stainless Steel Strand and Fittings – ASTM A316

Galvanized Steel Anchor Rods – ASTM F 568M

All railing components, with the exception of the stainless steel parts, shall be galvanized

according to Section 509.05 of the Standard Specifications for Road and Bridge Construction and general notes shown on the plans. Galvanizing will not be measured for payment but included in the unit cost of this pay item.

Stainless steel strands and fittings shall be isolated from the galvanized posts and plates to prevent galvanic corrosion due to dissimilar materials.

Welding procedures and personnel shall be qualified according to AWS D1.1/D1.1M, "Structural Welding Code – Steel."

Shop drawings shall include plans, elevations, sections, and detail views. Detail the posts, rails, strands and fittings, chains, and handrails. Indicate post and panel types, sizes, orientations and locations. Indicate critical dimensions from adjacent reveals, rustications and joints.

Indicate welded connections by AWS standard symbols. Detail loose and cast-in hardware, inserts, connections, and joints, including accessories.

Indicate locations and details of anchorage devices to be embedded in other construction. Coordinate with other trades to embed anchorages in other construction

Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 in. unless otherwise indicated. Remove sharp or rough areas on exposed surfaces. Provide a weep hole on the back face at the bottom of every HSS post.

Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. Obtain fusion without undercut or overlap. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 1 welds: no evidence of a welded joint.

Intermediate tensioning posts shall be set at maximum of 70 foot spacing.

After threading strands through intermediate posts, hang a 20 pound weight at midpoint of the maximum post spacing on each strand prior to applying tension. Tension each strand to remove the sag to a maximum of 5/8 inches.

Set railings accurately in location, alignment, and elevation. Set retaining wall posts plum within a tolerance of 1/16 in. in 3 ft. The posts on the railroad bridge superstructures, cheek walls, and wing walls need not be set plum. Use post-installed chemical anchors for fastening the base plates to the concrete.

**Method of Measurement:** This work will be measured for payment in units by the foot.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for STEEL RAILING (SPECIAL). Price shall be payment in full for all labor, materials, and equipment necessary to erect the steel railing.

## TRAFFIC SIGNALS / ELECTRICAL

### CONCRETE FOUNDATION, TYPE A

This work shall consist installing a Concrete Foundation, Type A in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction and State Standard 878001 with no exceptions.

The proposed location of the Concrete Foundation, Type A may be moved in the field to avoid conflicts at the approval of the Engineer. If foundation is located in an area not within the removal limits shown on the plans, removal of the existing sidewalk or earth disturbance shall be completed in accordance with Section 895 of the Standard Specifications for Road and Bridge Construction and any applicable notes or Special Provisions provided in these construction documents.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for CONCRETE FOUNDATION, TYPE A, which price shall be payment in full for all labor, material, and equipment necessary to perform the work described above.

### CONCRETE FOUNDATION, TYPE E

This work shall consist installing a Concrete Foundation, Type E, Specified Diameter in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction and State Standard 878001 with no exceptions.

The proposed location of the Concrete Foundation, Type E may be moved in the field to avoid conflicts at the approval of the Engineer. If foundation is located in an area not within the removal limits shown on the plans, removal of the existing sidewalk or earth disturbance shall be completed in accordance with Section 895 of the Standard Specifications for Road and Bridge Construction and any applicable notes or Special Provisions provided in these construction documents.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for CONCRETE FOUNDATION, TYPE E, 42" DIAMETER, CONCRETE FOUNDATION, TYPE E, 36" DIAMETER, or CONCRETE FOUNDATION, TYPE E, 30" DIAMETER, which price shall be payment in full for all labor, material, and equipment necessary to perform the work described above.

### CONTRACT GUARANTEE

The Contractor shall guarantee all electrical equipment, apparatus, materials, and workmanship provided under the contract for a period of six (6) months after the date of final inspection according to Article 801.14.

All instruction sheets required to be furnished by the manufacturer for materials and supplies

and for operations shall be delivered to the Engineer prior to the acceptance of the project, with the following warranties and guarantees:

1. The manufacturer's standard written warranty for each piece of electrical equipment or apparatus furnished under the contract.
2. The Contractor's written guarantee that, for a period of six (6) months after the date of final inspection of the project, all necessary repairs to or replacement of said warranted equipment, or apparatus shall be made by the Contractor at no cost to the Department.
3. The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of 6 months after final inspection of the project.

### **ELECTRIC CABLE**

This work shall consist of furnishing and stalling electric cable of the type, size, and number of conductors specified, in accordance with the requirements of Section 873 and 1076.04 of the Standard Specifications for Road and Bridge Construction except as describe herein.

All stranded wire connections in signal heads, push buttons, terminal compartments shall be made with insulated spade connections.

Cables shall be identified by color coded tape applied at both the signal and controller ends. The color-coding shall be as shown on the plans.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for ELECTRIC CABLE of the type, size, and number of conductors specified, which price shall be payment in full for furnishing the material and making all electrical connections and installing the cable complete.

### **ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1/C**

This work shall be in accordance with the applicable Articles of Sections 801, 806, 873, 1076, and 1088 of the Standard Specifications with the following modifications:

This work shall consist of furnishing and installing a grounding wire to bond all traffic signal handholes (lids and rings), mast arm assemblies, posts, light poles, cabinets and exposed metallic conduits.

The proposed ground wire shall be an insulated #6 XLP copper conductor with green insulation.

**Basis of Payment:** This work will be paid for at the contract unit price per foot for

ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1/C which price shall be payment in full for all labor, materials, and equipment required to provide the grounding system described above.

**FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL**

This work shall be in accordance with Sections 857, 1073, and 1074 of the Standard Specifications except as modified herein.

The Contractor shall provide all labor, materials, and equipment required for the work described above. The cost of this work shall be included in the bid price for this pay item, including painting the controller cabinet black prior to installation.. There will be no additional compensation for this work.

The cabinet and controller shall be compatible with the existing Econolite closed loop system and Aries remote monitoring software.

The traffic signal cabinet shall have a NEMA TS-2 back panel. The cabinet shall include a malfunction management unit to allow enhanced fault monitoring capabilities. The malfunction management unit shall support flashing yellow arrow operation and be a Reno A&E model MMU-1600G equipped with a graphical display and Ethernet port.

The controller shall be an Econolite ASC/3-2100 NEMA TS-2 Type 2 controller.

The cabinet, controller, and malfunction management unit shall be configured by the manufacturer for flashing yellow arrow operation.

The malfunction management unit shall be equipped with the latest software and firmware revisions. The cabinet shall be equipped with a plexi-glass shield that covers the power panel which houses the mercury bus relay, line filter, circuit breakers, and other electrical components.

The cabinet shall be equipped with a plexi-glass shield that covers the thermostat and a fluorescent lighting assembly that turns on when the door is opened. The fluorescent lighting assembly shall be equipped with a cold weather ballast and mounted in a location that will not interfere with cabinet maintenance.

The traffic signal cabinet shall be equipped with a sixteen load switch back panel to accommodate future expansion.

The cabinet shall be furnished with a compact heater strip to be used for moisture reduction during cold weather. The heater shall be thermostatically controlled, operate at 120 volts, have a minimum wattage of 150 watts, a maximum wattage of 250 watts, have a shield to protect service personnel and equipment from damaging heat, be separately fused, and be mounted where it does not interfere with a person working in the cabinet.

The cabinet shall be equipped with a twenty-four fiber wall- mountable interconnect center and

two six-fiber bulkheads. The cabinet shall also be equipped with any and all other components necessary to provide for a complete and functional fiber optic telemetry. The cabinet shall be equipped with toggle switch guards for all switches located on the door to prevent accidental switching. The cabinet shall include a high quality deluxe pleated filter.

The cabinet shall be equipped with additional surge protection for the controller, malfunction management unit, and detector amplifiers, and/or video detection system. The surge protector shall be a Transtector model ACP100BWN3 and shall be included in addition to an EDCO SHA-1250 IRS protector. The EDCO SHA-1250 IRS surge protector is to be provided in accordance with Section 1085.47 A(4a) and shall be wired to provide surge protection for the controller, malfunction management unit, and detector amplifiers. The Transtector surge suppressor may be wired to the equipment protected power terminals of the EDCO SHA-1250 IRS unit provided that the controller, MMU, and detection system are protected.

The controller cabinet shall contain one 10A, 120V, single pole circuit breaker for the control equipment, one 40A, 120V, single pole circuit breaker for the signal load, and one 15A, 120V, single pole circuit breaker for the internally illuminated street name signs.

The Contractor shall set up each cabinet in his or her shop for inspection by the Engineer. All phases that are utilized shall be hooked up to a light board to provide observation for each signal indication. The Engineer shall be notified when the set up is complete so that all pertinent timings may be entered into the each traffic signal controller. The facility shall be subject to a seven day burn-in period before installation will be allowed.

The Contractor shall ground and safety-bond the controller cabinet in accordance with NEC requirements.

After installing the cabinet in the field, prior to resuming normal signal operation, the Contractor shall test the cabinet by connecting a jumper to the cabinet field terminals to ensure that all conflicting signals will place the cabinet into conflict flash and to verify that the cabinet, controller, and malfunction management unit are operating correctly. The Contractor shall make arrangements with the local police agency to provide traffic control during the conflict test.

**Basis of Payment:** This work will be paid for at the contract unit price each for FULL ACTUATED CONTROLLER AND TYPE IV CABINET SPECIAL and shall be payment in full for all labor, materials, and equipment required to provide, test, and install the equipment described above, complete.

### **HANDHOLE (CONTRACTOR OPTION)**

This work shall consist of furnishing the material and constructing a cast-in-place handhole, heavy-duty handhole, or double handhole or installing a precast composite concrete handhole, heavy-duty handhole, or double handhole in accordance with Sections 814 and 1088.05 of the Standard Specifications for Road and Bridge Construction and the following additions or exceptions.

Precast composite concrete handhole or double handhole: If the Contractor chooses to install a

precast structure, the frame and cover shall be constructed of a polymer concrete and reinforced with a heavy-weave fiberglass cloth. The material shall be in accordance with Section 1088.05 of the Standard Specifications for Road and Bridge Construction. The nominal dimensions of the handhole shall be a minimum 17" (W) x 30" (L) x 30" (D) and the nominal dimensions of the double handhole shall be a minimum 30" (W) x 48" (L) x 36" (D).

The cover shall contain the llegend "TRAFFIC SIGNALS" and shall be held down by tow stainless steel hex head bolts. The cover shall contain 2 recessed left pins. The cover for a double handhole shall be split led, 2-piece cover.

**Basis of Payment:** This work will be paid for at the contract unit price each for HANDHOLE or DOUBLE HANDHOLE.

### **LOCATION OF UNDERGROUND ELECTRICAL FACILITIES**

The Contractor shall be responsible for locating existing IDOT, City of Springfield, CWLP, and St. John's Hospital facilities prior to performing any work. The Contractor shall also be liable for any damage to facilities resulting from inaccurate locating.

The Contractor may obtain, on request, plans for the existing electrical facilities from the agencies listed.

The Contractor shall also be responsible for locating and providing protection for facilities during all phases of construction. If at any time, the facilities are damaged, the Contractor shall immediately notify the Engineer and make all necessary arrangements for repair to the satisfaction of the Engineer. This work will not be paid for separately but shall be included in the contract bid prices.

### **LUMINAIRE, ELECTROLUMINESCENT DECORATIVE LIGHT TAPE**

**Description:** This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed luminaires at locations as indicated on the plans.

**Materials:** The materials shall be in accordance with Article 821.02 of the "Standard Specifications", plan details, and the following:

Luminaires shall have an Electroluminescent light engine. Luminaires will be mounted along the steel sacrificial beam on the NSRR bridge and precast prestressed fascia beam on the UPRR bridge as detailed on the plans. The fixture shall be catalog number LT200-EXT-CLASSIC NATURAL BLUE-LENGTH as shown on the plans as manufactured by Electro- LuminiX Lighting Corp., or an approved equal.

The fixture shall have the following salient characteristics:



- Dimming comes Standard
- Energy Efficient
- UV and Moisture Resistant
- Available in Lengths up to 300 FT
- Highly Visible through smoke and fog
- Thin profile
- Generates No Heat and is cool to the touch
- 0.25” clear barrier encapsulation envelops the light engine on all 4 sides
- 40,000 hour expected life
- 3 brightness settings
- 2” minimum width of lit area

Included with this pay item provide the power supply and power connector. Provide a stainless steel junction box NEMA 4X j-box with 1” threaded conduit hub for to protect the power connector. The junction box for the power supply will be IDOT pay item number 81300310.

**General:** The work shall be completed in accordance with Section 821 of the “Standard Specifications”, plan details, and as modified herein.

**Basis of Payment:** The work will be paid for at the contract unit price per foot for LUMINAIRE, DECORATIVE ELECTROLUMINESCENT LIGHT TAPE. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the luminaires.

### **LUMINAIRE, LED COBRA HEAD STYLE**

**Description:** This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed luminaires at locations as indicated on the plans.

**Materials:** The materials shall be in accordance with Article 821.02 of the “Standard Specifications”, plan details, and the following:

Luminaires shall have a 95 watt LED light engine. Luminaires on aluminum light poles with mast arms shall be catalog number LDRC-T3-B04-480-LCF as manufactured by LUMARK, or an approved equal.

The fixture shall have the following salient characteristics:

- Heavy duty die cast aluminum housing
- Removable door
- 3G vibration tested
- Tool-less entry for enhanced maintenance
- High efficiency LED optics with 4000K light color
- Designed to withstand a 10kV transient line surge
- Optimized thermal management and heavy duty die cast heat sink.
- Low temperature operation down to -30 Degree C.

- 90% Lumen maintenance at 60,000 hours per IESNA TM-21
- Mounting to be two bolt / one bracket slip fitter design
- 5 Stage super TGIC polyester powder paint finish, 2.5 mil nominal thickness
- 5 year limited warranty

**General:** The work shall be completed in accordance with Section 821 of the “Standard Specifications”, plan details, and as modified herein.

**Basis of Payment:** The work will be paid for at the contract unit price per each for LUMINAIRE, LED COBRA HEAD STYLE. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the luminaires.

### **LUMINAIRE, LED LINEAR 4FT WALL MOUNTED**

**Description:** This work shall consist of furnishing all equipment, material and labor necessary to properly install the proposed luminaires at locations as indicated on the plans.

**Materials:** The materials shall be in accordance with Article 821.02 of the “Standard Specifications”, plan details, and the following:

Luminaires shall have a 50 watt LED light engine. Luminaires will be wall mounted in the recessed notch as detailed on the drawings. The fixture shall be catalog number WL-A-3-40- 1/LEDR40-480V-FD-TP-SSH-HD85-WHT as manufactured by KURTZON LIGHTING, or an approved equal.

The fixture shall have the following salient characteristics:

- Double channel 304 type stainless steel housing painted white
- End Caps at each end of each run
- Closed cell 100% pure neoprene foam gasketing
- White high reflectance reflector
- White opal high impact virgin acrylic lens
- Provide joiner bands as needed for row mounting
- LED light source to meet LM-70 requirements for lumen maintenance and life.
- UL listed for wet location and 85 PSI hosedown
- IP-55 Rated
- 25 Year Warranty

As part of this pay item provide the necessary recessed junction boxes within the structure to facilitate routing the raceway from the light fixtures to the new lighting controller.

**General:** The work shall be completed in accordance with Section 821 of the “Standard Specifications”, plan details, and as modified herein.

**Basis of Payment:** The work will be paid for at the contract unit price per each for LUMINAIRE, LED LINEAR 4FT WALL MOUNTED. The unit price shall include the cost of all materials, equipment and labor required to furnish and install the

luminaires.

### **LUMINAIRE, METAL HALIDE HORIZONTAL MOUNT 400 WATT**

This work shall be in accordance with Section 821 of the Standard Specifications except as modified herein.

Luminaire shall be 400 Watt M-400 Luminaire with Cutoff Optics.

**Basis of Payment:** This work shall be paid for at the contract unit price each for LUMINAIRE, METAL HALIDE HORIZONTAL MOUNT 400 WATT and shall be payment in full for all labor, equipment, and materials required to supply and install the luminaire described above, complete.

### **OPERATION OF EXISTING AND TEMPORARY TRAFFIC SIGNALS**

The existing traffic signals at the intersection of Carpenter Street and 9<sup>th</sup> Street shall be completely removed, and the proposed signals shall be constructed as a part of the project. Temporary traffic signals shall be installed at Carpenter Street and 9<sup>th</sup> Street. The existing traffic signal controller and cabinet and video detection shall be reused for the temporary traffic signal operations. The Contractor shall furnish all labor, materials, and equipment required to keep the temporary traffic signals operational for as long as is required to follow the construction staging described in the plans; including, but not limited to, temporary traffic signal posts, temporary signal heads, and temporary wiring.

The existing traffic signals at the intersection of Carpenter Street and 11<sup>th</sup> Street shall be partially removed per the plans and specifications. Generally, the posts, poles, signal heads, foundations, and wiring for all equipment on the western quadrants of the intersection shall be removed. The existing controller and cabinet in the northwest quadrant shall be relocated as shown in the plans. The intersection shall operate as a three-way stop control condition (westbound Carpenter Street) with the existing signal heads covered during the construction.

### **PEDESTRIAN PUSH BUTTON**

This work shall be in accordance with Sections 888 and 1074 of the Standard Specifications except as modified herein.

The Contractor shall install the proposed pedestrian pushbuttons and signs on the traffic signal mast arms and posts. The proposed pedestrian pushbuttons and signs shall be installed so that the arrow on the sign corresponds to the associated street crossing and crosswalk.

All pedestrian pushbuttons shall have a round case and be equipped with a 2" diameter mushroom head for easy access, momentary LED indicator with audible buzzer, round and yellow housing.

The pedestrian pushbutton installation shall include all crossing signs and hardware required to

mount the pedestrian pushbutton. All hardware shall be of stainless steel construction. All bolts shall be 1/4" Hex Head and no self tapping/drilling screws will be allowed.

**Basis of Payment:** This work shall be paid for at the contract unit price each for PEDESTRIAN PUSH BUTTON and shall be payment in full for all labor, equipment, and materials required to supply and install the pedestrian push buttons described above, complete.

**PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER**

This work shall be in accordance with Section 881 and 1078 of the Standard Specifications except as modified herein.

The pedestrian signal head shall consist of a single 16" polycarbonate section and shall be equipped with an overlaid LED indication with countdown timer (Walking Person/Upraised Hand).

The traffic signal head shall have a yellow finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED signal face shall have international symbols (Upraised Hand - Color: Portland Orange, Walking Person - Color: Lunar White). Only filled indications will be allowed.

The LED assembly shall meet or exceed the following minimum specifications:

The LED assembly must conform to the following minimum specifications:

Lens : 16" x 18", Hard Coated for Abrasion Resistance, UV Stabilized Dome

LEDs: Interconnected to minimize the effect of single LED failures, Nominal Wattage White: 8W or less, Nominal Wattage Orange: 11W or less, Nominal Wattage Countdown: 6W

Luminous Intensity (min): Countdown = 1,400 cd/m<sup>2</sup>, Hand = 1,400 cd/m<sup>2</sup>, Person = 2,200 cd/m<sup>2</sup>

Product Warranty: 5 Year Replacement

Combination hand/person pedestrian signal modules shall incorporate separate power supplies for the hand and the person displays.

The assembly shall be capable of operating from 80 to 135 VAC with less than 10% variation in intensity, shall have an operating temperature range of -40° to 74°C, and shall be sealed and highly resistant to water intrusion.

All LED Pedestrian Signal Modules shall be fully compliant to the ITE PTCSI Part-2: LED

Pedestrian Traffic Signal Modules specifications adopted March 19, 2004 or the latest adopted version as listed on the ITE website at time of bid

The assembly shall be compatible with signal control equipment per NEMA TS-2, NEMA TS-1 standards, and include transient voltage protection and fusing to withstand high-repetition noise transients and low repetition high energy transients per NEMA standard 1992 per ITE VTCSH - STD Part 2.

**Basis of Payment:** This work will be paid for at the contract unit price per each for PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER and payment will be in full for all labor, equipment, and materials required to provide and install the pedestrian traffic signal heads equipped with LED indications described above, complete.

### **RELOCATE EXISTING TRAFFIC SIGNAL CONTROLLER**

This work shall be in accordance with Sections 857, 895, 1073, and 1074 of the Standard Specifications except as modified herein.

The Contractor shall provide all labor, materials, and equipment required for the work described below. The cost of this work shall be included in the bid price for this pay item. There will be no additional compensation for this work.

The existing controller and cabinet shall be relocated to the location shown in plans, and all existing equipment shall be removed and returned to the relocated cabinet at the proposed location.

**Basis of Payment:** This work will be paid for at the contract unit price each for RELOCATE EXISTING TRAFFIC SIGNAL CONTROLLER and shall be payment in full for all labor, materials, and equipment required to provide, test, and install the equipment described above, complete.

### **RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT**

This work shall be in accordance with Sections 857, 895, 1073, and 1074 of the Standard Specifications except as modified herein.

The Contractor shall provide all labor, materials, and equipment required for the work described below. The cost of this work shall be included in the bid price for this pay item. There will be no additional compensation for this work.

The existing video detection system shall be used to operate any temporary traffic signals and then relocated the proposed mast arm assembly in its existing intersection quadrant. The existing video detection system shall be connected to the controller at the intersection. New wires, of same gauge and number of conductors as existing, shall be pulled and connected to the controller at the location shown in the plans. No splicing of cable will be allowed.

Additionally, if existing traffic signal interconnect or emergency vehicle detection equipment is present at the intersection, then this equipment shall be relocated to a similar location at the intersection and reconnected to controller to maintain operations similar to the existing operations. No splicing of cable will be allowed.

**Basis of Payment:** This work will be paid for at the contract unit price each (per intersection) for RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT and shall be payment in full for all labor, materials, and equipment required to provide, test, and install the equipment described above, complete.

### **REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT**

This work shall be in accordance with Section 895 of the Standard Specifications except as modified herein.

The list of removal items shown below should represent an accurate listing of removal items along with other associated work; however, it is the Contractor's responsibility to verify all quantities prior to bidding. All traffic signal equipment at the intersection of 9<sup>th</sup> and Carpenter, with exception given to three handholes and video detection equipment, will be removed in full and no additional compensation will be granted. All traffic signal poles, mast arms, traffic signal heads, wiring on the western half of the 11<sup>th</sup> and Carpenter intersection, will be removed in full and no additional compensation will be granted.

The Contractor shall remove all wires pertaining to existing traffic signals and grounding, existing traffic signal heads, existing pedestrian signal heads, existing pedestrian push buttons, existing luminaries if present, existing mast arms and posts, existing concrete foundations for mast arms and posts, and existing controller foundations at the intersection of 9<sup>th</sup> and Carpenter. In areas where existing foundations and handholes are removed and existing sidewalk is not proposed for construction this pay item shall cover all work related to any sidewalk removal or replacement. This work shall be included in the bid price for this pay item.

A traffic signal interconnect system runs along the 9<sup>th</sup> Street corridor and routes through the intersection of 9<sup>th</sup> Street and Carpenter Street. The wiring for this system shall be disconnected and pulled back to the undisturbed handhole closest to the construction limits of the intersection. The wiring shall be stored in the handhole and pulled to reconnect the existing systems as soon as the intersection removals are complete. No additional compensation will be allowed to disconnect the existing system, pull the wiring to the undisturbed handhole, repulling the existing wiring, or reconnection of the existing systems.

The Contractor shall deliver all removal items to the City of Springfield to their desired location. The point of contact is Lori Williams at (217) 789-2260.

The Contractor shall dispose of all other items off of the right-of-way and reflect the salvage value of this equipment in the unit bid price for this pay item.

**Method of Measurement:** All traffic signal equipment at each intersection listed (as shown above for each intersection) will be paid for as each (per intersection).

**Basis of Payment:** The above work will be paid for at the contract unit price each (per intersection) for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT and shall be payment in full for removing, disposing of, and transporting the equipment described above, complete. No additional compensation will be allowed.

### **SERVICE INSTALLATION, TYPE C (MODIFIED)**

This work shall be in accordance with Section 805 and 1086 of the Standard Specifications except as modified herein.

Galvanized steel conduit shall be used for the service riser. The use of PVC conduit will not be allowed.

The service disconnect enclosed shall be a stainless steel, weatherproof NEMA 4X enclosure that meets the following specifications:

**60-Ampere Fused Disconnect Switch:** The fused disconnect switch shall be single-throw, three-wire (two poles, two fuses, and solid neutral). The switch shall provide for locking the blades in either the "On" or "Off" position with one or two padlocks and for locking the cover in the closed position. The fuses shall be cartridge fuses and contacts shall be rated 60 amperes, 240 volts and included with the disconnect installation.

The service disconnect shall be installed on a 6" x 6" x 10" treated post at a maximum height of 42".

The City of Springfield will furnish all padlocks.

The service for each proposed traffic signal will be pulled from the existing service location. It is the contractor's responsibility to verify the existing location and determine the wire, conduit, and any other material necessary to extend the existing service to the proposed traffic signal controller location. The proposed service will be metered. Applicable sections of the Standard Specifications and State Standards for Service Installation, Type A shall be followed.

This underground service will be metered. Applicable sections of the Standard Specifications and State Standards for Service Installation, Type A shall be followed.

**Basis of Payment:** This work shall be paid for at the contract unit price each for SERVICE INSTALLATION, TYPE C (MODIFIED) which price shall be payment in full for all labor, equipment, and materials required to provide the electrical service installation described above, complete.

### **SIGNAL HEAD, POLYCARBONATE, LED**

This work shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

The traffic signal heads shall consist of 12" polycarbonate sections and shall be equipped with LED assemblies for all red bulb, yellow bulb, green bulb, red arrow, yellow arrow, and green arrow indications.

The traffic signal heads shall have a yellow finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED modules shall conform to the specifications listed under the section TRAFFIC SIGNAL LED MODULE SPECIFICATIONS.

**Basis of Payment:** This work will be paid for at the contract unit prices each for SIGNAL HEAD, POLYCARBONATE, LED of the type specified and shall be payment in full for all labor, materials, and equipment required to provide and install the traffic signal heads described above, complete.

### **ST. JOHN'S MEDIUM VOLTAGE DISTRIBUTION RELOCATION**

#### **UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS**

**General:** For underground ducts and raceways for electrical systems.

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions. Conform to all requirements of IDOT's Standard of Specifications for Road and Bridge Construction.

#### **Summary**

**A. Section Includes:**

1. Concrete-encased conduit, ducts, and duct accessories.
2. Manholes.
3. Sump pump, controller, sump, valves, fittings and discharge piping.
4. 48 in. steel casing bored and jacked into place.
5. Sitework.

#### **Definitions**

- A. Trafficways:** Locations where vehicular or pedestrian traffic is a normal course of events.



### Action Submittals

- A. Product Data: For each type of product.
  - 1. Include duct-bank materials, including separators and miscellaneous components.
  - 2. Include ducts and conduits and their accessories, including elbows, end bells, bends, fittings, and solvent cement.
  - 3. Include accessories for manholes.
  - 4. Include pump, controller, sump, valves, fittings and discharge piping.
  - 5. Include warning tape.
  
- B. Shop Drawings:
  - 1. Precast or Factory-Fabricated Underground Utility Structures:
    - a. Include plans, elevations, sections, details, attachments to other work, and accessories.
    - b. Include duct entry provisions, including locations and duct sizes.
    - c. Include reinforcement details.
    - d. Include frame and cover design and manhole frame support rings.
    - e. Include Ladder details.
    - f. Include grounding details.
    - g. Include dimensioned locations of cable rack inserts, pulling-in and lifting irons, and sumps.
    - h. Include joint details.

### Informational Submittals

- A. Product Certificates: For concrete and steel used in precast concrete manholes, as required by ASTM C 858.
  
- B. Source quality-control reports.
  
- C. Field quality-control reports.

### Maintenance Materials Submittals

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  
- B. Furnish cable-support stanchions, arms, and associated fasteners in quantities equal to 5 percent of quantity of each item installed.

### Field Conditions

- A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by St. John's or others unless permitted under the following

conditions, and then only after arranging to provide temporary electrical service according to requirements indicated:

1. Notify Engineer, Construction Manager, and Owner no fewer than two (2) days in advance of proposed interruption of electrical service.
  2. Do not proceed with interruption of electrical service without St. John's written permission.
- B. Ground Water: Assume ground-water level is at grade level unless a lower water table is noted on Drawings.

**Products:** For underground ducts and raceways for electrical systems.

General Requirements for Ducts and Raceways

- A. Comply with ANSI C2.

Underground Conduit in Casing Pipe

- A. Follow requirements of 2012 IDOT Standard Specifications for Road and Bridge Construction Article 1006.5 (d).
- B. Where shown on the Plans, ducts shall be constructed in Casing Pipe bored and jacked in place. This work will be done in accordance with the requirements of any Permits obtained from Norfolk Southern (N.S.) Railroad Company for this work and in accordance with the following paragraphs:
  1. Pipe materials through the casing pipe shall be shown on the Plans or as described elsewhere in these Special Provisions.
  2. Casing shall be smooth wall steel casing pipe, ASTM Designation A-252 Grade "2," of size and thickness shown on the drawings.
  3. Casing pipe shall have its interior cleaned, primed, and the exterior shall be cleaned, primed, and coated to a thickness of 3/32 in. +/- 1/32 in. with coal-tar enamel. All materials and application shall be in accordance with American Water Works Association Specifications C-210.
  4. The Contractor shall assume all costs incurred in complying with any insurance and bonding requirements that may be imposed on such construction by the N.S. Railroad Company.

Conduit

- A. Rigid Steel Conduit: Galvanized. Comply with ANSI C80.1.
- B. RNC: NEMA TC 2, Type EPC-40-PVC, UL 651, with matching fittings by same manufacturer as the conduit, complying with NEMA TC 3 and UL 514B.

Nonmetallic Ducts and Duct Accessories

- A. Manufacturers: Subject to compliance with requirements:
  - 1. Carlon.
  - 2. Underground Devices Inc.
  - 3. Cantex.
  - 4. Arnco Corp.
  - 5. Condux International In
- B. Underground Plastic Utilities Duct: NEMA TC 2, UL 651, ASTM F 512, Type EPC-40, with matching fittings complying with NEMA TC 3 by same manufacturer as the duct.
- C. Duct Accessories:
  - 1. Duct Separators: Factory-fabricated rigid PVC interlocking spacers, sized for type and size of ducts with which used, and selected to provide minimum duct spacing indicated while supporting ducts during concreting or backfilling.
  - 2. Warning Tape: Underground-line warning tape.

Precast Concrete Handholes and Boxes

- A. Manufacturers: Subject to compliance with requirements, provide products by one (1) of the following:
  - 1. Oldcastle Precast, Inc.
  - 2. Trenwa.
  - 3. Utility Concrete Products, LLC.
  - 4. Utility Vault Co.
- B. Comply with ASTM C 858 for design and manufacturing processes.
- C. Description: Factory-fabricated, reinforced-concrete, monolithically poured walls and bottom unless open-bottom enclosures are indicated. Frame and cover shall form top of enclosure and shall have load rating consistent with that of handhole or box.
  - 1. Frame and Cover: Weatherproof cast-iron frame, with cast-iron cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.
  - 2. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
  - 3. Cover Legend: Molded lettering, "ELECTRIC."
  - 4. Configuration: Units shall be designed for flush burial and have integral closed bottom unless otherwise indicated.
  - 5. Extensions and Slabs: Designed to mate with bottom of enclosure. Same material as enclosure.
    - a. Extension shall provide increased depth of 12 in.
    - b. Slab: Same dimensions as bottom of enclosure, and arranged to provide closure.

6. Joint Sealant: Asphaltic-butyl material with adhesion, cohesion, flexibility, and durability properties necessary to withstand maximum hydrostatic pressures at the installation location with the ground-water level at grade.
7. Windows: Precast openings in walls, arranged to match dimensions and elevations of approaching ducts and duct banks, plus an additional 12 in. vertically and horizontally to accommodate alignment variations.
  - a. Windows shall be located no less than 6 in. from interior surfaces of walls, floors, or frames and covers of handholes, but close enough to corners to facilitate racking of cables on walls.
  - b. Window opening shall have cast-in-place, welded-wire fabric reinforcement for field cutting and bending to tie in to concrete envelopes of duct banks.
  - c. Window openings shall be framed with at least two (2) additional No. 3 steel reinforcing bars in concrete around each opening.

#### Sump Pump, Controller, Valves, Pipes and Accessories

- A. Manufacturers: Subject to compliance with requirements, provide products by one (1) of the following:
  1. Grundfos Pumps Corp.
  2. Little Giant Pump Co.
  3. Weil Pump Company.
  4. Zoeller Company.
- B. Description: Factory assembled and tested sump-pump unit.
- C. Pump Type: Submersible, end suction, single stage, close-coupled, overhung impeller, centrifugal sump pump as defined in HI 1.1-1.2 and HI 1.3. The casing shall be cast iron with a strainer inlet, legs that elevate the pump to permit flow into the impeller, and a vertical 2" diameter discharge for piping connection. The pump and motor shall be stainless steel with factory sealed ball bearings. The pump seal shall be mechanical. The impeller shall be statically and dynamically balanced, ASTM A 48, Class No. 25 A cast iron. The motor shall be hermetically sealed, capacitor-start type with built in overload protection, and three conductor waterproof power cable of length required with grounding plug and cable sealing assembly for connection at the pump.
- D. Controls: The enclosure shall be NEMA 250, Type 4X, wall mounted. Switches shall be non-mercury float type in NEMA 250, Type 6 enclosures with mounting rod and electric cables. There shall be a high water alarm float and matching control and electric bell. There shall be three floats, two for on-off status of the pump and one for alarm status.
- E. Control interface Features: Remote alarm contracts for remote alarm interface. Building automation system interface – Auxiliary contacts in the pump controls for interface to building automation system and capable of providing the following; on-off status of the pump, and alarm status.

- F. Sump Pump Basin: the basin shall be factory fabricated, watertight, and suitable for casting into the floor of the utility structure. The basin shall be large enough to fit the pump, discharge pipe and floats.
- G. Valves and Fittings: the sump pump discharge shall have a vertical riser pipe with the following valves and fittings in order lowest to highest; union, check valve, isolation ball valve. The union shall be PVC solvent weld with a threaded coupler to allow the pump to be removed from the discharge pipe. The check valve shall be a 2" ball style check valve with socket solvent weld joints for schedule 40 PVC pipe. The ball valve shall be a 2" full port 90 degree valve. The valve shall be PVC with socket solvent weld joints for schedule 40 PVC pipe.
- H. Pump Discharge Pipe: the pump discharge pipe and fittings shall be Schedule 40 PVC meeting ASTM D1785. The pipe shall be manufactured from a Type I, Grade I Polyvinyl Chloride (PVC) compound with a cell classification of 12454 per ASTM D1784. Joints shall be solvent weld per ASTM D2672.

#### Utility Structure Accessories

- A. Manufacturers: Subject to compliance with requirements, provide products by one (1) of the following:
  - 1. Bilco Company (The).
  - 2. Campbell Foundry Company.
  - 3. Carder Concrete Products.
  - 4. Christy Concrete Products.
  - 5. East Jordan Iron Works, Inc.
  - 6. Elmhurst-Chicago Stone Co.
  - 7. McKinley Iron Works, Inc.
  - 8. Neenah Foundry.
  - 9. NewBasis.
  - 10. Oldcastle Precast, Inc.
  - 11. Osburn Associates, Inc.
  - 12. Pennsylvania Insert Corporation.
  - 13. Quazite: Hubbell Power Systems, Inc.
  - 14. Rinker Group, Ltd.
  - 15. Riverton Concrete Products.
  - 16. Underground Devices, Inc.
  - 17. Utility Concrete Products, LLC.
  - 18. Utility Vault Co.
  - 19. Wausau Tile Inc.
- B. Manhole Frames, Covers, and Chimney Components: Comply with structural design loading specified for manhole.
  - 1. Frame and Cover: Weatherproof, gray cast iron complying with ASTM A 48/A 48M, Class 30B with milled cover-to-frame bearing surfaces; diameter, 29 in.:

- a. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
  - b. Special Covers: Recess in face of cover designed to accept finish material in paved areas.
2. Cover Legend: Cast in. Selected to suit system:
- a. Legend: "ELECTRIC-HV" for duct systems with medium-voltage cables.
3. Manhole Chimney Components: Precast concrete rings with dimensions matched to those of roof opening.
- a. Mortar for Chimney Ring and Frame and Cover Joints: Comply with ASTM C 270, Type M, except for quantities less than 2.0 cu. ft. where packaged mix complying with ASTM C 387, Type M, may be used.
  - b. Seal joints watertight using preformed plastic or rubber conforming to ASTM C 990. Install sealing material according to the sealant manufacturers' printed instructions.
- C. Manhole Sump Frame and Grate: ASTM A 48/A 48M, Class 30B, gray cast iron.
- D. Pulling Eyes in Concrete Walls: Eyebolt with reinforcing-bar fastening insert, 2-in.-diameter eye, and 1-by-4-in. bolt.
1. Working Load Embedded in 6-In., 4000-psi Concrete: 13,000-lbf minimum tension.
- E. Pulling Eyes in Nonconcrete Walls: Eyebolt with reinforced fastening, 1-1/4-in.-diameter eye, rated 2,500-lbf minimum tension.
- F. Pulling-In and Lifting Irons in Concrete Floors: 7/8-in.- diameter, hot-dip galvanized, bent steel rod; stress relieved after forming; and fastened to reinforcing rod. Exposed triangular opening.
1. Ultimate Yield Strength: 40,000-lbf shear and 60,000-lbf tension.
- G. Bolting Inserts for Concrete Utility Structure Cable Racks and Other Attachments: Flared, threaded inserts of noncorrosive, chemical-resistant, nonconductive thermoplastic material; 1/2-in. ID by 2-3/4 in. deep, flared to 1-1/4 in. minimum at base.
1. Tested Ultimate Pullout Strength: 12,000 lbf minimum.
- H. Ground Rod Sleeve: 3-in., PVC conduit sleeve in manhole floors 2 in. from the wall adjacent to, but not underneath, the ducts routed from the facility.

- I. Expansion Anchors for Installation after Concrete Is Cast: Zinc-plated, carbon-steel-wedge type with stainless-steel expander clip with 1/2-in. bolt, 5300-lbf rated pullout strength, and minimum 6800-lbf rated shear strength.
- J. Cable Rack Assembly: Steel, hot-dip galvanized, except insulators.
  - 1. Stanchions: T-section or channel; 2-1/4-in. nominal size; punched with 14 holes on 1-1/2-in. centers for cable-arm attachment.
  - 2. Arms: 1-1/2 in. wide, lengths ranging from 3 in. with 450-lb minimum capacity to 18 in. with 250-lb minimum capacity. Arms shall have slots along full length for cable ties and be arranged for secure mounting in horizontal position at any vertical location on stanchions.
  - 3. Insulators: High-glaze, wet-process porcelain arranged for mounting on cable arms.
- K. Duct-Sealing Compound: Nonhardening, safe for contact with human skin, not deleterious to cable insulation, and workable at temperatures as low as 35°F. Capable of withstanding temperature of 300°F without slump and adhering to clean surfaces of plastic ducts, metallic conduits, conduit coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and common metals.
- L. Fixed Manhole Ladders: Arranged for attachment to roof and floor of manhole. Ladder and mounting brackets and braces shall be fabricated from nonconductive, structural-grade, fiberglass-reinforced resin.
- M. Cover Hooks: Heavy duty, designed for lifts 60 lbf and greater. Two (2) required.

#### Source Quality Control

- A. Test and inspect precast concrete utility structures according to ASTM C 1037.

**Execution:** For underground ducts and raceways for electrical systems:

#### Preparation

- A. Coordinate layout and installation of ducts, manholes, handholes, and boxes with final arrangement of other utilities, site grading, and surface features as determined in the field. Notify Engineer if there is a conflict between areas of excavation and existing structures or archaeological sites to remain.
- B. Coordinate elevations of ducts and duct-bank entrances into manholes, handholes, and boxes with final locations and profiles of ducts and duct banks, as determined by coordination with other utilities, underground obstructions, and surface features. Revise locations and elevations as required to suit field conditions and to ensure that duct runs drain to manholes and handholes, and as approved by Engineer.
- C. Clear and grub vegetation to be removed, and protect vegetation to remain.

### Underground Conduit in Casing Pipe Installation

- A. Installation of pipe by jacking, boring, or tunneling shall be carried on as may be required by the Standard Specifications for Road and Bridge Construction, Article 552.04, these Special Provisions, and "Specifications for Pipeline Occupancy of Norfolk Southern Corporation," NSCE-8, dated 5/16/2001. The N.S. Railroad Company shall be notified of impending construction a minimum of five (5) working days prior to commencement of actual boring operations:
1. Properly designed casing spacers, subject to the approval of the engineer, shall be used as required to adjust the pipe within the casing to meet planned grade lines.
  2. The ends of the casing pipe shall be closed by filling all voids in casing with flowable concrete fill.
  3. All working operations of the Contractor, subcontractor and/or their agents or employees must be subordinate to the free and unobstructed use of the Railway. The Contractor shall save harmless the City of Springfield, St. John's Hospital and the Norfolk Southern Railroad Company, against all claims, suits or judgments arising because of or resulting from all operations, action, or omission of the Contractor subcontractor, and/or their agents or employees.
- B. The Contractor shall inspect the location where the pipe is to be installed and familiarize himself with the conditions under which the work will be performed and with all necessary details as to the orderly prosecution of the work. The omission of any details for the satisfactory installation of the work in its entirety which may not appear herein, shall not relieve the Contractor of full responsibility.
- C. If, in the opinion of the Engineer, the installation of the pipe is being conducted in an unsafe manner, the Contractor will be required to stop work and bulkhead the heading until suitable agreements are reached between the Contractor and the Engineer. The Owner and the N.S. Railroad Company will not be responsible and shall be saved harmless in the event of delays to the Contractor's work resulting from any cause whatsoever.
- D. Boring or jacking pits shall not be opened more than forty-eight (48) hours in advance of construction and shall be completely backfilled within forty-eight (48) hours after completion of boring or jacking operations. Roadside edges of boring or jacking pits shall be located 10 ft distance from the edge of a roadway surface.

### Underground Duct Application

- A. Ducts for Electrical Cables More than 600 V: First 10 ft outside of structure walls to be RGS then converted to RNC, NEMA Type EPC-40-PVC, in concrete-encased duct bank unless otherwise indicated.

### Underground Enclosure Application

- A. Manholes: Precast concrete:



1. Units Located in Roadways and Other Deliberate Traffic Paths by Heavy or Medium Vehicles: HS-20 structural load rating according to AASHTO HB 17.

#### Sump Pump, Controller, Valves, Pipes and Accessories Application

- A. Pump Installation Standard – Comply with HI 1.4 for the installation of the pumps.
- B. Pump Startup Service – Complete installation and startup checks according to manufacturer’s written instructions.
- C. Demonstration – Train the Owner’s maintenance personnel to adjust, operate and maintain controls and pumps.
- D. Pipes – The pump discharge pipe shall be installed 42-in below existing ground elevation. The trench shall be backfilled with FA-6. The asphalt parking lot surface shall be patched with like material. The electrical structure shall have a cored hole for the discharge pipe and the annular space between the pipe and structure shall be sealed with non-shrink grout. The Contractor shall uncover the existing 2-in discharge pipe prior to installing the new pipe to confirm pipe material, elevation and fittings required to connect to the pipe.
- E. The pump, controller, pipes, valves, fittings, floats, electrical connections, excavation, backfill, surface restoration and all items required to install the sump pump system and connect it to the Hospitals automation systems shall be considered part of the pay item ST. JOHN’S MEDIUM-VOLTAGE DISTRIBUTION RELOCATION.

#### Sitework

- A. Temporary Fencing: The contractor shall manually erect a temporary fence as designated on the plans or where directed by the Engineer. The temporary fence shall be similar to plastic or wood lathe snow fence, and shall be a minimum of 4 ft-high with stakes or other supports placed a maximum of 15 ft apart. This work will not be paid for separately, but included in the contract unit price of “St. John’s Medium-Voltage Distribution Relocation.”
- B. Pavement and Removal: This work shall consist of full-depth saw cutting and removing portions of the asphalt parking lot, as required. This work shall be according to Section 442 of the IDOT SSRBC, where applicable. This work will not be paid for separately, but included in the contract unit price of “St. John’s Medium-Voltage Distribution Relocation.”
- C. Excavation: This work shall be in accordance with Section 550.04 of the IDOT SSRBC, where applicable. This work will not be paid for separately, but included in the contract unit price of “St. John’s Medium-Voltage Distribution Relocation.”
- D. Backfilling: This work shall be in accordance with Section 208 and 550.07 of the IDOT SSRBC, where applicable, and according to this special provision. Backfill material shall consist of suitable excavation material or trench backfill. Trench backfill shall be used when under pavement or parking lot. This work will not be

paid for separately, but included in the contract unit price of "St. John's Medium-Voltage Distribution Relocation."

- E. Restore Surface Features: Restore surface features at areas disturbed by excavation, sorting of dirt, cable laying, and other work. Restoring vegetation and include topsoiling, fertilizing, liming, seeding, and mulching. Existing aggregate surfaces shall also be restored in-kind. This work shall be in accordance with Sections 211, 250, 251, and 402 of the IDOT SSRBC, where applicable. This work will not be paid for separately, but included in the contract unit price of "St. John's Medium-Voltage Distribution Relocation."
- F. Pavement Patching: The existing asphalt pavement shall be patched in the path of underground ducts and utility structures. The pavement patch shall be of the same thickness of the removed pavement. This work shall be in accordance with Section 442 of the IDOT SSRBC, where applicable. This work will not be paid for separately, but included in the contract unit price of "St. John's Medium-Voltage Distribution Relocation."
- G. Signs: All pipelines (except those in streets where it would not be practical to do so) shall be prominently marked at right-of-way lines (on both sides of track for crossings) by durable, weatherproof signs located over the centerline of the pipe. Signs shall show the following:
  - 1. Name and address of owner.
  - 2. Contents of pipe.
  - 3. Pipe depth below a grade at point of a sign.
  - 4. Emergency telephone number in event of pipe rupture.

This work will not be paid for separately, but included in the contract unit price at St. John's Medium-Voltage Distribution Relocation.

#### Duct Installation

- A. Install ducts according to NEMA TCB 2.
- B. Slope: Pitch ducts a minimum slope of 1:300 down toward manholes and handholes and away from buildings and equipment. Slope ducts from a high point in runs between two (2) manholes, to drain in both directions.
- C. Curves and Bends: Use 5-degree angle couplings for small changes in direction. Use manufactured long sweep bends with a minimum radius of 48 in., both horizontally and vertically, at other locations unless otherwise indicated.
- D. Joints: Use solvent-cemented joints in ducts and fittings and make watertight according to manufacturer's written instructions. Stagger couplings so those of adjacent ducts do not lie in same plane.

- E. Duct Entrances to Manholes and Concrete and Polymer Concrete Handholes: Use end bells, spaced approximately 10 in. o.c. for 5-in. ducts, and vary proportionately for other duct sizes.
1. Begin range from regular spacing to end-bell spacing 10 ft from the end bell without reducing duct line slope and without forming a trap in the line.
  2. Direct-Buried Duct Banks: Install an expansion and deflection fitting in each conduit in the area of disturbed earth adjacent to manhole or handhole. Install an expansion fitting near the center of all straight line direct-buried duct banks with calculated expansion of more than 3/4 in.
  3. Grout end bells into structure walls from both sides to provide watertight entrances.
- F. Structure Wall Penetrations: Make a transition from underground duct to rigid steel conduit at least 10 ft outside the structures wall, without reducing duct line slope away from the building, and without forming a trap in the line. Use fittings manufactured for duct-to-conduit transition.
- G. Sealing: Provide temporary closure at terminations of ducts that have cables pulled. Seal spare ducts at terminations. Use sealing compound and plugs to withstand at least 15-psig hydrostatic pressure.
- H. Pulling Cord: Install 100-lbf- test nylon cord in empty ducts.
- I. Concrete-Encased Ducts: Support ducts on duct separators.
1. Excavate trench bottom to provide firm and uniform support for duct bank.
  2. Width: Excavate trench 12 in. wider than duct bank on each side.
  3. Depth: Install top of duct bank at least 36 in. below finished grade.
  4. Support ducts on duct separators coordinated with duct size, duct spacing, and outdoor temperature.
  5. Separator Installation: Space separators close enough to prevent sagging and deforming of ducts, with not less than four (4) spacers per 20 ft of duct. Secure separators to earth and to ducts to prevent floating during concreting. Stagger separators approximately 6 in. between tiers. Tie entire assembly together using fabric straps; do not use tie wires or reinforcing steel that may form conductive or magnetic loops around ducts or duct groups.
  6. Minimum Space between Ducts: 3 in. between ducts and exterior envelope wall, 2 in. between ducts for like services, and 4 in. between power and signal ducts.
  7. Elbows: Use manufactured duct elbows for stub-ups at poles and equipment, at building entrances through floor, and at changes of direction in duct run unless otherwise indicated. Extend concrete encasement throughout length of elbow.
  8. Elbows: Use manufactured rigid steel conduit elbows for stub-ups at poles and equipment, at building entrances through floor, and at changes of direction in duct run.
    - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 in. of concrete.

- b. **Stub-Ups to Equipment:** For equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 in. from edge of base. Install insulated grounding bushings on terminations at equipment.
9. **Reinforcement:** Reinforce concrete-encased duct banks where they cross disturbed earth and where indicated. Arrange reinforcing rods and ties without forming conductive or magnetic loops around ducts or duct groups.
10. **Forms:** Use walls of trench to form side walls of duct bank where soil is self-supporting and concrete envelope can be poured without soil inclusions; otherwise, use forms.
11. **Concrete Cover:** Install a minimum of 3 in. of concrete cover at top and bottom, and a minimum of 2 in. on each side of duct bank.
12. **Concreting Sequence:** Pour each run of envelope between manholes or other terminations in one (1) continuous operation.
  - a. Start at one (1) end and finish at the other, allowing for expansion and contraction of ducts as their temperature changes during and after the pour. Use expansion fittings installed according to manufacturer's written recommendations, or use other specific measures to prevent expansion-contraction damage.
  - b. If more than one (1) pour is necessary, terminate each pour in a vertical plane and install 3/4-in. reinforcing-rod dowels extending a minimum of 18 in. into concrete on both sides of joint near corners of envelope.
13. **Pouring Concrete:** Comply with requirements in IDOT's Standard Specifications. Place concrete carefully during pours to prevent voids under and between conduits and at exterior surface of envelope. Do not allow a heavy mass of concrete to fall directly onto ducts. Allow concrete to flow to center of bank and rise up in middle, uniformly filling all open spaces. Do not use power-driven agitating equipment unless specifically designed for duct-bank application.

#### Installation of Concrete Manholes, Handholes, and Boxes

##### A. Precast Concrete Handhole and Manhole Installation:

1. Comply with ASTM C 891 unless otherwise indicated.
2. Install units level and plumb and with orientation and depth coordinated with connecting ducts, to minimize bends and deflections required for proper entrances.
3. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1-in. sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

##### B. Elevations:

1. **Manhole Roof:** Install with rooftop at least 24 in. below finished grade.
2. **Manhole Frame:** In paved areas and trafficways, set frames flush with finished grade. Set other manhole frames 1 in. above finished grade.
3. **Install handholes with bottom below frost line.**

4. Handhole Covers: In paved areas and trafficways, set surface flush with finished grade. Set covers of other handholes 1 in. above finished grade.
  5. Where indicated, cast handhole cover frame integrally with handhole structure.
- C. Drainage: Install drains in bottom of manholes where indicated. Coordinate with drainage provisions indicated.
- D. Manhole Access: Circular opening in manhole roof; sized to match cover size.
1. Manholes with Fixed Ladders: Offset access opening from manhole centerlines to align with ladder.
  2. Install chimney, constructed of precast concrete collars and rings, to support cast-iron frame to connect cover with manhole roof opening. Provide moisture-tight masonry joints and waterproof grouting for frame to chimney.
- E. Waterproofing: Apply waterproofing to exterior surfaces of manholes after concrete has cured at least three (3) days. After ducts have been connected and grouted, and before backfilling, waterproof joints and connections, and touch up abrasions and scars. Waterproof exterior of manhole chimneys after mortar has cured at least three (3) days.
- F. Hardware: Install removable hardware, including pulling eyes, cable stanchions, cable arms, as required for installation and support of cables and conductors and as indicated.
- G. Fixed Manhole Ladders: Arrange to provide for safe entry with maximum clearance from cables and other items in manholes.
- H. Field-Installed Bolting Anchors in Manholes and Concrete Handholes: Do not drill deeper than 3-7/8 in. for manholes and 2 in. for handholes, for anchor bolts installed in the field. Use a minimum of two (2) anchors for each cable stanchion.

#### Filling in Existing Manhole

- A. After the new raceway and distribution system is installed and operational, pull out all of the existing wiring and recycle it. Provide a credit for the recycled copper. Cut the top of the manhole to 30 in. below grade and fill in the void in the remaining manhole with sand and top off with topsoil. Grade and seed the area. Break the bottom of the manhole up prior to backfilling to allow proper natural drainage.

#### Filling Existing Abandoned 2-24" Steel Casing Full with Controlled Low Strength Material (CLSM)

- A. Upon completion of re-routing the existing primary circuits, the existing 2-24" steel pipe casings, and the 18 conduits under the railroad tracks are to be pumped full with (CLSM). CLSM as specified by the IDOT Standard Specifications for Road and Bridge Construction.

- B. The concrete encased duct bank to the west of the manhole must be cut open 2'- 0" past the new right-of-way, the ends of the conduits plugged and the 18 conduits are to be filled completely with CLSM.

#### Grounding

- C. Ground underground ducts and utility structures according to IDOT's Standard Specifications.

#### Field Quality Control

- A. Perform the following tests and inspections and prepare test reports:
  - 1. Demonstrate capability and compliance with requirements on completion of installation of underground ducts and utility structures.
  - 2. Pull solid aluminum or wood test mandrel through duct to prove joint integrity and adequate bend radii, and test for out-of-round duct. Provide a minimum 6-in.- long mandrel equal to 80 percent fill of duct. If obstructions are indicated, remove obstructions and retest.
  - 3. Test manhole grounding to ensure electrical continuity of grounding and bonding connections. Measure and report ground resistance.
- B. Correct deficiencies and retest as specified above to demonstrate compliance.

#### Cleaning

- A. Pull leather-washer-type duct cleaner, with graduated washer sizes, through full length of ducts. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts.
- B. Clean internal surfaces of manholes, including sump. Remove foreign material.

#### MEDIUM-VOLTAGE CABLES

**General:** For medium-voltage cables:

#### Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions. Conform to IDOT's Standard Specifications for Road and Bridge Construction.

#### Summary

- A. This Section includes cables and related splices, terminations, and accessories for medium-voltage electrical distribution systems.

#### Definitions

- A. NETA ATS: Acceptance Testing Specification.

Submittals

- A. Product Data: For each type of cable indicated. Include splices and terminations for cables and cable accessories.
- B. Cable Splicer: Provide Owner with the names of the cable splicers to be employed, together with satisfactory proof that each splicer has had at least three (3) years' experience in splicing medium voltage cables and is experienced with the type and rating of cables to be spliced.
- C. Material Certificates: For each cable and accessory type, signed by manufacturers.
- D. Source quality-control test reports.
- E. Field quality-control test reports.

Quality Assurance

- A. Installer: Engage a cable splicer, trained and certified by splice material manufacturer, to install, splice, and terminate medium-voltage cable.
- B. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
  - 1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.
- C. Source Limitations: Obtain cables and accessories through one (1) source from a single manufacturer.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- E. Comply with IEEE C2 and NFPA 70.
- F. Comply with AEIC C6.
- G. Comply with UL Standard 1072 for Medium Voltage Solid Dielectric Cable.
- H. Comply with ICEA S-68-516 for Ethylene-Propylene-rubber insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.
- I. The medium voltage power cable shall have a twenty (20) year performance record in utility and industrial applications.

### Project Conditions

- A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:
1. Notify Owner no fewer than seven (7) days in advance of proposed interruption of electric service.
  2. Do not proceed with interruption of electric service without Owner's written permission.

### **Products for Medium Voltage Cables:**

#### Manufacturers

- A. Manufacturers: Subject to compliance with requirements, provide products by one (1) of the following:
1. Cables:
    - a. Aetna Insulated Wire, LLC
    - b. General Cable Technologies Corporation.
    - c. Kerite Co. (The); Hubbell Incorporated.
    - d. Okonite Company (The).
  2. Cable Splicing and Terminating Products and Accessories:
    - a. Raychem Corp.; Telephone Energy and Industrial Division; Tyco International Ltd.
    - b. RTE Components; Cooper Power Systems, Inc.
    - c. Thomas & Betts Corporation/Elastimold.
    - d. 3M; Electrical Products Division.

#### Cables

- A. Cable Type: MV-105.
- B. Comply with UL 1072, AEIC CS8, ICEA S-68-516, and NEMA WC74.
- C. Conductor: Coated or uncoated copper.
- D. Conductor Stranding: Concentric lay, Class B per ASTM 496.
- E. Strand Filling: Conductor interstices are filled with impermeable compound.
- F. Conductor Insulation: Ethylene-propylene rubber (EPR):
1. Voltage Rating: 15 kV.



2. Insulation Thickness: 133 percent insulation level. The average thickness of insulation shall be as specified by AEIC.
  3. Cable insulation shall meet or exceed electrical and physical requirements of ICES S-93-639/NEMA WC 74 & S-97-682, AEIC CS8, and UL 1072.
  4. The minimum average thickness shall be 220 mils for 15kV.
- G. Shielding: An extruded layer of black semi-conducting thermo-setting compound shall be applied directly over the insulation. Directly over the insulation shield, there shall be a helically applied 5 mil copper shielding tape with a minimum of 25 percent overlap.
- H. Cable Jacket: Sunlight-resistant PVC.

### Splice Kits

- A. Connectors and Splice Kits: Comply with IEEE 404; type as recommended by cable or splicing kit manufacturer for the application.
- B. Splicing Products: As recommended, in writing, by splicing kit manufacturer for specific sizes, ratings, and configurations of cable conductors. Include all components required for complete splice, with detailed instructions:
1. Combination tape and cold-shrink-rubber sleeve kit with re-jacketing by cast-epoxy-resin encasement or other waterproof, abrasion-resistant material.
  2. Heat-shrink splicing kit of uniform, cross-section, polymeric construction with outer heat-shrink jacket.
  3. Premolded, cold-shrink-rubber, in-line splicing kit.
  4. Premolded EPDM splicing body kit with cable joint sealed by interference fit of mating parts and cable.

### Solid Terminations

- A. Shielded-Cable Terminations: Comply with the following classes of IEEE 48. Insulation class is equivalent to that of cable. Include shield ground strap for shielded cable terminations:
1. Class 1 Terminations: Modular type, furnished as a kit, with stress-relief tube; multiple, molded-silicone rubber, insulator modules; shield ground strap; and compression-type connector.
  2. Class 1 Terminations: Heat-shrink type with heat-shrink inner stress control and outer nontracking tubes; multiple, molded, nontracking skirt modules; and compression-type connector.
  3. Class 1 Terminations: Modular type, furnished as a kit, with stress-relief shield terminator; multiple-wet-process, porcelain, insulator modules; shield ground strap; and compression-type connector.
  4. Class 1 Terminations, Indoors: Kit with stress-relief tube, nontracking insulator tube, shield ground strap, compression-type connector, and end seal.

### Identification

- A. Identification: All medium voltage cable shall be identified by means of surface printing or indenting, indicating manufacturer, size, insulation type, voltage rating, and UL designations.

### Medium Voltage Ground Conductor

- A. Ground Conductor: All medium voltage power circuits in conduit shall be paralleled by a grounded conductor intended to minimize fault current in power cable shields. The ground conductor shall be THWN insulation, rated at 600-Volts, and the size is in accordance with the latest revision to the NEC.

### Arc-Proofing Materials

- A. Tape for First Course on Metal Objects: 10-mil-thick, corrosion-protective, moisture-resistant, PVC pipe-wrapping tape.
- B. Arc-Proofing Tape: Fireproof tape, flexible, conformable, intumescent to 0.3 in. thick, compatible with cable jacket.
- C. Glass-Cloth Tape: Pressure-sensitive adhesive type, 1/2 in. wide.

### Source Quality Control

- A. Test and inspect cables according to ICEA S-68-516 before shipping.

### **Execution for Medium Voltage Cables:**

#### Installation

- A. Install cable in accordance with manufacturer's recommendations and pay particular attention to requirements for installation in cold weather including bending radius and pulling tension.
- B. Rigid Conduit or Encased Ducts: Cables shall be installed in rigid conduit inside buildings and in concrete encased ducts outside of buildings.
- C. Install cables according to IEEE 576
- D. Pull Conductors: Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values:
  - 1. Where necessary, use manufacturer-approved pulling compound or lubricant that will not deteriorate conductor or insulation.
  - 2. Use pulling means, including fish tape, cable, rope, and basket-weave cable grips that will not damage cables and raceways. Do not use rope hitches for pulling attachment to cable.

- E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.
- F. Install "buried-cable" warning tape 12 in. above duct banks.
- G. In manholes, pull boxes, junction boxes, and cable vaults, train cables around walls by the longest route from entry to exit and support cables at intervals adequate to prevent sag.
- H. Install cable splices at pull points and elsewhere as indicated; use standard kits.
- I. Cable Terminations:
  - 1. Modular Molded Rubber Termination: IEEE 48, Class1, kit form, suitable for use with cable specified, including stress cones, ground clamps, connectors, rubber caps, and serial lugs.
  - 2. Cold Shrink Termination: IEEE 48, kit form, suitable for use with cable specified, including semi-conductive tape, stress control tape, splicing tape, vinyl plastic tape, non-traking rubber skirts, stress cones, mechanical ground straps, and cable preparation kit.
  - 3. Lugs: Use high-press lugs on all terminations.
- J. Arc Proofing: Unless otherwise indicated, arc proof medium-voltage cable at locations not protected by conduit, or termination materials. In addition to arc-proofing tape manufacturer's written instructions, apply arc proofing as follows:
  - 1. Clean cable sheath.
  - 2. Wrap metallic cable components with 10-mil pipe-wrapping tape.
  - 3. Smooth surface contours with electrical insulation putty.
  - 4. Apply arc-proofing tape in one half-lapped layer with coated side toward cable.
  - 5. Band arc-proofing tape with 1-in.-wide bands of half-lapped, adhesive, glass-cloth tape 2 in. o.c.
- K. Seal around cables passing through fire-rated partitions.
- L. Ground shields of shielded cable at terminations, and splices. Ground metal bodies of terminators, splices, cable and hardware.
- M. Provide brass cable tags at all exposed locations.

#### Cable Protection

- A. Protect Cable: During installation cables shall be protected from physical damage and infiltration of water.
- B. Damaged Cable: Damage to cable or observed presence of water inside of the cable shall be cause for the cable to be rejected and replaced at the Contractors expense.
- C. Handling and Storage: Cables shall be transported and stored on circular reel legs and not stored on the sides.

Field Quality Control

- A. Testing: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports.
- B. Perform the following field tests and inspections and prepare test reports:
  - 1. Perform each visual and mechanical inspection and electrical test stated in NETA ATS. Certify compliance with test parameters.
  - 2. After installing medium-voltage cables and before electrical circuitry has been energized, test for compliance with requirements.
- C. Remove and replace malfunctioning units and retest as specified above.
- D. Medium Voltage Cable Insulation Resistance Test.
  - 1. After installation, and before placing in service, perform a d.c. High Potential Test on all medium voltage rated cables. All precautions and limits as specified in the applicable standards shall be adhered to. Current sensing circuits in test equipment shall measure only the leakage current associated with the cable under test. Test procedures shall be as follows and the results for each cable test shall be recorded:
    - a. Record temperature and relative humidity. Do not perform tests unless weather is clear and relative humidity is below 70 percent.
    - b. Each conductor shall be individually tested with all other conductors grounded.
    - c. Terminations shall be properly corona suppressed by guard ring, field reduction sphere, or other suitable methods.
    - d. Perform megger and continuity test prior to high-pot.
    - e. A d.c. high potential shall be applied in at least five (5) equal increments until maximum test voltage is reached. The d.c. leakage current shall be recorded at each step after a constant stabilization time consistent with system charging current decay. 100 percent voltage shall be reached in a maximum of sixty (60) seconds.
    - f. A graphic plot shall be made of leakage current (X axis) versus voltage (Y axis) at each increment.
    - g. The test conductor shall be raised to a maximum test voltage and held for a total of fifteen (15) minutes. Readings of leakage current (Y axis) versus time (X axis) shall be recorded and plotted for the following intervals – fifteen (15) sec., thirty (30) sec., forty-five (45) sec., one (1) min. two (2) min., etc., to fifteen (15) minutes.
    - h. The conductor test potential shall be reduced to zero and grounds applied for at least ten (10) minutes.
    - i. The d.c. test voltage shall be 53 kV.
- E. Remove and replace malfunctioning units and retest as specified above.

**Measurement and Payment:** This work will be paid for at the contract lump sum price for MEDIUM-VOLTAGE DISTRIBUTION RELOCATION which shall include all labor, equipment, materials, boring and jacking, steel casings, manholes, duct banks, accessories, wiring, conduit, shoring, backfilling existing manhole, filling existing 2-24" steel casings and 18 conduits with CLSM, sump pump including controller, sump discharge pipes, associated supports, hardware, concrete work, operational instructions, utility service work, coordination, testing, temporary fencing, pavement removal, excavation, backfilling, surface restoration, pavement patching, and signs required to complete the installation of the medium voltage distribution circuits and place them in proper working order complete.

### **TEMPORARY TRAFFIC SIGNAL INSTALLATION**

This work shall be in accordance with Section 890 of the Standard Specifications except as modified herein.

All work and material in relation to the installation, operation, and removal of the temporary traffic signals at the intersection of Carpenter and Ninth, shall be included in this pay item.

**Method of Measurement:** All traffic signal equipment will be paid for as each (per intersection).

**Basis of Payment:** The above work will be paid for at the contract unit price each (per intersection) for TEMPORARY TRAFFIC SIGNAL INSTALLATION complete. No additional compensation will be allowed.

### **TRAFFIC SIGNAL BACKPLATE, FORMED PLASTIC**

This work shall consist of furnishing and stalling a traffic signal backplate in accordance with Sections 882 and 1078.03 of the Standard Specifications for Road and Bridge Construction and the following exceptions.

The traffic signal backplate shall be of the same material as the traffic signal heads as specified on the plans.

A Three (3) inch wide strip of reflective sheeting shall be applied to the outside perimeter of the face of the backplates. The reflective tape shall be fluorescent yellow in color and shall consist of type ZZ sheeting.

**Basis of Payment:** This item will be paid for at the contract unit price each for TRAFFIC SIGNAL BACKPLATE, FORMED PLASTIC for supplying and installing the traffic signal backplate with reflective tape to the satisfaction of the Engineer.

## **TRAFFIC SIGNAL LED MODULE SPECIFICATIONS**

The material requirement shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

The LED assemblies for the red, yellow, and green solid and arrow indications shall meet or exceed the following minimum specifications:

### **Solid Indication LED Module Specifications**

Compliance:	Fully compliant with ITE VTCSH LED Circular Signal Supplement specifications dated and adopted June 27, 2005
Compliance Verification:	Intertek ETL verified compliance – Product must be listed on the “Directory of LED Modules Certified Products” list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
Diameter:	12” (300mm)
Lens:	UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, Incandescent Appearance
LEDS:	Hi-Flux
Operating Temperature Range:	-40 to +74C (-40 to +165F)
Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	10.0 W (Red), 18.0W (Yellow), 12.5 W (Green)
Nominal Wavelength:	625-626 nm (Red), 589-590 nm (Yellow), 500-502 nm (Green)
Minimum Maintained Intensity:	365 Cd (Red), 910 Cd (Yellow), 475 Cd (Green)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for

moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection

Warranty: 5 year replacement (materials, workmanship, and intensity)

Arrow Indication LED Module Specifications (Red, Yellow, Green)

Compliance: Fully compliant with ITE VTCSH LED Vehicle Arrow Supplement specifications adopted July 1, 2007

Compliance Verification: Intertek ETL verified compliance – Product must be listed on the “Directory of LED Modules Certified Products” list located on the ETL website at <http://www.intertek.com/lighting/performance-testing/traffic-signals/>

Diameter: 12” (300mm)

Lens: Clear Frosted, UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, incandescent appearance, omni-directional

LEDS: Hi-flux LEDs

Operating Temperature Range: -40 to +74C (-40 to +165F)

Operating Voltage Range: 80 to 135 V (60Hz AC)

Power Factor (PF): > 90%

Total Harmonic Distortion (THD): < 20%

Minimum Voltage Turn-Off: 35V

Turn-On/Turn-Off Time: <75 ms

Nominal Power: 5.0-7.0 W (Red), 6.0-12.5W (Yellow), 5.0-7.0 W (Green)

Nominal Wavelength: 625-628 nm (Red), 590 nm (Yellow), 500nm (Green)

Minimum Maintained Intensity: 56.8-58.4 Cd (Red), 141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)

Standard Conformance: FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical

vibration, NEMA TS2 Transient Voltage Protection

Warranty: 5 year replacement (materials, workmanship, and intensity)

Arrow Indication LED Module Specifications (Yellow/Green Dual Mode)

Diameter: 12" (300mm)

LEDS: Interconnected to minimize the effect of single LED failures

Lens: Clear UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance

Operating Temperature Range: -40 to +74C (-40 to +165F)

Operating Voltage Range: 80 to 135 V (60Hz AC)

Power Factor (PF): > 90%

Total Harmonic Distortion (THD): < 20%

Minimum Voltage Turn-Off: 35V

Turn-On/Turn-Off Time: <75 ms

Nominal Power: 8.0-10.0 W (Yellow), 8.0-10.0 W (Green)

Nominal Wavelength: 590-592 nm (Yellow), 505-508 nm (Green)

Minimum Maintained Intensity: 141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)

Standard Conformance: FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection

Warranty: 5 year replacement (materials, workmanship, and intensity)

12" Pedestrian LED Module Specifications (Man/Hand, Countdown Timer)

Compliance: Fully compliant with ITE PTCSI Part-2 LED Pedestrian Traffic Signal Modules specification adopted August 4, 2010



Compliance Verification:	Intertek ETL verified compliance – Product must be listed on the “Directory of LED Modules Certified Products” list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
Size:	12” x 12”
Configuration:	Full Man/Full Hand Overlay Module, Countdown Timer Module
Lens:	Clear Frosted, UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance
Operating Temperature Range:	-40 to +74C (-40 to +165F)
Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	5.0-9.0 W (Man), 5.0-11.0W (Hand), 5.0-8.0 W (Timer)
Minimum Maintained Intensity:	1,400 Cd (Hand), 1,400 Cd (Timer), 2,200 Cd (Man)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
Warranty:	5 year replacement (materials, workmanship, and intensity)

16” Pedestrian LED Module Specifications (Man/Hand with Countdown Timer)

Compliance:	Fully compliant with ITE PTCSI Part-2 LED Pedestrian Traffic Signal Modules specification adopted August 4, 2010
Compliance Verification:	Intertek ETL verified compliance – Product must be listed on the “Directory of LED Modules Certified Products” list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-">http://www.intertek.com/lighting/performance-</a>

	testing/traffic-signals/
Size:	16" x 18"
Configuration:	Man/Hand Overlay with Countdown Timer
Lens:	UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance
Operating Temperature Range:	-40 to +74C (-40 to +165F)
Operating Voltage Range:	80 to 135 V (60Hz AC)
Power Factor (PF):	> 90%
Total Harmonic Distortion (THD):	< 20%
Minimum Voltage Turn-Off:	35V
Turn-On/Turn-Off Time:	<75 ms
Nominal Power:	6.0-9.0 W (Man), 7.0-9.0W (Hand), 5.0-8.0 W (Timer)
Minimum Maintained Intensity:	1,400 Cd (Hand), 1,400 Cd (Timer), 2,200 Cd (Man)
Standard Conformance:	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
Warranty:	5 year replacement (materials, workmanship, and intensity)

### **TRAFFIC SIGNAL POST**

This work shall consist of furnishing and installing a traffic signal post of the type and length indicated on the plans in accordance with Section 875 and 1077.01 of the Standard Specifications for Road and Bridge Construction and the following additions or exceptions.

An aluminum collar shall be attached where the post connects to the base. Minimum 1" diameter washers may be used between the post base and the anchor bolts to level the post.

**Basis of Payment:** This work will be paid for at the contract unit price each for TRAFFIC SIGNAL POST of the type and length indicated on the plan for supplying and installing the signal post.



Storm Water Pollution Prevention Plan

Route FAU Route 7975
Section 13-00475-00-BR
County Sangamon County

Marked Rte. Carpenter Street
Project No. TIG-5146 (087)
Contract No. 93617

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issued by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or 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.

Nathan Bottom
Print Name
City Engineer
Title
City of Springfield, Illinois
Agency

Nathan Bottom
Signature
2/24/14
Date

I. Site Description:

A. Provide a description of the project location (include latitude and longitude):

The project is located along Carpenter Street and the Norfolk Southern Railroad (NSRR) in Springfield, IL. The northern limit of the project begins south of Enos Avenue (39.8095 lat., -89.6420 long.) and ends north of Madison Street (39.8040 lat., -89.6421 long.). The western limit of the project is west of 9th Street (39.8072 lat., -89.6433 long.) and extends to the west side of 11th Street (39.8072 lat., -89.6408 long.) along Carpenter Street.

B. Provide a description of the construction activity which is the subject of this plan:

The proposed project will consist of constructing an underpass for Carpenter Street which will cross underneath the NSRR tracks. The proposed roadway will consist of 2 lanes in each direction with a 10 foot two way turn lane which will transition to a median underneath the bridge structure. Curb and gutter with sidewalks will also be provided along the roadway. In order to construct this new structure, the railroad will be temporarily relocated to a proposed shoofly alignment along the east side of the existing tracks. While on the temporary tracks, new subballast will be constructed south of Carpenter Street to accommodate 3 sets of tracks in the future. North of Carpenter Street, new subballast, ballast, ties, and rails will be placed along the proposed interim alignment. The proposed improvements also include pipe underdrains and storm sewer construction.

C. Provide the estimated duration of this project:

18 months

D. The total area of the construction site is estimated to be 6.0 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 5.86 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

A curve number of 98 was used for the hydrologic analysis, indicating mostly impervious areas.

F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:

Using the Web Soil Survey website (http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx) the following soil types were identified:

<u>M.U.S.</u>	<u>Description</u>
43A	Ipava silt loam, 0 to 2% slopes, a somewhat poorly drained soil with moderately high permeability
68A	Sable silt clay loam, 0 to 2% slopes, a poorly drained soil with moderately high to high permeability
533	Urban Land

See Attachment A for Soils Map.

- G. Provide an aerial extent of wetland acreage at the site:

Based on the wetlands reconnaissance survey and the National Wetland Inventory Mapping, this project does not affect any wetlands regulated under the Clean Water Act of 1972.

- H. Provide a description of potentially erosive areas associated with this project:

The locations of potential erosion will occur in areas of exposed dirt from excavation operations. The area with the most concerns will be around the Carpenter Street Underpass.

- I. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

**Construction along the NSRR:**

Stage 1A: Soil disturbing activities will consist of pavement removal and trenching for placement of pipe underdrains. Grading will also take place for the construction of the railroad shoofly.

Stage 1B: This stage consists of completing the cut over of the existing tracks to the shoofly tracks. There are no major soil disturbing operations in this stage.

Stage 2A: Soil disturbing activities will consist of interim track grading and trenching for placement of pipe underdrains.

Stage 2B: This stage consists of completing the final cut over of the shoofly tracks to the interim tracks. There are no major soil disturbing operations in this stage.

Stage 3: Soil disturbing activities will consist of shoofly track removal from Stations 6+90 to 8+90.

**Construction along Carpenter Street:**

Stage 1A: Soil disturbing activities will consist of the pavement removal, construction of drilled shafts, and excavation for the proposed retaining walls. The pump station will also be constructed in this stage.

Stage 1B: This stage consists of completing the cut over of the existing tracks to the shoofly tracks. There are no major soil disturbing operations in this stage.

Stage 2A: Soil disturbing activities will consist of excavation to the bottom of the abutment and pier caps, construction of drilled shafts, and excavation for the proposed roadway.

Stage 2B: This stage consists of completing the final cut over of the shoofly tracks to the interim tracks. There are no major soil disturbing operations in this stage.

Stage 3: Soil disturbing activities will consist of excavation and reshaping of the roadway to match the proposed grades and cross sections. All unsuitable materials shall be removed and utilities relocated to accommodate the proposed roadway. The construction of the MSE walls and crashwalls will occur in this stage. The maximum slopes will be 3H:1V for tying into the existing ground and for tying slopes into proposed sidewalks adjacent to the roadway. The maximum grade of the proposed roadway is 7.0%.

- J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

- K. Identify who owns the drainage system (municipality or agency) this project will drain into:  
City of Springfield
- L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.  
City of Springfield  
Springfield Metro Sanitary District
- M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:  
The ultimate receiving waters for the jobsite are through the wastewater treatment plant and to Spring Creek. Spring Creek outlets into the Sangamon River.
- N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.  
There are no protected areas within or adjacent to the project jobsite.
- O. The following sensitive environmental resources are associated with this project, and may have the potential to be impacted by the proposed development:
- Floodplain
  - Wetland Riparian
  - Threatened and Endangered Species
  - Historic Preservation
  - 303(d) Listed receiving waters for suspended solids, turbidity, or siltation
  - Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation
  - Applicable Federal, Tribal, State or Local Programs
  - Other
1. 303(d) Listed receiving waters (fill out this section if checked above):
- a. The name(s) of the listed water body, and identification of all pollutants causing impairment:
  - b. Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:
  - c. Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:
  - d. Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:
2. TMDL (fill out this section if checked above)
- a. The name(s) of the listed water body:
  - b. Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:
  - c. If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet that allocation:

P. The following pollutants of concern will be associated with this construction project:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Soil Sediment        | <input type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete             | <input type="checkbox"/> Antifreeze / Coolants  |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment    |
| <input type="checkbox"/> Concrete Curing Compounds       | <input type="checkbox"/> Other (specify)  |
| <input type="checkbox"/> Solid Waste Debris              | <input type="checkbox"/> Other (specify)  |
| <input type="checkbox"/> Paints                          | <input type="checkbox"/> Other (specify)  |
| <input type="checkbox"/> Solvents                        | <input type="checkbox"/> Other (specify)  |
| <input type="checkbox"/> Fertilizers / Pesticides        | <input type="checkbox"/> Other (specify)  |

**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, borrow sites, and waste sites. 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 ILR10. 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:** At a minimum, controls must be coordinated, installed and maintained to:

1. Minimize the amount of soil exposed during construction activity;
2. Minimize the disturbance of steep slopes;
3. Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
4. Minimize soil compaction and, unless infeasible, preserve topsoil.

B. **Stabilization Practices:** Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(B)(1) and II(B)(2), stabilization measures shall be initiated **immediately** where construction activities have temporarily or permanently ceased, but in no case more than **one (1) day** after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

- |  |  |
|--|--|
| <input type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips           | <input type="checkbox"/> Sodding                                       |
| <input type="checkbox"/> Protection of Trees               | <input type="checkbox"/> Geotextiles                                   |
| <input type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (specify)                               |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify)                               |
| <input type="checkbox"/> Temporary Mulching                | <input type="checkbox"/> Other (specify)                               |
| <input checked="" type="checkbox"/> Permanent Seeding      | <input type="checkbox"/> Other (specify)                               |

Describe how the stabilization practices listed above will be utilized during construction:

Permanent seeding will be placed on bare slopes to prevent erosion. Seeding should be placed immediately after finished grading.

Erosion Control Blanket will be placed in ditches and on slopes within 24 hours after seeding operations are completed. Erosion Control Blanket will be installed in accordance to IDOT Article 251.04.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

The erosion control blanket will help to prevent erosion until the vegetation is established in areas where permanent seeding was placed. The vegetation will prevent erosion on the slopes after construction is completed.

- C. **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: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following structural practices will be used for this project:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier    | <input type="checkbox"/> Rock Outlet Protection                 |
| <input type="checkbox"/> Temporary Ditch Check                   | <input checked="" type="checkbox"/> Riprap                      |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions                                |
| <input checked="" type="checkbox"/> Sediment Trap                | <input type="checkbox"/> Slope Mattress                         |
| <input type="checkbox"/> Temporary Pipe Slope Drain              | <input type="checkbox"/> Retaining Walls                        |
| <input type="checkbox"/> Temporary Sediment Basin                | <input type="checkbox"/> Slope Walls                            |
| <input type="checkbox"/> Temporary Stream Crossing               | <input type="checkbox"/> Concrete Revetment Mats                |
| <input type="checkbox"/> Stabilized Construction Exits           | <input type="checkbox"/> Level Spreaders                        |
| <input type="checkbox"/> Turf Reinforcement Mats                 | <input type="checkbox"/> Other (specify) Pipe Outlet Protection |
| <input type="checkbox"/> Permanent Check Dams                    | <input type="checkbox"/> Other (specify)                        |
| <input type="checkbox"/> Permanent Sediment Basin                | <input type="checkbox"/> Other (specify)                        |
| <input type="checkbox"/> Aggregate Ditch                         | <input type="checkbox"/> Other (specify)                        |
| <input type="checkbox"/> Paved Ditch                             | <input type="checkbox"/> Other (specify)                        |

Describe how the structural practices listed above will be utilized during construction:

The storm drain inlet protection will be placed at all the inlets and manholes with open grates to prevent sediment and silt from construction operations from entering the storm sewer system. The inlet protection will consist of inlet filters. These inlet filters should be checked on a regular basis and maintained as necessary to ensure the proper function of each filter.

A perimeter erosion barrier will be placed within the project limits at various locations between stations 47727+75 and 47739+16 on the west side of the tracks and just west of the tracks between stations 47723+65 to 47726+59 to prevent construction sediment from flowing into the adjacent parking lots and roadways. The barrier should be inspected on a periodic basis and repaired or replaced as necessary to allow proper functionality.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Once construction operations are completed and vegetation is sufficiently established to prevent erosion, the storm drain inlet filters can be removed.

The perimeter erosion barrier can be removed after exposed surfaces have been constructed to their final condition and all vegetation is sufficiently established to prevent sediment from flowing into the adjacent parking lots and roadways.

The proposed wet well along Carpenter Street will serve as a permanent sediment basin after construction is completed.

Stone riprap will be placed along the 2:1 left slope of the railroad subballast from stations 47729+00 to 47735+90. The riprap will help to prevent erosion of the graded embankment as well as aide in the stabilization of the subballast.

D. **Treatment Chemicals**

Will polymer flocculants or treatment chemicals be utilized on this project:  Yes  No

If yes above, identify where and how polymer flocculants or treatment chemicals will be utilized on this project.

E. **Permanent Storm Water Management Controls:** Provided below is a description of measures that will be installed during the construction process to control volume and 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.

1. Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design and Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

2. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

The proposed storm water management system includes storm sewer, wet wells, a pumping station, and a force main. Proposed storm sewer will be placed along the Carpenter Street curb and gutter for drainage of the roadway, adjacent slopes, and sidewalks. Two wet wells will be placed south of Carpenter Street and to the east of the NSRR tracks. The pump station will be used in conjunction with the wells to carry the water through a force main and empty into the sewer system. The proposed drainage system will be designed to regulate the amount of additional flow into the existing drainage system and to avoid adverse impacts to its current functionality.

Vehicle entrances and exits must be constructed and maintained to prevent tracking of sediments onto opened roadways. The contractor will provide the resident engineer with a written plan identifying the locations of the entrances and exits and the procedures that will be used to construct and maintain them.

Stockpiles shall be maintained to eliminate pollution of storm water runoff. Runoff from stockpiles containing materials such as aggregates, aggregate subbase, topsoil, fill material, or other materials that will be stored for construction can be contained using BMPs such as perimeter erosion barrier, temporary mulch, plastic covers, or storm drain inlet protection. The contractor will provide the resident engineer with a written plan of the procedures to be used in addition to how they will be maintained.

F. **Approved State or Local Laws:** The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. 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 the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

All management practices provided within this plan are in accordance with the current editions of the IDOT



Standard Specifications for Road and Bridge Construction and the IDOT Supplemental Specifications and Recurring Special Provisions.

G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.

1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
  - Approximate duration of the project, including each stage of the project
  - Rainy season, dry season, and winter shutdown dates
  - Temporary stabilization measures to be employed by contract phases
  - Mobilization timeframe
  - Mass clearing and grubbing/roadside clearing dates
  - Deployment of Erosion Control Practices
  - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
  - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
  - Paving, saw-cutting, and any other pavement related operations
  - Major planned stockpiling operations
  - Timeframe for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
  - Permanent stabilization activities for each area of the project
2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
  - Vehicle Entrances and Exits – Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
  - Material Delivery, Storage and Use – Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
  - Stockpile Management – Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
  - Waste Disposal – Discuss methods of waste disposal that will be used for this project.
  - Spill Prevention and Control – Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
  - Concrete Residuals and Washout Wastes – Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
  - Litter Management – Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
  - Vehicle and Equipment Fueling – Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
  - Vehicle and Equipment Cleaning and Maintenance – Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
  - Dewatering Activities – Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
  - Polymer Flocculants and Treatment Chemicals – Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
  - Additional measures indicated in the plan.

### III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured

BMPs which are to be installed and maintained per manufacture's specifications.

#### **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 using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

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 notify the appropriate IEPA Field Operations Section office by email at: [epa.swnoncomp@illinois.gov](mailto:epa.swnoncomp@illinois.gov), telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA 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 non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

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. Failure to Comply:**

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	<u>FAU Route 7975</u>	Marked Rte.	<u>Carpenter Street</u>
Section	<u>13-00475-00-BR</u>	Project No.	<u>TIG-5146 (087)</u>
County	<u>Sangamon County</u>	Contract No.	<u>93617</u>

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP 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

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP:

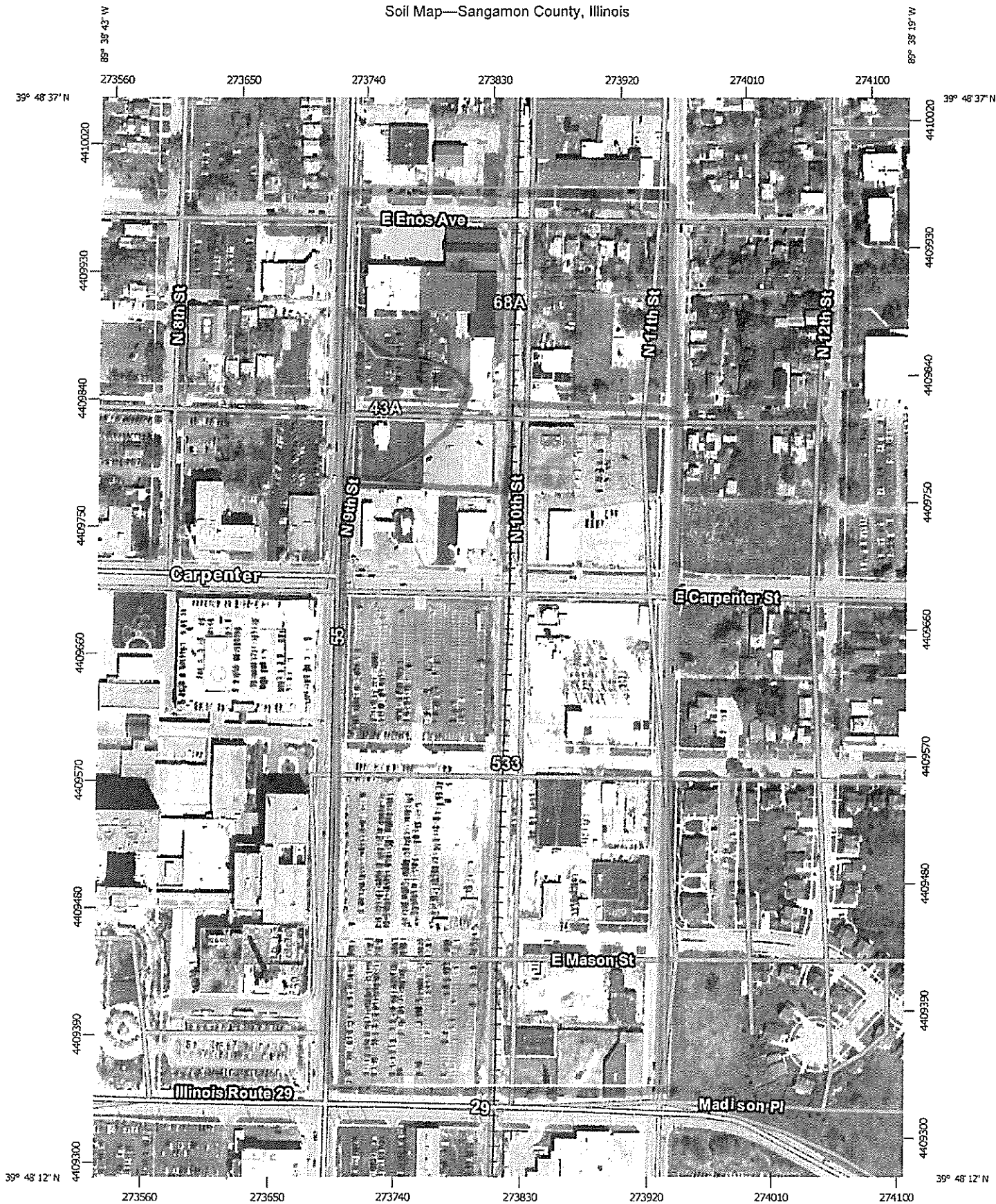
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Soil Map—Sangamon County, Illinois



Map Scale: 1:3,720 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 16N WGS84

**Certification of Metal Fabricator**

Effective: January 1, 2014

Add the following after the last paragraph of Article 106.08 of the Supplemental Specifications and Recurring Special Provisions:

“Fabricators with the old Simple Steel Bridges AISC certification that expires in July 2014 or before are considered to have Intermediate Bridges AISC certification for the purposes of this article.

Fabricators with the old Major Steel Bridges AISC certification that expires in July 2014 or before are considered to have Advanced Bridges AISC certification for the purposes of this article.”

## **PROJECT LABOR AGREEMENT - QUARTERLY EMPLOYMENT REPORT**

Public Act 97-0199 requires the Department to submit quarterly reports regarding the number of minorities and females employed under Project Labor Agreements. To assist in this reporting effort, the Contractor shall provide a quarterly workforce participation report for all minority and female employees working under the project labor agreement of this contract. The data shall be reported on Construction Form BC 820, Project Labor Agreement (PLA) Workforce Participation Quarterly Reporting Form available on the Department's website <http://www.dot.il.gov/const/conforms.html>.

The report shall be submitted no later than the 15<sup>th</sup> of the month following the end of each quarter (i.e. April 15 for the January – March reporting period). The form shall be emailed to [DOT.PLA.Reporting@illinois.gov](mailto:DOT.PLA.Reporting@illinois.gov) or faxed to (217) 524-4922.

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.

Illinois Department of Transportation  
**PROJECT LABOR AGREEMENT**

This Project Labor Agreement ("PLA" or "Agreement") is entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2014, by and between the Illinois Department of Transportation ("IDOT" or "Department") in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades signatory hereto as determined by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of each of its affiliated members (individually and collectively, the "Unions"). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT's Prime Contractor and each of its subcontractors of whatever tier ("Subcontractor" or "Subcontractors") on Contract No. \_\_\_\_\_ (hereinafter, the "Project").

**ARTICLE 1 - INTENT AND PURPOSES**

- 1.1 This PLA is entered into in accordance with the Project Labor Agreement Act ("Act", 30 ILCS 571). It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays, or other disruptions to the prosecution of the work. The parties acknowledge the obligations of the Contractors and Subcontractors to comply with the provisions of the Act. The parties will work with the Contractors and Subcontractors within the parameters of other statutory and regulatory requirements to implement the Act's goals and objectives.
- 1.2 As a condition of the award of the contract for performance of work on the Project, IDOT's Prime Contractor and each of its Subcontractors shall execute a "Contractor Letter of Assent", in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. The Contractor shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the Subcontractor's performance of Construction Work on the Project. Upon request copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization consistent with this Agreement and at the pre-job conference referenced in Article III, Section 3.1.
- 1.3 Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Contractor Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company, or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company, or entity that does not agree in writing to become bound for the term of this Project by the terms of this PLA prior to commencing such work and to the applicable area-wide collective bargaining agreement(s) with the Union(s) signatory hereto.
- 1.4 It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The parties hereto also

agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.

- 1.5 In the event of a variance or conflict, whether explicit or implicit, between the terms and conditions of this PLA and the provisions of any other applicable national, area, or local collective bargaining agreement, the terms and conditions of this PLA shall supersede and control. For any work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors, and for any instrument calibration work and loop checking performed under the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, the preceding sentence shall apply only with respect to Articles I, II, V, VI, and VII.
- 1.6 Subject to the provisions of paragraph 1.5 of this Article, it is the parties' intent to respect the provisions of any other collective bargaining agreements that may now or hereafter pertain, whether between the Prime Contractor and one or more of the Unions or between a Subcontractor and one or more of the Unions. Accordingly, except and to the extent of any contrary provision set forth in this PLA, the Prime Contractor and each of its Subcontractors agrees to be bound and abide by the terms of the following in order of precedence: (a) the applicable collective bargaining agreement between the Prime Contractor and one or more of the Unions made signatory hereto; (b) the applicable collective bargaining agreement between a Subcontractor and one or more of the Unions made signatory hereto; or (c) the current applicable area collective bargaining agreement for the relevant Union that is the agreement certified by the Illinois Department of Labor for purposes of establishing the Prevailing Wage applicable to the Project. The Union will provide copies of the applicable collective bargaining agreements pursuant to part (c) of the preceding sentence to the Prime Contractor. Assignments by the Contractors or Subcontractors amongst the trades shall be consistent with area practices; in the event of unresolved disagreements as to the propriety of such assignments, the provisions of Article VI shall apply.
- 1.7 Subject to the limitations of paragraphs 1.4 to 1.6 of this Article, the terms of each applicable collective bargaining agreement as determined in accordance with paragraph 1.6 are incorporated herein by reference, and the terms of this PLA shall be deemed incorporated into such other applicable collective bargaining agreements only for purposes of their application to the Project.
- 1.8 To the extent necessary to comply with the requirements of any fringe benefit fund to which the Prime Contractor or Subcontractor is required to contribute under the terms of an applicable collective bargaining agreement pursuant to the preceding paragraph, the Prime Contractor or Subcontractor shall execute all "Participation Agreements" as may be reasonably required by the Union to accomplish such purpose; provided, however, that such Participation Agreements shall, when applicable to the Prime Contractor or Subcontractor solely as a result of this PLA, be amended as reasonably necessary to reflect such fact. Upon written notice in the form of a lien of a Contractor's or Subcontractor's delinquency from any applicable fringe benefit fund, IDOT will withhold from the Contractor's periodic pay request an amount sufficient to extinguish any delinquency obligation of the Contractor or Subcontractor arising out of the Project.
- 1.9 In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained



until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

## **ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS**

- 2.1 The term Construction Work as used herein shall include all “construction, demolition, rehabilitation, renovation, or repair” work performed by a “laborer or mechanic” at the “site of the work” for the purpose of “building” the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5 and Illinois labor laws.
- 2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.
- 2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.
- 2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre-fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.
- 2.5 The parties are mutually committed to promoting a safe working environment for all personnel at the job-site. It shall be the responsibility of each employer to which this PLA applies to provide and maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.
- 2.6 The use or furnishing of alcohol or drugs and the conduct of any other illegal activity at the job-site is strictly prohibited. The parties shall take every practical measure consistent with the terms of applicable collective bargaining agreements to ensure that the job-site is free of alcohol and drugs.
- 2.7 All parties to this PLA agree that they will not discriminate against any employee based on race, creed, religion, color, national origin, union activity, age, gender or sexual orientation and shall comply with all applicable federal, state, and local laws.
- 2.8 In accordance with the Act and to promote diversity in employment, IDOT will establish, in cooperation with the other parties, the apprenticeship hours which are to be performed by minorities and females on the Project. IDOT shall consider the total hours to be performed by these underrepresented groups, as a percentage of the workforce, and create aspirational goals for each Project, based on the level of underutilization for the service area of the Project (together “Project Employment Objectives”). IDOT shall

provide a quarterly report regarding the racial and gender composition of the workforce on the Project.

Persons currently lacking qualifications to enter apprenticeship programs will have the opportunity to obtain skills through basic training programs as have been established by the Department. The parties will endeavor to support such training programs to allow participants to obtain the requisite qualifications for the Project Employment Objectives.

The parties agree that all Contractors and Subcontractors working on the Project shall be encouraged to utilize the maximum number of apprentices as permitted under the terms of the applicable collective bargaining agreements to realize the Project Employment Objectives.

The Unions shall assist the Contractor and each Subcontractor in efforts to satisfy Project Employment Objectives. A Contractor or Subcontractor may request from a Union specific categories of workers necessary to satisfy Project Employment Objectives. The application of this section shall be consistent with all local Union collective bargaining agreements, and the hiring hall rules and regulations established for the hiring of personnel, as well as the apprenticeship standards set forth by each individual Union.

- 2.9 The parties hereto agree that engineering/architectural/surveying consultants' materials testing employees are subject to the terms of this PLA for Construction Work performed for a Contractor or Subcontractor on this Project. These workers shall be fully expected to objectively and responsibly perform their duties and obligations owed to the Department without regard to the potential union affiliation of such employees or of other employees on the Project.
- 2.10 This Agreement shall not apply to IDOT employees or employees of any other governmental entity.

### **ARTICLE III - ADMINISTRATION OF AGREEMENT**

- 3.1 In order to assure that all parties have a clear understanding of the PLA, and to promote harmony, at the request of the Unions a post-award pre-job conference will be held among the Prime Contractor, all Subcontractors and Union representatives prior to the start of any Construction Work on the Project. No later than the conclusion of such pre-job conference, the parties shall, among other matters, provide to one another contact information for their respective representatives (including name, address, phone number, facsimile number, e-mail). Nothing herein shall be construed to limit the right of the Department to discuss or explain the purpose and intent of this PLA with prospective bidders or other interested parties prior to or following its award of the job.
- 3.2 Representatives of the Prime Contractor and the Unions shall meet as often as reasonably necessary following award until completion of the Project to assure the effective implementation of this PLA.
- 3.3 Any notice contemplated under Article VI and VII of this Agreement to a signatory labor organization shall be made in writing to the Local Union with copies to the local union's International Representative.

### **ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS**

- 4.1 The standard work day and work week for Construction Work on the Project shall be consistent with the respective collective bargaining agreements. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate. If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.
- 4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.
- 4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.
- 4.4 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, employment begins and ends at the Project site; employees shall be at their place of work at the starting time; and employees shall remain at their place of work until quitting time.
- 4.5 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, there shall be no limit on production by workmen, no restrictions on the full use of tools or equipment, and no restrictions on efficient use of manpower or techniques of construction other than as may be required by safety regulations.
- 4.6 The parties recognize that specialized or unusual equipment may be installed on the Project. In such cases, the Union recognizes the right of the Prime Contractor or Subcontractor to involve the equipment supplier or vendor's personnel in supervising the setting up of the equipment, making modifications and final alignment, and performing similar activities that may be reasonably necessary prior to and during the start-up procedure in order to protect factory warranties. The Prime Contractor or Subcontractor shall notify the Union representatives in advance of any work at the job-site by such vendor personnel in order to promote a harmonious relationship between the equipment vendor's personnel and other Project employees.
- 4.7 For the purpose of promoting full and effective implementation of this PLA, authorized Union representatives shall have access to the Project job-site during scheduled work hours. Such access shall be conditioned upon adherence to all reasonable visitor and security rules of general applicability that may be established for the Project site at the pre-job conference or from time to time thereafter.

**ARTICLE V – GRIEVANCE PROCEDURES FOR DISPUTES ARISING UNDER A PARTICULAR COLLECTIVE BARGAINING AGREEMENT**

- 5.1 In the event a dispute arises under a particular collective bargaining agreement specifically not including jurisdictional disputes referenced in Article VI below, said dispute shall be resolved by the Grievance/Arbitration procedure of the applicable

collective bargaining agreement. The resulting determination from this process shall be final and binding on all parties bound to its process.

- 5.2 Employers covered under this Agreement shall have the right to discharge or discipline any employee who violates the provisions of this Agreement. Such discharge or discipline by a contractor or subcontractor shall be subject to Grievance/Arbitration procedure of the applicable collective bargaining agreement only as to the fact of such violation of this agreement. If such fact is established, the penalty imposed shall not be disturbed. Work at the Project site shall continue without disruption or hindrance of any kind as a result of a Grievance/Arbitration procedure under this Article.
- 5.3 In the event there is a deadlock in the foregoing procedure, the parties agree that the matter shall be submitted to arbitration for the selection and decision of an Arbitrator governed under paragraph 6.8.

### **ARTICLE VI –DISPUTES: GENERAL PRINCIPLES**

- 6.1 This Agreement is entered into to prevent strikes, lost time, lockouts and to facilitate the peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers.
- 6.2 A panel of Permanent Arbitrators are attached as addendum (A) to this agreement. By mutual agreement between IDOT and the Unions, the parties can open this section of the agreement as needed to make changes to the list of permanent arbitrators.
- 6.3 The PLA Jurisdictional Dispute Resolution Process (“Process”) sets forth the procedures below to resolve jurisdictional disputes between and among Contractors, Subcontractors, and Unions engaged in the building and construction industry. Further, the Process will be followed for any grievance or dispute arising out of the interpretation or application of this PLA by the parties except for the prohibition on attorneys contained in 6.11. All decisions made through the Process are final and binding upon all parties.

### **DISPUTE PROCESS**

- 6.4 Administrative functions under the Process shall be performed through the offices of the President and/or Secretary-Treasurer of the Illinois State Federation of Labor, or their designated representative, called the Administrator. In no event shall any officer, employee, agent, attorney, or other representative of the Illinois Federation of Labor, AFL-CIO be subject to any subpoena to appear or testify at any jurisdictional dispute hearing.
- 6.5 There shall be no abandonment of work during any case participating in this Process or in violation of the arbitration decision. All parties to this Process release the Illinois State Federation of Labor (“Federation”) from any liability arising from its action or inaction and covenant not to sue the Federation, nor its officers, employees, agents or attorneys.
- 6.6 In the event of a dispute relating to trade or work jurisdiction, all parties, including the employers, Contractors or Subcontractors, agree that a final and binding resolution of the dispute shall be resolved as follows:
- (a) Representatives of the affected trades and the Contractor or Subcontractor shall meet on the job site within two (2) business days after receiving written notice in an

effort to resolve the dispute. (In the event there is a dispute between local unions affiliated with the same International Union, the decision of the General President, or his/her designee, as the internal jurisdictional authority of that International Union, shall constitute a final and binding decision and determination as to the jurisdiction of work.)

- (b) If no settlement is achieved subsequent to the preceding Paragraph, the matter shall be referred to the local area Building & Construction Trades Council, which shall meet with the affected trades within two (2) business days subsequent to receiving written notice. In the event the parties do not wish to avail themselves of the local Building & Construction Trades Council, the parties may elect to invoke the services of their respective International Representatives with no extension of the time limitations. An agreement reached at this Step shall be final and binding upon all parties.
- (c) If no settlement agreement is reached during the proceedings contemplated by Paragraphs "a" or "b" above, the matter shall be immediately referred to the Illinois Jurisdictional Dispute Process for final and binding resolution of said dispute. Said referral submission shall be in writing and served upon the Illinois State Federation of Labor, or the Administrator, pursuant to paragraph 6.4 of this agreement. The Administrator shall, within three (3) days, provide for the selection of an available Arbitrator to hear said dispute within this time period. Upon good cause shown and determined by the Administrator, an additional three (3) day extension for said hearing shall be granted at the sole discretion of the Administrator. Only upon mutual agreement of all parties may the Administrator extend the hearing for a period in excess of the time frames contemplated under this Paragraph. Business days are defined as Monday through Friday, excluding contract holidays.

6.7 The primary concern of the Process shall be the adjustment of jurisdictional disputes arising out of the Project. A sufficient number of Arbitrators shall be selected from list of approved Arbitrators as referenced Sec. 6.2 and shall be assigned per Sec. 6.8. Decisions shall be only for the Project and shall become effective immediately upon issuance and complied with by all parties. The authority of the Arbitrator shall be restricted and limited specifically to the terms and provisions of Article VI and generally to this Agreement as a whole.

6.8 The Arbitrator chosen shall be randomly selected based on the list of Arbitrators in Sec. 6.2 and geographical location of the jurisdictional dispute and upon his/her availability, and ability to conduct a Hearing within two (2) business days of said notice. The Arbitrator may issue a "bench" decision immediately following the Hearing or he/she may elect to only issue a written decision, said decision must be issued within two (2) business days subsequent to the completion of the Hearing. Copies of all notices, pleadings, supporting memoranda, decisions, etc. shall be provided to all disputing parties and the Illinois State Federation of Labor.

Any written decision shall be in accordance with this Process and shall be final and binding upon all parties to the dispute and may be a "short form" decision. Fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion. The decision of the Arbitrator shall be final and binding upon the parties hereto, their members, and affiliates.

In cases of jurisdictional disputes or other disputes between a signatory labor

organization and another labor organization, both of which is an affiliate or member of the same International Union, the matter or dispute shall be settled in the manner set forth by their International Constitution and/or as determined by the International Union's General President whose decision shall be final and binding upon all parties. In no event shall there be an abandonment of work.

6.9 In rendering a decision, the Arbitrator shall determine:

- (a) First, whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between National or International Unions to the dispute or agreements between local unions involved in the dispute, governs;
- (b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a previous decision of record governing the case, the Arbitrator shall give equal weight to such decision of record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record and established trade practice in the industry rather than the prevailing practice in the locality; and,
- (c) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.

6.10 The Arbitrator shall set forth the basis for his/her decision and shall explain his/her findings regarding the applicability of the above criteria. If lower ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the Project. Agreements of Record, for other PLA projects, are applicable only to those parties signatory to such agreements. Decisions of Record are those that were either attested to by the former Impartial Jurisdictional Disputes Board or adopted by the National Arbitration Panel.

6.11 All interested parties, as determined by the Arbitrator, shall be entitled to make presentations to the Arbitrator. Any interested labor organization affiliated to the PLA Committee and party present at the Hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the Arbitrator and to agree to be bound by its decision. In addition to the representative of the local labor organization, a representative of the labor organization's International Union may appear on behalf of the parties. Each party is responsible for arranging for its witnesses. In the event an Arbitrator's subpoena is required, the party requiring said subpoena shall prepare the subpoena for the Arbitrator to execute. Service of the subpoena upon any witness shall be the responsibility of the issuing party.

Attorneys shall not be permitted to attend or participate in any portion of a Hearing.

The parties are encouraged to determine, prior to Hearing, documentary evidence which may be presented to the Arbitrator on a joint basis.

- 6.12 The Order of Presentation in all Hearings before an Arbitrator shall be
- I. Identification and Stipulation of the Parties
  - II. Unions(s) claiming the disputed work presents its case
  - III. Union(s) assigned the disputed work presents its case
  - IV. Employer assigning the disputed work presents its case
  - V. Evidence from other interested parties (i.e., general contractor, project manager, owner)
  - VI. Rebuttal by union(s) claiming the disputed work
  - VII. Additional submissions permitted and requested by Arbitrator
  - VIII. Closing arguments by the parties
- 6.13 All parties bound to the provisions of this Process hereby release the Illinois State Federation of Labor and IDOT, their respective officers, agents, employees or designated representatives, specifically including any Arbitrator participating in said Process, from any and all liability or claim, of whatsoever nature, and specifically incorporating the protections provided in the Illinois Arbitration Act, as amended from time to time.
- 6.14 The Process, as an arbitration panel, nor its Administrator, shall have any authority to undertake any action to enforce its decision(s). Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Arbitrator or Administrator determining non-compliance with a prior award or decision.
- 6.15 If at any time there is a question as to the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process, the primary responsibility for any determination of the arbitrability of a dispute and the jurisdiction of the Arbitrator shall be borne by the party requesting the Arbitrator to hear the underlying jurisdictional dispute. The affected party or parties may proceed before the Arbitrator even in the absence or one or more stipulated parties with the issue of jurisdiction as an additional item to be decided by the Arbitrator. The Administrator may participate in proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Illinois Jurisdictional Dispute Resolution Process. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process shall bear all the costs, expenses and attorneys' fees incurred by the Illinois Jurisdictional Dispute Resolution Process and/or its Administrator in establishing its jurisdiction.

## **ARTICLE VII - WORK STOPPAGES AND LOCKOUTS**

- 7.1 During the term of this PLA, no Union or any of its members, officers, stewards, employees, agents or representatives shall instigate, support, sanction, maintain, or participate in any strike, picketing, walkout, work stoppage, slow down or other activity that interferes with the routine and timely prosecution of work at the Project site or at any other contractor's or supplier's facility that is necessary to performance of work at the Project site. Hand billing at the Project site during the designated lunch period and before commencement or following conclusion of the established standard workday shall not, in itself, be deemed an activity that interferes with the routine and timely prosecution of work on the Project.

7.2 Should any activity prohibited by paragraph 7.1 of this Article occur, the Union shall undertake all steps reasonably necessary to promptly end such prohibited activities.

7.2.A No Union complying with its obligations under this Article shall be liable for acts of employees for which it has no responsibility or for the unauthorized acts of employees it represents. Any employee who participates or encourages any activity prohibited by paragraph 7.1 shall be immediately suspended from all work on the Project for a period equal to the greater of (a) 60 days; or (b) the maximum disciplinary period allowed under the applicable collective bargaining agreement for engaging in comparable unauthorized or prohibited activity.

7.2.B Neither the PLA Committee nor its affiliates shall be liable for acts of employees for which it has no responsibility. The principal officer or officers of the PLA Committee will immediately instruct, order and use the best efforts of his office to cause the affiliated union or unions to cease any violations of this Article. The PLA Committee in its compliance with this obligation shall not be liable for acts of its affiliates. The principal officer or officers of any involved affiliate will immediately instruct, order or use the best effort of his office to cause the employees the union represents to cease any violations of this Article. A union complying with this obligation shall not be liable for unauthorized acts of employees it represents. The failure of the Contractor to exercise its rights in any instance shall not be deemed a waiver of its rights in any other instance.

During the term of this PLA, the Prime Contractor and its Subcontractors shall not engage in any lockout at the Project site of employees covered by this Agreement.

7.3 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.

7.4 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.5 of this Article.

7.5 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:

7.5.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to paragraph 6.8 of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.

7.5.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not



before twenty-four (24) hours after the written notice to all parties involved as required above.

7.5.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.

7.5.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.

7.5.E Such Award may be enforced by any court of competent jurisdiction upon the filing of the Award and such other relevant documents as may be required. Facsimile or other hardcopy written notice of the filing of such enforcement proceedings shall be given to the other relevant parties. In a proceeding to obtain a temporary order enforcing the Permanent Arbitrator's Award as issued under this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Permanent Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

7.6 Individuals found to have violated the provisions of this Article are subject to immediate termination. In addition, IDOT reserves the right to terminate this PLA as to any party found to have violated the provisions of this Article.

7.7 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.

7.8 The fees and expenses of the Permanent Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

#### **ARTICLE VIII – TERMS OF AGREEMENT**

8.1 If any Article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.

8.2 This Agreement shall be in full force as of and from the date of the Notice of Award until the Project contract is closed.

- 8.3 This PLA may not be changed or modified except by the subsequent written agreement of the parties. All parties represent that they have the full legal authority to enter into this PLA. This PLA may be executed by the parties in one or more counterparts.
- 8.4 Any liability arising out of this PLA shall be several and not joint. IDOT shall not be liable to any person or other party for any violation of this PLA by any other party, and no Contractor or Union shall be liable for any violation of this PLA by any other Contractor or Union.
- 8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

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Addendum A

IDOT Slate of Permanent Arbitrators

1. Bruce Feldacker
2. Thomas F. Gibbons
3. Edward J. Harrick
4. Brent L. Motchan
5. Robert Perkovich
6. Byron Yaffee
7. Glenn A. Zipp

Execution Page

***Illinois Department of Transportation***

\_\_\_\_\_  
Omer Osman, Director of Highways

\_\_\_\_\_  
Tony Small, Director of Finance & Administration

\_\_\_\_\_  
Michael A. Forti, Chief Counsel

\_\_\_\_\_  
Ann L. Schneider, Secretary

\_\_\_\_\_  
(Date)

***Illinois AFL-CIO Statewide Project Labor Agreement Committee, representing the Unions listed below:***

\_\_\_\_\_

\_\_\_\_\_  
(Date)

List Unions:

**\*\*RETURN WITH BID\*\***

Exhibit A - Contractor Letter of Assent

\_\_\_\_\_  
(Date)

To All Parties:

In accordance with the terms and conditions of the contract for Construction Work on [Contract No. ], this Letter of Assent hereby confirms that the undersigned Prime Contractor or Subcontractor agrees to be bound by the terms and conditions of the Project Labor Agreement established and entered into by the Illinois Department of Transportation in connection with said Project.

It is the understanding and intent of the undersigned party that this Project Labor Agreement shall pertain only to the identified Project. In the event it is necessary for the undersigned party to become signatory to a collective bargaining agreement to which it is not otherwise a party in order that it may lawfully make certain required contributions to applicable fringe benefit funds, the undersigned party hereby expressly conditions its acceptance of and limits its participation in such collective bargaining agreement to its work on the Project.

\_\_\_\_\_  
(Authorized Company Officer)

\_\_\_\_\_  
(Company)

**\*\*RETURN WITH BID\*\***

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 Springfield

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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.

## AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012

Revised: January 1, 2013

Add the following Section to the Standard Specifications:

### “SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

**303.01 Description.** This work shall consist of constructing an aggregate subgrade improvement.

**303.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate .....	1004.06
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2, and 3) .....	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01, CS 02, and RR 01 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01, CS 02, or RR 01 are used in lower lifts.

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.

**303.03 Equipment.** The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

**303.04 Soil Preparation.** The stability of the soil shall be according to the Department’s Subgrade Stability Manual for the aggregate thickness specified.

**303.05 Placing Aggregate.** The maximum nominal lift thickness of aggregate gradations CA 02, CA 06, or CA 10 shall be 12 in. (300 mm). The maximum nominal lift thickness of aggregate gradations CS 01, CS 02, and RR 01 shall be 24 in. (600 mm).

**303.06 Capping Aggregate.** The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When the contract specifies that a granular subbase is to be placed on the aggregate subgrade improvement, the 3 in. (75 mm) of capping aggregate shall be the same gradation and may be placed with the underlying aggregate subgrade improvement material.

**303.07 Compaction.** All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

**303.08 Finishing and Maintenance of Aggregate Subgrade Improvement.** The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

**303.09 Method of Measurement.** This work will be measured for payment according to Article 311.08.

**303.10 Basis of Payment.** This work will be paid for at the contract unit price per cubic yard (cubic meter) or ton (metric ton) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.”

Add the following to Section 1004 of the Standard Specifications:

**“1004.06 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.
  - (1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 01.

The coarse aggregate gradation for total subgrade thickness more than 12 in. (300 mm) shall be CS 01, CS 02 or RR 01(see Article 1005.01(c)).

Grad No.	COARSE AGGREGATE SUBGRADE GRADATIONS				
	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	



COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)					
Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

(2) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.”

80274

## COATED GALVANIZED STEEL CONDUIT (BDE)

Effective: January 1, 2013

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

“(3) Coated Galvanized Steel Conduit. The conduit prior to coating shall meet the requirements for rigid metal conduit and be manufactured according to NEMA Standard No. RN1.

The coating shall have the following characteristics.

Hardness	85+ Shore A Durometer
Dielectric Strength	400 V/mil @ 60 Hz
Aging	1,000 Hours Atlas Weatherometer
Brittleness Temperature	0 °F (-18 °C) when tested according to ASTM D 746
Elongation	200 percent

The exterior galvanized surfaces shall be coated with a primer before the coating to ensure a bond between the zinc substrate and the coating. The bond strength created shall be greater than the tensile strength of the plastic coating. The nominal thickness of the coating shall be 40 mils (1 mm). The coating shall pass the following bonding test.

Two parallel cuts 1/2 in. (13 mm) apart and 1 1/2 in. (38 mm) in length shall be made with a sharp knife along the longitudinal axis. A third cut shall be made perpendicular to and crossing the longitudinal cuts at one end. The knife shall then be worked under the coating for 1/2 in. (13 mm) to free the coating from the metal.

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

A two part urethane coating shall be applied to the interior of the conduit. The internal coating shall have a nominal thickness of 2 mils (50 µm). The interior coating shall be applied in a manner so there are no runs, drips, or pinholes at any point. The coating shall not peel, flake, or chip off after a cut is made in the conduit or a scratch is made in the coating. The urethane interior coating applied shall afford sufficient flexibility to permit field bending without cracking or flaking of the interior coating.

All conduit fittings and couplings shall be as specified and recommended by the conduit manufacturer. All conduit fitting covers shall be furnished with stainless steel screws which have been encapsulated with a polyester material on the head to ensure maximum corrosion protection.”

80310

**CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH (BDE)**

Effective: April 1, 2014

Add the following to Article 606.02 of the Standard Specifications:

“(i) Polyurethane Joint Sealant ..... 1050.04”

Revise the fifth paragraph of Article 606.07 of the Standard Specifications to read:

“Transverse contraction and longitudinal construction joints shall be sealed according to Article 420.12, except transverse joints in concrete curb and gutter shall be sealed with polysulfide or polyurethane joint sealant.”

Add the following to Section 1050 of the Standard Specifications:

**“1050.04 Polyurethane Joint Sealant.** The joint sealant shall be a polyurethane sealant, Type S, Grade NS, Class 25, Use T, according to ASTM C 920.”

80334

## CONTRACT CLAIMS (BDE)

Effective: April 1, 2014

Revise the first paragraph of Article 109.09(a) of the Standard Specifications to read:

“(a) Submission of Claim. All claims filed by the Contractor shall be in writing and in sufficient detail to enable the Department to ascertain the basis and amount of the claim. As a minimum, the following information must accompany each claim submitted.”

Revise Article 109.09(e) of the Standard Specifications to read:

“(e) Procedure. The Department provides two administrative levels for claims review.

Level I Engineer of Construction

Level II Chief Engineer/Director of Highways or Designee

- (1) Level I. All claims shall first be submitted at Level I. Two copies each of the claim and supporting documentation shall be submitted simultaneously to the District and the Engineer of Construction. The Engineer of Construction, in consultation with the District, will consider all information submitted with the claim and render a decision on the claim within 90 days after receipt by the Engineer of Construction. Claims not conforming to this Article will be returned without consideration. The Engineer of Construction may schedule a claim presentation meeting if in the Engineer of Construction's judgment such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. If a Level I decision is not rendered within 90 days of receipt of the claim, or if the Contractor disputes the decision, an appeal to Level II may be made by the Contractor.
- (2) Level II. An appeal to Level II shall be made in writing to the Engineer of Construction within 45 days after the date of the Level I decision. Review of the claim at Level II shall be conducted as a full evaluation of the claim. A claim presentation meeting may be scheduled if the Chief Engineer/Director of Highways determines that such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. A Level II final decision will be rendered within 90 days of receipt of the written request for appeal.

Full compliance by the Contractor with the provisions specified in this Article is a contractual condition precedent to the Contractor's right to seek relief in the Court of Claims. The Director's written decision shall be the final administrative action of the Department. Unless the Contractor files a claim for adjudication by the Court of Claims within 60 days after the date of the written decision, the failure to file shall constitute a release and waiver of the claim.”

80335

## **DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)**

Effective: September 1, 2000

Revised: August 2, 2011

**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. The 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 11.00 % 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 for 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 shall 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 website 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 that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, 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 documents 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 document 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 or 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 for the determination.
- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the 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 issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. 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 documentation and 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 consideration, 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. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement.

- (a) NO AMENDMENT. 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) TERMINATION OR REPLACEMENT. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.
- (c) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. 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. 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. 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.
- (d) ALTERNATIVE WORK METHODS. 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 reasonable 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) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;

- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- (6) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated, or fails to complete its work on the Contract for any reason the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal.

- (f) PAYMENT RECORDS. 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 BDE 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 (h) of this part.

- (g) ENFORCEMENT. 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.
- (h) RECONSIDERATION. 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

**FRICTION AGGREGATE (BDE)**

Effective: January 1, 2011

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

- “(4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.
- a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).
  - b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase.”

Revise Article 1004.03(a) of the Standard Specifications to read:

“**1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA).** The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA All Other	Stabilized Subbase or Shoulders	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag <sup>1/</sup> Crushed Concrete

Use	Mixture	Aggregates Allowed
HMA High ESAL Low ESAL	Binder IL-25.0, IL-19.0, or IL-19.0L  SMA Binder	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete <sup>3/</sup>
HMA High ESAL Low ESAL	C Surface and Leveling Binder IL-12.5, IL-9.5, or IL-9.5L  SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag <sup>4/</sup> Crushed Concrete <sup>3/</sup>
HMA High ESAL	D Surface and Leveling Binder IL-12.5 or IL-9.5  SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone (other than Limestone) <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>5/</sup> Crushed Steel Slag <sup>4/ 5/</sup> Crushed Concrete <sup>3/</sup>
		<u>Other Combinations Allowed:</u>
		<i>Up to...</i> <i>With...</i>
		25% Limestone                      Dolomite
		50% Limestone                      Any Mixture D aggregate other than Dolomite
		75% Limestone                      Crushed Slag (ACBF) <sup>5/</sup> or Crushed Sandstone



Use	Mixture	Aggregates Allowed	
HMA High ESAL	E Surface IL-12.5 or IL-9.5  SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>5/</sup> Crushed Steel Slag <sup>5/</sup> Crushed Concrete <sup>3/</sup>  No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Dolomite <sup>2/</sup>	Any Mixture E aggregate
		75% Dolomite <sup>2/</sup>	Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone
75% Crushed Gravel or Crushed Concrete <sup>3/</sup>	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF) <sup>5/</sup> , or Crushed Steel Slag <sup>5/</sup>		
HMA High ESAL	F Surface IL-12.5 or IL-9.5  SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination:</u> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>5/</sup> Crushed Steel Slag <sup>5/</sup> No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>

Use	Mixture	Aggregates Allowed	
		50% Crushed Gravel, Crushed Concrete <sup>3/</sup> , or Dolomite <sup>2/</sup>	Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When either slag is used, the blend percentages listed shall be by volume.”

80265

## FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 1, 2009

Revised: July 1, 2009

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name and sign and date the form shall make this contract exempt of fuel cost adjustments for all categories of work. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and work added by adjusted unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Added work paid for by time and materials will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

### (a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.

- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units		
Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

Metric Units		
Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times FUF \times Q$$

Where: CA = Cost Adjustment, \$  
FPI<sub>P</sub> = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)  
FPI<sub>L</sub> = Fuel Price Index, as published by the Department for the month prior to the letting, \$/gal (\$/liter)  
FUF = Fuel Usage Factor in the pay item(s) being adjusted  
Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

**Progress Payments.** Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

**Final Quantities.** Upon completion of the work and determination of final pay quantities, an adjustment will be prepared to reconcile any differences between estimated quantities previously paid and the final quantities. The value for the balancing adjustment will be based on a weighted average of FPI<sub>P</sub> and Q only for those months requiring the cost adjustment. The cost adjustment will be applicable to the final measured quantities of all applicable pay items.

**Basis of Payment.** Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI<sub>L</sub> and FPI<sub>P</sub> in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

Return With Bid

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

**OPTION FOR  
FUEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of fuel cost adjustments in all categories. Failure to indicate "Yes" for any category of work at the time of bid will make that category of work exempt from fuel cost adjustment. After award, this form, when submitted shall become part of the contract.

**Contract No.:** \_\_\_\_\_

**Company Name:** \_\_\_\_\_

**Contractor's Option:**

Is your company opting to include this special provision as part of the contract plans for the following categories of work?

- |  |     |                          |
|--|-----|--------------------------|
| Category A Earthwork.                          | Yes | <input type="checkbox"/> |
| Category B Subbases and Aggregate Base Courses | Yes | <input type="checkbox"/> |
| Category C HMA Bases, Pavements and Shoulders  | Yes | <input type="checkbox"/> |
| Category D PCC Bases, Pavements and Shoulders  | Yes | <input type="checkbox"/> |
| Category E Structures                          | Yes | <input type="checkbox"/> |

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

80229

## GRANULAR MATERIALS (BDE)

Effective: November 1, 2012

Revise the title of Article 1003.04 of the Standard Specifications to read:

**“1003.04 Fine Aggregate for Bedding, Trench Backfill, Embankment, Porous Granular Backfill, Sand Backfill for Underdrains, and French Drains.”**

Revise Article 1003.04(c) of the Standard Specifications to read:

“(c) Gradation. The fine aggregate gradations for granular embankment, granular backfill, bedding, and trench backfill for pipe culverts and storm sewers shall be FA 1, FA 2, or FA 6 through FA 21.

The fine aggregate gradation for porous granular embankment, porous granular backfill, french drains, and sand backfill for underdrains shall be FA 1, FA 2, or FA 20, except the percent passing the No. 200 (75 µm) sieve shall be 2±2.”

Revise Article 1004.05(c) of the Standard Specifications to read:

“(c) Gradation. The coarse aggregate gradations shall be as follows.

Application	Gradation
Blotter	CA 15
Granular Embankment, Granular Backfill, Bedding, and Trench Backfill for Pipe Culverts and Storm Sewers	CA 6, CA 9, CA 10, CA 12, CA17, CA18, and CA 19
Porous Granular Embankment, Porous Granular Backfill, and French Drains	CA 7, CA 8, CA 11, CA 15, CA 16 and CA 18”

80303

## HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: April 1, 2012

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 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 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-4.75	Ndesign = 50	93.0 – 97.4%	91.0%
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 – MIXTURE DESIGN COMPOSITION AND VOLUMETRIC REQUIREMENTS (BDE)**

Effective: November 1, 2013

Revise Article 406.14(b) of the Standard Specifications to read.

“(b) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was not produced within 2.0 to 6.0 percent air voids or within the individual control limits of the JMF, the mixture and test strip will not be paid for and the mixture shall be removed at the Contractor’s expense. An additional test strip and mixture will be paid for in full, if produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF.”

Revise Article 406.14(c) of the Standard Specifications to read.

“(c) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF, the mixture shall be removed. Removal will be paid in accordance to Article 109.04. This initial mixture and test strip will be paid for at the contract unit prices. The additional mixture will be paid for at the contract unit price, and any additional test strips will be paid for at one half the unit price of each test strip.”

Revise Article 1030.04(a)(1) of the Standard Specifications to read.

“(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) <sup>1/</sup>										
Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm		IL-9.5 mm		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in. (37.5 mm)		100								
1 in. (25 mm)	90	100		100						
3/4 in. (19 mm)		90	82	100		100				
1/2 in. (12.5 mm)	45	75	50	85	90	100		100		100
3/8 in. (9.5 mm)						89	90	100		100
#4 (4.75 mm)	24	42 <sup>2/</sup>	24	50 <sup>2/</sup>	28	65	32	69	90	100
#8 (2.36 mm)	16	31	20	36	28	48 <sup>3/</sup>	32	52 <sup>3/</sup>	70	90
#16 (1.18 mm)	10	22	10	25	10	32	10	32	50	65
#50 (300 µm)	4	12	4	12	4	15	4	15	15	30
#100 (150 µm)	3	9	3	9	3	10	3	10	10	18
#200 (75 µm)	3	6	3	6	4	6	4	6	7	9

Ratio Dust/Asphalt Binder		1.0		1.0		1.0		1.0		1.0 <sup>1/4</sup>
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- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 40 percent passing the #4 (4.75 mm) sieve for binder courses with Ndesign ≥ 90.
- 3/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign ≥ 90.
- 4/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.”

Delete Article 1030.04(a)(4) of the Standard Specifications.

Revise Article 1030.04(b)(1) of the Standard Specifications to read.

“(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix, and shall conform to the following requirements.

VOLUMETRIC REQUIREMENTS High ESAL						
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum					Voids Filled with Asphalt Binder (VFA), %
	IL-25.0	IL-19.0	IL-12.5	IL-9.5	IL-4.75 <sup>1/</sup>	
50	12.0	13.0	14.0	15.0	18.5	65 – 78 <sup>2/</sup>
70					65 - 75	
90						
105						

- 1/ Maximum Draindown for IL-4.75 shall be 0.3 percent
- 2/ VFA for IL-4.75 shall be 76-83 percent”

Delete Article 1030.04(b)(4) of the Standard Specifications.

Revise the Control Limits Table in Article 1030.05(d)(4) of the Standard Specifications to read.

“CONTROL LIMITS
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Parameter	High ESAL Low ESAL	High ESAL Low ESAL	All Other	IL-4.75	IL-4.75
	Individual Test	Moving Avg. of 4	Individual Test	Individual Test	Moving Avg. of 4
% Passing: <sup>1/</sup>					
1/2 in. (12.5 mm)	± 6 %	± 4 %	± 15 %		
No. 4 (4.75 mm)	± 5 %	± 4 %	± 10 %		
No. 8 (2.36 mm)	± 5 %	± 3 %			
No. 16 (1.18 mm)				± 4 %	± 3 %
No. 30 (600 µm)	± 4 %	± 2.5 %			
Total Dust Content No. 200 (75 µm)	± 1.5 %	± 1.0 %	± 2.5 %	± 1.5 %	± 1.0 %
Asphalt Binder Content	± 0.3 %	± 0.2 %	± 0.5 %	± 0.3 %	± 0.2 %
Voids	± 1.2 %	± 1.0 %	± 1.2 %	± 1.2 %	± 1.0 %
VMA	-0.7 % <sup>2/</sup>	-0.5 % <sup>2/</sup>		-0.7 % <sup>2/</sup>	-0.5 % <sup>2/</sup>

1/ Based on washed ignition oven

2/ Allowable limit below minimum design VMA requirement”

80322

## HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION (BDE)

Effective: November 1, 2013

Description. This special provision provides the requirements for Hamburg Wheel and tensile strength testing for High ESAL, IL-4.75, and Stone Matrix Asphalt (SMA) hot-mix asphalt (HMA) mixes during mix design verification and production. This special provision also provides the plant requirements for hydrated lime addition systems used in the production of High ESAL, IL-4.75, and SMA mixes.

Mix Design Testing. Add the following to Article 1030.04 of the Standard Specifications:

“(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (Illinois Modified AASHTO T 324) and the Tensile Strength Test (Illinois Modified AASHTO T 283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department's verification test, the Contractor shall make necessary changes to the mix and provide passing Hamburg Wheel and tensile strength test results from a private lab. The Department will verify the passing results.

All new and renewal mix designs shall meet the following requirements for verification testing.

(1) Hamburg Wheel Test Criteria. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in. (12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the mix requirements table of the plans.

Illinois Modified AASHTO T 324 Requirements <sup>1/</sup>

PG Grade	Number of Passes
PG 58-xx (or lower)	5,000
PG 64-xx	7,500
PG 70-xx	15,000
PG 76-xx (or higher)	20,000

<sup>1/</sup> When produced at temperatures of  $275 \pm 5$  °F ( $135 \pm 3$  °C) or less, loose Warm Mix Asphalt shall be oven aged at  $270 \pm 5$  °F ( $132 \pm 3$  °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

(2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 415 kPa (60 psi) for non-polymer modified performance graded (PG) asphalt binder and 550 kPa (80 psi) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 1380 kPa (200 psi).”

Production Testing. Revise Article 1030.06(a) of the Standard Specifications to read:

“(a) High ESAL, IL-4.75 and SMA Mixtures. For each contract, a 300 ton (275 metric tons) test strip will be required at the beginning of HMA production for each mixture with a quantity of 3000 tons (2750 metric tons) or more according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”.

Before start-up, target values shall be determined by applying gradation correction factors to the JMF when applicable. These correction factors shall be determined from previous experience. The target values, when approved by the Engineer, shall be used to control HMA production. Plant settings and control charts shall be set according to target values.

Before constructing the test strip, target values shall be determined by applying gradation correction factors to the JMF when applicable. After any JMF adjustment, the JMF shall become the Adjusted Job Mix Formula (AJMF). Upon completion of the first acceptable test strip, the JMF shall become the AJMF regardless of whether or not the JMF has been adjusted. If an adjustment/plant change is made, the Engineer may require a new test strip to be constructed. If the HMA placed during the initial test strip is determined to be unacceptable to remain in place by the Engineer, it shall be removed and replaced.

The limitations between the JMF and AJMF are as follows.

Parameter	Adjustment
1/2 in. (12.5 mm)	± 5.0 %
No. 4 (4.75 mm)	± 4.0 %
No. 8 (2.36 mm)	± 3.0 %
No. 30 (600 µm)	*
No. 200 (75 µm)	*
Asphalt Binder Content	± 0.3 %

\* In no case shall the target for the amount passing be greater than the JMF.

Any adjustments outside the above limitations will require a new mix design.

Mixture sampled to represent the test strip shall include additional material sufficient for the Department to conduct Hamburg Wheel testing according to Illinois Modified AASHTO T324 (approximately 60 lb (27 kg) total).

The Contractor shall immediately cease production upon notification by the Engineer of failing Hamburg Wheel test. All prior produced material may be paved out provided all other mixture criteria is being met. No additional mixture shall be produced until the Engineer receives passing Hamburg Wheel tests.

The Department may conduct additional Hamburg Wheel tests on production material as determined by the Engineer.”

Revise the title of Article 1030.06(b) of the Standard Specifications to read:

“(b) Low ESAL and All Other Mixtures.”

System for Hydrated Lime Addition. Revise the fourth sentence of the third paragraph of Article 1030.04(c) of the Standard Specifications to read:

“The method of application shall be according to Article 1102.01(a)(10).”

Replace the first three sentences of the second paragraph of Article 1102.01(a)(10) of the Standard Specifications to read:

“When hydrated lime is used as the anti-strip additive, a separate bin or tank and feeder system shall be provided to store and accurately proportion the lime onto the aggregate either as a slurry, as dry lime applied to damp aggregates, or as dry lime injected onto the hot aggregates prior to adding the liquid asphalt cement. If the hydrated lime is added either as a slurry or as dry lime on damp aggregates, the lime and aggregates shall be mixed by a power driven pugmill to provide a uniform coating of the lime prior to entering the dryer. If dry hydrated lime is added to the hot dry aggregates in a dryer-drum plant, the lime shall be added in such a manner that the lime will not become entrained into the air stream of the dryer-drum and that thorough dry mixing shall occur prior to the injection point of the liquid asphalt. When a batch plant is used, the hydrated lime shall be added to the mixture in the weigh hopper or as approved by the Engineer.”

Basis of Payment. Replace the seventh paragraph of Article 406.14 of the Standard Specifications with the following:

“For mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

If an anti-stripping additive is required for any other HMA mix, the cost of the additive will be paid for according to Article 109.04. The cost incurred in introducing the additive into the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive.”

80323

## LRFD STORM SEWER BURIAL TABLES (BDE)

Effective: November 1, 2013

Revise Article 550.02 of the Standard Specifications to read as follows:

Item	Article Section
(a) Clay Sewer Pipe .....	1040.02
(b) Extra Strength Clay Pipe .....	1040.02
(c) Concrete Sewer, Storm Drain, and Culvert Pipe .....	1042
(d) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe .....	1042
(e) Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (Note 1) .....	1042
(f) Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe (Note 1) .....	1042
(g) Polyvinyl Chloride (PVC) Pipe .....	1040.03
(h) Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior .....	1040.03
(i) Corrugated Polypropylene (CPP) Pipe with Smooth Interior .....	1040.07
(j) Rubber Gaskets and Preformed Flexible Joint Sealants for Concrete Pipe .....	1056
(k) Mastic Joint Sealer for Pipe .....	1055
(l) External Sealing Band .....	1057
(m) Fine Aggregate (Note 2) .....	1003.04
(n) Coarse Aggregate (Note 3) .....	1004.05
(o) Reinforcement Bars and Welded Wire Fabric .....	1006.10
(p) Handling Hole Plugs .....	1042.16
(q) Polyethylene (PE) Pipe with a Smooth Interior .....	1040.04
(r) Corrugated Polyethylene (PE) Pipe with a Smooth Interior .....	1040.04

Note 1. The class of elliptical and arch pipe used for various storm sewer sizes and heights of fill shall conform to the requirements for circular pipe.

Note 2. The fine aggregate shall be moist.

Note 3. The coarse aggregate shall be wet.”



Revise the table for permitted materials in Article 550.03 of the Standard Specifications as follows:

"Class	Materials
A	Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
B	Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe Flexible Pipes: Polyvinyl Chloride (PVC) Pipe Corrugated Polyvinyl Chloride Pipe (PVC) with a Smooth Interior Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polypropylene (CPP) Pipe with a Smooth Interior"

Replace the storm sewers tables in Article 550.03 of the Standard Specifications with the following:

**STORM SEWERS**  
**KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED**  
**FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE**

Nominal Diameter in.	Type 1										Type 2					
	Fill Height: 3' and less With 1" minimum cover										Fill Height: Greater than 3' not exceeding 10'					
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
10	NA	3	X	X	X	X	X	NA	1	*X	X	X	X	X	NA	
12	IV	NA	X	X	X	X	X	II	1	*X	X	X	X	X	X	
15	IV	NA	X	X	NA	X	X	II	1	*X	X	X	X	NA	X	
18	IV	NA	X	X	X	X	X	II	2	X	X	X	X	X	X	
21	III	NA	X	X	NA	NA	NA	II	2	X	X	X	X	NA	NA	
24	III	NA	X	X	X	X	X	II	2	X	X	X	X	X	X	
27	III	NA	NA	NA	NA	NA	NA	II	3	X	NA	NA	NA	NA	NA	
30	IV	NA	X	X	X	X	X	II	3	X	X	X	X	X	X	
33	III	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA	
36	III	NA	NA	X	X	X	X	II	NA	X	X	X	X	NA	X	
42	II	NA	X	NA	X	X	X	II	NA	X	X	NA	NA	NA	NA	
48	II	NA	X	NA	X	X	X	II	NA	X	X	NA	NA	NA	NA	
54	II	NA	NA	NA	NA	NA	NA	II	NA	X	X	NA	X	NA	NA	
60	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	
66	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	
72	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	
78	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	
84	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA	
90	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA	
96	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA	
102	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA	
108	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA	

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe  
CSP Concrete Sewer, Storm drain, and Culvert Pipe  
PVC Polyvinyl Chloride Pipe  
CPVC Corrugated Polyvinyl Chloride Pipe  
ESCP Extra Strength Clay Pipe  
PE Polyethylene Pipe with a Smooth Interior  
CPE Corrugated Polyethylene Pipe with a Smooth Interior  
CPP Corrugated Polypropylene pipe with a Smooth Interior  
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 Pipe

**STORM SEWERS (Metric)**  
**KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED**  
**FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE**

Nominal Diameter in.	Type 1											Type 2						
	Fill Height: 1 m. and less With 300 mm minimum cover											Fill Height: Greater than 1 m not exceeding 3 m						
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP		
250	NA	3	X	X	X	X	X	NA	1	*X	X	X	X	X	NA			
300	IV	NA	X	X	X	X	X	II	1	*X	X	X	X	X	X			
375	IV	NA	X	X	NA	X	X	II	1	*X	X	X	NA	X	X			
450	IV	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X			
525	III	NA	NA	X	X	NA	NA	II	2	X	X	X	NA	NA	NA			
600	III	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X			
675	III	NA	NA	NA	NA	NA	NA	II	3	X	NA	NA	NA	NA	NA			
750	IV	NA	NA	X	X	X	X	II	3	X	X	X	X	X	X			
825	III	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA			
900	III	NA	NA	NA	X	X	X	II	NA	X	X	X	X	NA	X			
1050	II	NA	X	X	X	X	X	II	NA	X	X	NA	NA	NA	NA			
1200	II	NA	X	X	NA	X	X	II	NA	X	X	NA	NA	NA	NA			
1350	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA			
1500	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	X			
1650	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA			
1800	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA			
1950	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA			
2100	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA			
2250	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA			
2400	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA			
2550	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA			
2700	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA			

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe  
CSP Concrete Sewer, Storm drain, and Culvert Pipe  
PVC Polyvinyl Chloride Pipe  
CPVC Corrugated Polyvinyl Chloride Pipe  
ESCP Extra Strength Clay Pipe  
PE Polyethylene Pipe with a Smooth Interior  
CPE Corrugated Polyethylene Pipe with a Smooth Interior  
CPP Corrugated Polypropylene pipe with a Smooth Interior  
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 Pipe

STORM SEWERS														
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE														
Nominal Diameter In.	Type 3										Type 4			
	Fill Height: Greater than 10' not exceeding 15'										Fill Height: Greater than 15' not exceeding 20'			
	RCCP	GSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	GSP	ESCP	PVC	CPVC	PE
10	NA	2	X	X	X	X	NA	NA	3	X	X	X	X	NA
12	III	2	X	X	X	NA	X	IV	NA	NA	X	X	X	NA
15	III	3	X	X	NA	NA	X	IV	NA	NA	X	X	NA	X
18	III	NA	X	X	X	NA	X	IV	NA	NA	X	X	NA	NA
21	III	NA	NA	X	NA	NA	NA	IV	NA	NA	X	X	NA	NA
24	III	NA	NA	X	X	NA	NA	IV	NA	NA	X	X	NA	NA
27	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
30	III	NA	NA	X	X	NA	X	IV	NA	NA	X	X	NA	NA
33	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
36	III	NA	NA	X	X	X	NA	IV	NA	NA	X	X	NA	NA
42	III	NA	NA	X	NA	X	NA	IV	NA	NA	X	NA	X	NA
48	III	NA	NA	X	NA	X	NA	IV	NA	NA	X	NA	X	NA
54	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
60	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
66	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
72	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
78	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
84	III	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
90	III	NA	NA	NA	NA	NA	NA	1680	NA	NA	NA	NA	NA	NA
96	III	NA	NA	NA	NA	NA	NA	1690	NA	NA	NA	NA	NA	NA
102	IV	NA	NA	NA	NA	NA	NA	1700	NA	NA	NA	NA	NA	NA
108	1360	NA	NA	NA	NA	NA	NA	1710	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe  
 CSP Concrete Sewer, Storm drain, and Culvert Pipe  
 PVC Polyvinyl Chloride Pipe  
 CPVC Corrugated Polyvinyl Chloride Pipe  
 ESCP Extra Strength Clay Pipe  
 PE Polyethylene Pipe with a Smooth Interior  
 CPE Corrugated Polyethylene Pipe with a Smooth Interior  
 CPP Corrugated Polypropylene pipe with a Smooth Interior  
 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 Pipe  
 Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

**STORM SEWERS (metric)**  
**KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED**  
**FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE**

Nominal Diameter in.	Type 3											Type 4					
	Fill Height: Greater than 3 m not exceeding 4.5 m											Fill Height: Greater than 4.5 m not exceeding 6 m					
	RCCP	CSP	ESCP	PVC	CPVC	PE	OPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPP		
250	NA	2	X	X	X	X	X	NA	3	X	X	X	X	X	NA		
300	III	2	X	X	X	NA	NA	X	NA	NA	X	X	X	X	NA		
375	III	3	X	X	NA	NA	X	X	NA	NA	X	X	X	NA	X		
450	III	NA	X	X	X	NA	X	X	NA	NA	X	X	X	X	NA		
525	III	NA	NA	X	X	NA	NA	NA	NA	NA	X	X	X	NA	NA		
600	III	NA	NA	X	X	X	NA	NA	NA	NA	X	X	X	X	NA		
675	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
750	III	NA	NA	X	X	X	NA	X	NA	NA	X	X	X	X	NA		
825	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
900	III	NA	NA	NA	X	X	NA	NA	NA	NA	X	X	X	X	NA		
1050	III	NA	NA	NA	NA	X	NA	NA	NA	NA	X	NA	NA	X	NA		
1200	III	NA	NA	NA	X	X	NA	NA	NA	NA	X	NA	NA	X	NA		
1350	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1500	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1650	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1800	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1950	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
2100	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
2250	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
2400	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
2550	IV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
2700	70	NA	NA	NA	NA	NA	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  
PVC Polyvinyl Chloride Pipe  
CPVC Corrugated Polyvinyl Chloride Pipe  
ESCP Extra Strength Clay Pipe  
PE Polyethylene Pipe with a Smooth Interior  
CPE Corrugated Polyethylene Pipe with a Smooth Interior  
CPP Corrugated Polypropylene pipe with a Smooth Interior  
X This material is Not Acceptable for the given pipe diameter and fill height.  
\* May also use Standard Strength Clay Pipe  
Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE									
Nominal Diameter in.	Type 5			Type 6			Type 7		
	Fill Height: Greater than 20' not exceeding 25'			Fill Height: Greater than 25' not exceeding 30'			Fill Height: Greater than 30' not exceeding 35'		
	RCCP	PVC	CPVC	RCCP	PVC	CPVC	RCCP	CPVC	CPVC
10	NA	X	X	NA	X	X	NA	X	X
12	IV	X	X	V	X	X	V	X	X
15	IV	X	X	V	X	X	V	X	X
18	IV	X	X	V	X	X	V	X	X
21	IV	X	X	V	X	X	V	X	X
24	IV	X	X	V	X	X	V	X	X
27	IV	NA	NA	V	NA	NA	V	NA	NA
30	IV	X	X	V	X	X	V	X	X
33	IV	NA	NA	V	NA	NA	V	NA	NA
36	IV	X	X	V	X	X	V	X	X
42	IV	X	X	V	X	X	V	NA	NA
48	IV	X	X	V	NA	NA	V	NA	NA
54	IV	NA	NA	V	NA	NA	V	NA	NA
60	IV	NA	NA	V	NA	NA	V	NA	NA
66	IV	NA	NA	V	NA	NA	V	NA	NA
72	V	NA	NA	V	NA	NA	V	NA	NA
78	2020	NA	NA	2370	NA	NA	2730	NA	NA
84	2020	NA	NA	2380	NA	NA	2740	NA	NA
90	2030	NA	NA	2390	NA	NA	2750	NA	NA
96	2040	NA	NA	2400	NA	NA	2750	NA	NA
102	2050	NA	NA	2410	NA	NA	2760	NA	NA
108	2060	NA	NA	2410	NA	NA	2770	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe  
PVC Polyvinyl Chloride Pipe  
CPVC Corrugated Polyvinyl Chloride Pipe  
ESCP Extra Strength Clay 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.  
Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

STORM SEWERS (metric)									
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE									
Nominal Diameter in.	Type 5			Type 6			Type 7		
	Fill Height: Greater than 20' not exceeding 25'			Fill Height: Greater than 25' not exceeding 30'			Fill Height: Greater than 30' not exceeding 35'		
	RCCP	PVC	CPVC	RCCP	PVC	CPVC	RCCP	RCCP	CPVC
250	NA	X	X	NA	X	X	NA	NA	X
300	IV	X	X	V	X	X	V	V	X
375	IV	X	X	V	X	X	V	V	X
450	IV	X	X	V	X	X	V	V	X
525	IV	X	X	V	X	X	V	V	X
600	IV	X	X	V	X	X	V	V	X
675	IV	NA	NA	V	NA	NA	V	V	NA
750	IV	X	X	V	X	X	V	V	X
825	IV	NA	NA	V	NA	NA	V	V	NA
900	IV	X	X	V	X	X	V	V	X
1050	IV	X	NA	V	X	NA	V	V	NA
1200	IV	X	NA	V	X	NA	V	V	NA
1350	IV	NA	NA	V	NA	NA	V	V	NA
1500	IV	NA	NA	V	NA	NA	V	V	NA
1650	IV	NA	NA	V	NA	NA	V	V	NA
1800	V	NA	NA	V	NA	NA	V	V	NA
1950	100	NA	NA	110	NA	NA	130	130	NA
2100	100	NA	NA	110	NA	NA	130	130	NA
2250	100	NA	NA	110	NA	NA	130	130	NA
2400	100	NA	NA	120	NA	NA	130	130	NA
2550	100	NA	NA	120	NA	NA	130	130	NA
2700	100	NA	NA	120	NA	NA	130	130	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay 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.

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

Revise the sixth paragraph of Article 550.06 of the Standard Specifications to read:

“PVC, PE and CPP pipes shall be joined according to the manufacturer’s specifications.”

Revise the first and second paragraphs of Article 550.08 of the Standard Specifications to read:

“**550.08 Deflection Testing for Storm Sewers.** All PVC, PE, and CPP 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.

For PVC, PE, and CPP storm sewers with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC, PE, and CPP storm sewers with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel shall be used.”

Revise the fifth paragraph of Article 550.08 to read as follows.

“The outside diameter of the mandrel shall be 95 percent of the base inside diameter. For all PVC pipe the base inside diameter shall be defined using ASTM D 3034 methodology. For all PE and CPP 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.”

Revise the first paragraph of Article 1040.03 of the Standard Specifications to read:

“**1040.03 Polyvinyl Chloride (PVC) Pipe.** Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.”

Delete Articles 1040.03(e) and (f) of the Standard Specifications.

Revise Articles 1040.04(c) and (d) of the Standard Specifications to read:

“(c) PE Profile Wall Pipe for Insertion Lining. The pipe shall be according to ASTM F 894. When used for insertion lining of pipe culverts, the pipe liner shall have a minimum pipe stiffness of 46 psi (317 kPa) at five percent deflection for nominal inside diameters of 42 in. (1050 mm) or less. For nominal inside diameters of greater than 42 in. (1050 mm), the pipe liner shall have a minimum pipe stiffness of 32.5 psi (225 kPa) at five percent deflection. All sizes shall have wall construction that presents essentially smooth internal and external surfaces.

(d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written



certification that the material meets those properties and the resin used to manufacture the pipe meets or exceeds the minimum cell classification requirements.”

Add the following to Section 1040 of the Standard Specifications:

**“1040.08 Polypropylene (PP) Pipe.** Storage and handling shall be according to the manufacturer's recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.

- (a) Corrugated PP Pipe with a Smooth Interior. The pipe shall be according to AAHSTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D.
- (b) Perforated Corrugated PP Pipe with A Smooth Interior. The pipe shall be according to AASHTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type SP. In addition, the top centerline of the pipe shall be marked so that it is readily visible from the top of the trench before backfilling, and the upper ends of the slot perforations shall be a minimum of ten degrees below the horizontal.”

80325

## **PAYROLLS AND PAYROLL RECORDS (BDE)**

Effective: January 1, 2014

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

### **“STATEMENTS AND PAYROLLS**

The payroll records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable.

The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box (“No Work”, “Suspended”, or “Complete”) checked on the form.”

STATE CONTRACTS. Revise Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

### **“IV. COMPLIANCE WITH THE PREVAILING WAGE ACT**

1. **Prevailing Wages.** All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of five years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll

records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department or the Department of Labor; and Federal, State, or local law enforcement agencies and prosecutors.

3. Submission of Payroll Records. The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor, or an officer, employee, or officer thereof, which avers that: (i) he or she has examined the records and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class A misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

80331

**PORTLAND CEMENT CONCRETE – CURING OF ABUTMENTS AND PIERS (BDE)**

Effective: January 1, 2014

Revise Note 7/ of the Index Table of Curing and Protection of Concrete Construction of Article 1020.13 of the Standard Specifications to read:

“7/ Asphalt emulsion for waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18. The top surfaces of abutments and piers shall be cured according to Article 1020.13(a)(3) or (5).”

80332

## **PORTLAND CEMENT CONCRETE EQUIPMENT (BDE)**

Effective: November 1, 2013

Add the following to the first paragraph of Article 1103.03(a)(5) of the Standard Specifications to read:

“As an alternative to a locking key, the start and finish time for mixing may be automatically printed on the batch ticket. The start and finish time shall be reported to the nearest second.”

80326

## **PROGRESS PAYMENTS (BDE)**

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

“(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.”

80328

## QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Revised: January 1, 2014

Revise Note 7/ of Schedule B of Recurring Special Provision Check Sheet #31 of the Standard Specifications to read:

- 7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of two 6 x 12 in. (150 x 300 mm) cylinder breaks, three 4 x 8 in. (100 x 200 mm) cylinder breaks, or two beam breaks for field tests. Per Illinois Modified AASHTO T 23, cylinders shall be 6 x 12 in. (150 x 300 mm) when the nominal maximum size of the coarse aggregate exceeds 1 in. (25 mm).

80281

**RAILROAD PROTECTIVE LIABILITY INSURANCE (5 and 10) (BDE)**

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

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NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
Norfolk Southern Railway Company Three Commercial Place Norfolk, Virginia 23510-2191	None	16 trains/day 60mph

DOT/AAR No.: 479324D  
RR Division: Western

RR Mile Post: 413.85  
RR Sub-Division: Decatur

For Freight/Passenger Information Contact:  
For Insurance Information Contact:

Daniel Parker  
Scott Dickerson

Phone: (404) 529-1256  
Phone: (757) 629-2364

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DOT/AAR No.:  
RR Division:

RR Mile Post:  
RR Sub-Division:

For Freight/Passenger Information Contact:  
For Insurance Information Contact:

Phone:  
Phone:

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Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

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



The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

## RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

Revise: April 1, 2014

Revise Section 1031 of the Standard Specifications to read:

### **“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES**

**1031.01 Description.** Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material produced by cold milling or crushing an existing 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.
- (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Bureau of Materials and Physical Research Policy Memorandum “Reclaimed Asphalt Shingle (RAS) Sources”, by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 93 percent passing the #4 (4.75 mm) sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
  - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
  - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

**1031.02 Stockpiles.** RAP and RAS stockpiles shall be according to the following.

- (a) RAP 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 provide documentation on the quality of the RAP to clarify the appropriate stockpile.

- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) 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 shall pass the sieve size specified below for the mix into which the FRAP will be incorporated.

Mixture FRAP will be used in:	Sieve Size that 100% of FRAP Shall Pass
IL-25.0	2 in. (50 mm)
IL-19.0	1 1/2 in. (40 mm)
IL-12.5	1 in. (25 mm)
IL-9.5	3/4 in. (20 mm)
IL-4.75	1/2 in. (13 mm)

- (2) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) 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.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) 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.
- (4) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, HMA (High or Low ESAL), or "All Other" (as defined by Article 1030.04(a)(3)) 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.
- (5) 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.

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise specified by the Engineer, mechanically blending manufactured sand (FM 20 or FM 22) up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The sand shall be accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be maintained by project contract number and kept for a minimum of three years.

**1031.03 Testing.** RAP/FRAP and RAS testing shall be according to the following.

- (a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

(1) During 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).

(2) After Stockpiling. 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.

Each sample shall be split to obtain two equal 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.

- (b) RAS Testing. RAS or RAS blended with manufactured sand shall be sampled and tested during stockpiling according to Illinois Department of Transportation Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Source".

Samples shall be collected during stockpiling at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 250 tons (225 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a  $\leq 1000$  ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS or RAS blended with manufactured sand shall be stockpiled in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

Before testing, each sample shall be split to obtain two test samples. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall perform a washed extraction and test for unacceptable materials on the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

If the sampling and testing was performed at the shingle processing facility in accordance with the QC Plan, the Contractor shall obtain and make available all of the test results from start of the initial stockpile.

**1031.04 Evaluation of Tests.** Evaluation of tests results shall be according to the following.

- (a) Evaluation of RAP/FRAP 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)		$\pm 5 \%$
1/2 in. (12.5 mm)	$\pm 8 \%$	$\pm 15 \%$
No. 4 (4.75 mm)	$\pm 6 \%$	$\pm 13 \%$
No. 8 (2.36 mm)	$\pm 5 \%$	
No. 16 (1.18 mm)		$\pm 15 \%$
No. 30 (600 $\mu\text{m}$ )	$\pm 5 \%$	
No. 200 (75 $\mu\text{m}$ )	$\pm 2.0 \%$	$\pm 4.0 \%$
Asphalt Binder	$\pm 0.4 \%$ <sup>1/</sup>	$\pm 0.5 \%$
$G_{mm}$	$\pm 0.03$	

1/ The tolerance for FRAP shall be  $\pm 0.3 \%$ .

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above 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)".

- (b) Evaluation of RAS and RAS Blended with Manufactured Sand Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.0 %
Asphalt Binder Content	± 1.5 %

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, or if the percent unacceptable material exceeds 0.5 percent by weight of material retained on the # 4 (4.75 mm) sieve, the RAS or RAS blend shall not be used in Department projects. All test data and acceptance ranges shall be sent to the District for evaluation.

**1031.05 Quality Designation of Aggregate in RAP/FRAP.**

- (a) RAP. 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/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
- (2) RAP from Superpave/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
- (3) RAP from Class I, Superpave/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) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 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.

**1031.06 Use of RAP/FRAP and/or RAS in HMA.** The use of RAP/FRAP and/or RAS shall be a Contractor's option when constructing HMA in all contracts.

(a) RAP/FRAP. The use of RAP/FRAP in HMA shall be as follows.

- (1) 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.
- (2) Steel Slag Stockpiles. Homogeneous RAP stockpiles containing steel slag will be approved for use in all HMA (High ESAL and Low ESAL) Surface and Binder Mixture applications.
- (3) 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. RAP/FRAP from Conglomerate stockpiles shall be considered equivalent to limestone for frictional considerations. Known frictional contributions from plus #4 (4.75 mm) homogeneous RAP and FRAP stockpiles will be accounted for in meeting frictional requirements in the specified mixture.
- (4) 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.
- (5) 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.
- (6) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in Article 1031.06(c)(1) below for a given N Design.

(b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0% by weight of the total mix.

(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the Max RAP/RAS ABR table listed below for the given Ndesign.

**RAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage**

HMA Mixtures <sup>1/, 2/</sup> Ndesign	RAP/RAS Maximum ABR %		
	Binder/Leveling Binder	Surface	Polymer Modified
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10
105	10	10	10

1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the RAP/RAS ABR shall not exceed 50 percent of the mixture.

2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR 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 high and low virgin asphalt binder grades shall each be reduced by one grade when RAP/RAS ABR exceeds 25 percent (i.e. 26 percent RAP/RAS ABR would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

(2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the FRAP/RAS table listed below for the given N design.

**FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage**

HMA Mixtures <sup>1/, 2/</sup> Ndesign	FRAP/RAS Maximum ABR %		
	Binder/Leveling Binder	Surface	Polymer Modified <sup>3/, 4/</sup>
30	50	40	10



50	40	35	10
70	40	30	10
90	40	30	10
105	40	30	10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N30, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR 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 high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP/RAS ABR exceeds 25 percent (i.e. 26 percent ABR would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the FRAP/RAS ABR shall not exceed 20 percent.
- 4/ For IL-4.75 mix the FRAP/RAS ABR shall not exceed 30 percent.

**1031.07 HMA Mix Designs.** At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

- (a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS mix designs shall be submitted for 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.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.500 shall be used for mix design purposes.

**1031.08 HMA Production.** HMA production utilizing RAP/FRAP and/or RAS shall be as follows.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP 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.

- (b) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within  $\pm 0.5$  percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.
- (c) RAP/FRAP and/or RAS. HMA plants utilizing RAP/FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAP/FRAP/RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.
- h. 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.)

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.

- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- e. RAP/FRAP/RAS weight to the nearest pound (kilogram).
- f. Virgin asphalt binder weight to the nearest pound (kilogram).
- g. Residual asphalt binder in the RAP/FRAP/RAS 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.

**1031.09 RAP in Aggregate Surface Course and Aggregate Shoulders.** The use of RAP in aggregate surface course (temporary access entrances only) and aggregate wedge shoulders Type B 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. RAP used to construct aggregate surface course and aggregate shoulders shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".
- (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."

80306

## REINFORCEMENT BARS (BDE)

Effective: November 1, 2013

Revise the first and second paragraphs of Article 508.05 of the Standard Specifications to read:

**“508.05 Placing and Securing.** All reinforcement bars shall be placed and tied securely at the locations and in the configuration shown on the plans prior to the placement of concrete. Manual welding of reinforcement may only be permitted on precast concrete products as indicated in the current Bureau of Materials and Physical Research Policy Memorandum “Quality Control / Quality Assurance Program for Precast Concrete Products”, and for precast prestressed concrete products as indicated in the Department’s current “Manual for Fabrication of Precast Prestressed Concrete Products”. Reinforcement bars shall not be placed by sticking or floating into place or immediately after placement of the concrete.

Bars shall be tied at all intersections, except where the center to center dimension is less than 1 ft (300 mm) in each direction, in which case alternate intersections shall be tied. Molded plastic clips may be used in lieu of wire to secure bar intersections, but shall not be permitted in horizontal bar mats subject to construction foot traffic or to secure longitudinal bar laps. Plastic clips shall adequately secure the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. Plastic clips may be recycled plastic, and shall meet the approval of the Engineer. The number of ties as specified shall be doubled for lap splices at the stage construction line of concrete bridge decks when traffic is allowed on the first completed stage during the pouring of the second stage.”

Revise the fifth paragraph of Article 508.05 of the Standard Specifications to read:

“Supports for reinforcement in bridge decks shall be metal. For all other concrete construction the supports shall be metal or plastic. Metal bar supports shall be made of cold-drawn wire, or other approved material and shall be either epoxy coated, galvanized or plastic tipped. When the reinforcement bars are epoxy coated, the metal supports shall be epoxy coated. Plastic supports may be recycled plastic. Supports shall be provided in sufficient number and spaced to provide the required clearances. Supports shall adequately support the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. The legs of supports shall be spaced to allow an opening that is a minimum 1.33 times the nominal maximum aggregate size used in the concrete. Nominal maximum aggregate size is defined as the largest sieve which retains any of the aggregate sample particles. All supports shall meet the approval of the Engineer.”

Revise the first sentence of the eighth paragraph of Article 508.05 of the Standard Specifications to read:

“Epoxy coated reinforcement bars shall be tied with plastic coated wire, epoxy coated wire, or molded plastic clips where allowed.”

Add the following sentence to the end of the first paragraph of Article 508.06(c) of the Standard Specifications:

“In addition, the total slip of the bars within the splice sleeve of the connector after loading in tension to 30 ksi (207 MPa) and relaxing to 3 ksi (20.7 MPa) shall not exceed 0.01 in. (254 microns).”

Revise Article 1042.03(d) of the Standard Specifications to read:

“(d) Reinforcement and Accessories: The concrete cover over all reinforcement shall be within  $\pm 1/4$  in. ( $\pm 6$  mm) of the specified cover.

Welded wire fabric shall be accurately bent and tied in place.

Miscellaneous accessories to be cast into the concrete or for forming holes and recesses shall be carefully located and rigidly held in place by bolts, clamps, or other effective means. If paper tubes are used for vertical dowel holes, or other vertical holes which require grouting, they shall be removed before transportation to the construction site.”

80327

## REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2012

Revised: November 2, 2012

Revise Article 669.01 of the Standard Specifications to read:

**“669.01 Description.** This work shall consist of the transportation and proper disposal of contaminated soil and water. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.”

Revise Article 669.08 of the Standard Specifications to read:

**“669.08 Contaminated Soil and/or Groundwater Monitoring.** The Contractor shall hire a qualified environmental firm to monitor the area containing the regulated substances. The affected area shall be monitored with a photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID). Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. No excavated soils can be taken to a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation with detectable PID or FID meter readings that are above background. The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily. All testing shall be done by a qualified engineer/technician. Such testing and monitoring shall be included in the work. The Contractor shall identify the exact limits of removal of non-special waste, special waste, or hazardous waste. All limits shall be approved by the Engineer prior to excavation. The Contractor shall take all necessary precautions.

Based upon the land use history of the subject property and/or PID or FID readings indicating contamination, a soil or groundwater sample shall be taken from the same location and submitted to an approved laboratory. Soil or groundwater samples shall be analyzed for the contaminants of concern, including pH, based on the property's land use history or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605. The analytical results shall serve to document the level of soil contamination. Soil and groundwater samples may be required at the discretion of the Engineer to verify the level of soil and groundwater contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, location and elevation, and any other observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 and "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective."

Replace the first two paragraphs of Article 669.09 of the Standard Specifications with the following:

**"669.09 Contaminated Soil and/or Groundwater Management and Disposal.** The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
  - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. Such soil excavated for storm sewers can be placed back into the excavated trench as backfill, when suitable, unless trench backfill is specified. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
  - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
  - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

- (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
- (5) When the Engineer determines soil cannot be managed according to Articles 669.09(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC but the pH of the soil is less than 6.25 or greater than 9.0, the excavated soil can be utilized within the construction limits or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation.
- (c) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste.

All groundwater encountered within lateral trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than  $10^{-7}$  cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer."

Revise Article 669.14 of the Standard Specifications to read:

**"669.14 Final Environmental Construction Report.** At the end of the project, the Contractor will prepare and submit three copies of the Environmental Construction Report on the activities conducted during the life of the project, one copy shall be submitted to the Resident Engineer, one copy shall be submitted to the District's Environmental Studies Unit, and one copy shall be submitted with an electronic copy in Adode.pdf format to the Geologic



and Waste Assessment Unit, Bureau of Design and Environment, IDOT, 2300 South Dirksen Parkway, Springfield, Illinois 62764. The technical report shall include all pertinent information regarding the project including, but not limited to:

- (a) Measures taken to identify, monitor, handle, and dispose of soil or groundwater containing regulated substances, to prevent further migration of regulated substances, and to protect workers,
- (b) Cost of identifying, monitoring, handling, and disposing of soil or groundwater containing regulated substances, the cost of preventing further migration of regulated substances, and the cost for worker protection from the regulated substances. All cost should be in the format of the contract pay items listed in the contract plans (identified by the preliminary environmental site investigation (PESA) site number),
- (c) Plan sheets showing the areas containing the regulated substances,
- (d) Field sampling and testing results used to identify the nature and extent of the regulated substances,
- (e) Waste manifests (identified by the preliminary environmental site investigation (PESA) site number) for special or hazardous waste disposal, and
- (f) Landfill tickets (identified by the preliminary environmental site investigation (PESA) site number) for non-special waste disposal."

Revise the second paragraph of Article 669.16 of the Standard Specifications to read:

"The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL."

80283

## REMOVAL AND DISPOSAL OF SURPLUS MATERIALS (BDE)

Effective: November 2, 2012

Revise the first four paragraphs of Article 202.03 of the Standard Specifications to read:

**“202.03 Removal and Disposal of Surplus, Unstable, Unsuitable, and Organic Materials.** Suitable excavated materials shall not be wasted without permission of the Engineer. The Contractor shall dispose of all surplus, unstable, unsuitable, and organic materials, in such a manner that public or private property will not be damaged or endangered.

Suitable earth, stones and boulders naturally occurring within the right-of-way may be placed in fills or embankments in lifts and compacted according to Section 205. Broken concrete without protruding metal bars, bricks, rock, stone, reclaimed asphalt pavement with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities may be used in embankment or in fill. If used in fills or embankments, these materials shall be placed and compacted to the satisfaction of the Engineer; shall be buried under a minimum of 2 ft (600 mm) of earth cover (except when the materials include only uncontaminated dirt); and shall not create an unsightly appearance or detract from the natural topographic features of an area. Broken concrete without protruding metal bars, bricks, rock, or stone may be used as riprap as approved by the Engineer. If the materials are used for fill in locations within the right-of-way but outside project construction limits, the Contractor must specify to the Engineer, in writing, how the landscape restoration of the fill areas will be accomplished. Placement of fill in such areas shall not commence until the Contractor's landscape restoration plan is approved by the Engineer.

Aside from the materials listed above, all other construction and demolition debris or waste shall be disposed of in a licensed landfill, recycled, reused, or otherwise disposed of as allowed by State or Federal laws and regulations. When the Contractor chooses to dispose of uncontaminated soil at a clean construction and demolition debris (CCDD) facility or at an uncontaminated soil fill operation, it shall be the Contractor's responsibility to have the pH of the material tested to ensure the value is between 6.25 and 9.0, inclusive. A copy of the pH test results shall be provided to the Engineer.

A permit shall be obtained from IEPA and made available to the Engineer prior to open burning of organic materials (i.e., plant refuse resulting from pruning or removal of trees or shrubs) or other construction or demolition debris. Organic materials originating within the right-of-way limits may be chipped or shredded and placed as mulch around landscape plantings within the right-of-way when approved by the Engineer. Chipped or shredded material to be placed as mulch shall not exceed a depth of 6 in. (150 mm).”

80319

## STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: April 1, 2009

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

- Metal Piling (excluding temporary sheet piling)
- Structural Steel
- Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars  
Q = quantity of steel incorporated into the work, in lb (kg)  
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where:  $MPI_M$  = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

$MPI_L$  = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the  $MPI_M$  will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the  $MPI_L$  and  $MPI_M$  in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

### Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling) Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness) Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness) Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness) Other piling	23 lb/ft (34 kg/m) 32 lb/ft (48 kg/m) 37 lb/ft (55 kg/m) See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail Steel Plate Beam Guardrail, Type A w/steel posts Steel Plate Beam Guardrail, Type B w/steel posts Steel Plate Beam Guardrail, Types A and B w/wood posts Steel Plate Beam Guardrail, Type 2 Steel Plate Beam Guardrail, Type 6 Traffic Barrier Terminal, Type 1 Special (Tangent) Traffic Barrier Terminal, Type 1 Special (Flared)	20 lb/ft (30 kg/m) 30 lb/ft (45 kg/m) 8 lb/ft (12 kg/m) 305 lb (140 kg) each 1260 lb (570 kg) each 730 lb (330 kg) each 410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms Traffic Signal Post Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m) Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m) Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m ) Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m) Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m) Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m) Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	11 lb/ft (16 kg/m) 14 lb/ft (21 kg/m) 21 lb/ft (31 kg/m) 13 lb/ft (19 kg/m) 19 lb/ft (28 kg/m) 31 lb/ft (46 kg/m) 65 lb/ft (97 kg/m) 80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence) Steel Railing, Type SM Steel Railing, Type S-1 Steel Railing, Type T-1 Steel Bridge Rail	64 lb/ft (95 kg/m) 39 lb/ft (58 kg/m) 53 lb/ft (79 kg/m) 52 lb/ft (77 kg/m)
Frames and Grates Frame Lids and Grates	250 lb (115 kg) 150 lb (70 kg)

Return With Bid

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

**OPTION FOR  
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment. After award, this form, when submitted shall become part of the contract.

**Contract No.:** \_\_\_\_\_

**Company Name:** \_\_\_\_\_

**Contractor's Option:**

Is your company opting to include this special provision as part of the contract plans for the following items of work?

Metal Piling	Yes	<input type="checkbox"/>
Structural Steel	Yes	<input type="checkbox"/>
Reinforcing Steel	Yes	<input type="checkbox"/>
Dowel Bars, Tie Bars and Mesh Reinforcement	Yes	<input type="checkbox"/>
Guardrail	Yes	<input type="checkbox"/>
Steel Traffic Signal and Light Poles, Towers and Mast Arms	Yes	<input type="checkbox"/>
Metal Railings (excluding wire fence)	Yes	<input type="checkbox"/>
Frames and Grates	Yes	<input type="checkbox"/>

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

80127

## **TRAINING SPECIAL PROVISIONS (BDE)**

Effective: October 15, 1975

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 **5** . 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 shall 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

## WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: November 1, 2013

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

### Materials.

Add the following to Article 1030.02 of the Standard Specifications.

“(h) Warm Mix Asphalt (WMA) Technologies (Note 3)”

Add the following note to Article 1030.02 of the Standard Specifications.

“Note 3. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, “Warm-Mix Asphalt Technologies”.”

### Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

**“1102.01 Hot-Mix Asphalt Plant.** The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, “Approval of Hot-Mix Asphalt Plants and Equipment”. Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing

by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements.”

Add the following to Article 1102.01(a) of the Standard Specifications.

“(13) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of  $\pm 2$  percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.
- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes.”

#### Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

“(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification.

#### Production.

Revise the second paragraph of Article 1030.06(a) of the Standard Specifications to read:

“At the start of mix production for HMA, WMA, and HMA using WMA technologies, QC/QA mixture start-up will be required for the following situations; at the beginning of production of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix.”

#### Quality Control/Quality Assurance Testing.

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

Parameter	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  Note 5.	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)	1 per day	Illinois-Modified AASHTO T 312
Maximum Specific Gravity of Mixture	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	1 per day	Illinois-Modified AASHTO T 209

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	
	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

Note 5. The WMA compaction temperature for mixture volumetric testing shall be  $270 \pm 5$  °F ( $132 \pm 3$  °C) for quality control testing. The WMA compaction temperature for quality assurance testing will be  $270 \pm 5$  °F ( $132 \pm 3$  °C) if the mixture is not allowed to cool to room temperature. If the mixture is allowed to cool to room temperature it shall be reheated to standard HMA compaction temperatures.”

#### Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

“The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C). WMA shall be delivered at a minimum temperature of 215 °F (102 °C).”

#### Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

## **WEEKLY DBE TRUCKING REPORTS (BDE)**

Effective: June 2, 2012

The Contractor shall provide a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used on the jobsite; or used for the delivery and/or removal of equipment/material to and from the jobsite. The jobsite shall also include offsite locations, such as plant sites or storage sites, when those locations are used solely for this contract.

The report shall be submitted on the form provided by the Department within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur. The report shall be submitted to the Engineer and a copy shall be provided to the district EEO Officer.

Any costs associated with providing weekly DBE trucking reports 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.

80302

**TEMPORARY SHEET PILING**

Effective: September 2, 1994

Revised: January 31, 2012

Description. This work shall consist of furnishing, driving, adjusting for stage construction when required and subsequent removal of the sheet piling according to the dimensions and details shown on the plans and according to the applicable portions of Section 512 of the Standard Specifications.

This work shall also include furnishing, installing and subsequent removal of all miscellaneous steel shapes, plates and connecting hardware when required to attach the sheeting to an existing substructure unit and/or to facilitate stage construction.

General. The Contractor may propose other means of supporting the sides of the excavation provided they are done so at no extra cost to the department. If the Contractor elects to vary from the design requirements shown on the plans, the revised design calculations and details shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

Material. The sheet piling shall be made of steel and may be new or used material, at the option of the Contractor. The sheet piling shall have a minimum section modulus as shown on the plans or in the approved Contractor's alternate design. The sheeting shall have a minimum yield strength of 38.5 ksi (265 MPa) unless otherwise specified. The sheeting, used by the Contractor, shall be identifiable and in good condition free of bends and other structural defects. The Contractor shall furnish a copy of the published sheet pile section properties to the Engineer for verification purposes. The Engineer's approval will be required prior to driving any sheeting. All driven sheeting not approved by the Engineer shall be removed at the Contractor's expense.

Construction. The Contractor shall verify locations of all underground utilities before driving any sheet piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The Contractor shall be responsible for determining the appropriate equipment necessary to drive the sheeting to the tip elevation(s) specified on the plans or according to the Contractor's approved design. The sheet piling shall be driven, as a minimum, to the tip elevation(s) specified, prior to commencing any related excavation. If unable to reach the minimum tip elevation, the adequacy of the sheet piling design will require re-evaluation by the Department prior to allowing excavation adjacent to the sheet piling in question. The Contractor shall not excavate below the maximum excavation line shown on the plans without the prior permission of the Engineer. The sheet piling shall remain in place until the Engineer determines it is no longer required.

The sheet piling shall be removed and disposed of by the Contractor when directed by the Engineer. When allowed, the Contractor may elect to cut off a portion of the sheet piling leaving the remainder in place. The remaining sheet piling shall be a minimum of 12 in. (300 mm) below

the finished grade or as directed by the Engineer. Removed sheet piling shall become the property of the Contractor.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) where its presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven through or around with normal driving procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

Method of Measurement. The temporary sheet piling will be measured for payment in place in square feet (square meter). Any temporary sheet piling cut off, left in place, or driven to dimensions other than those shown on the contract plans without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's expense.

If the Contractor is unable to drive the sheeting to the specified tip elevation(s) and can demonstrate that any further effort to drive it would only result in damaging the sheeting, then the Contractor shall be paid based on the plan quantity of temporary sheeting involved. However, no additional payment will be made for any walers, bracing, or other supplement to the temporary sheet piling, which may be required as a result of the re-evaluation in order to insure the original design intent was met. Portions of the temporary sheet piling left in place for reuse in later stages of construction shall only be measured for payment once.

Basis of Payment. This work will be paid for at the contract unit price per square foot (square meter) for TEMPORARY SHEET PILING.

Payment for any excavation performed in conjunction with this work will not be included in this item but shall be paid for as specified elsewhere in this contract.

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



**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.

**CONCRETE DECK BEAMS**

Effective: June 13, 2008

Revised: October 9, 2009

Add the following equipment to Article 504.03.

(c) Mechanical Mixer (Note 1)

1101.19

Note 1: A drill with paddle may be used for mixing small quantities of nonshrink grout. Hand mixing will not be allowed.

Replace the second sentence of the fifth paragraph of Article 504.06(d) with the following.

Dowels at the fixed ends of the deck beams shall be installed, nonshrink grout placed and cured for a minimum of 24 hours. If the bearing area is specified to be grouted it shall be done at the time of dowel placement.

Replace the fourth paragraph of Article 504.06(e) with the following.

A mechanical mixer shall be used to mix the nonshrink grout and the type of mixer and mixing procedures shall be per the manufacturer's recommendations. During placement, the grout shall be worked into the area with a pencil vibrator. The surface shall be troweled to a smooth finish. The nonshrink grout shall be immediately cured with cotton mats according to Article 1020.13 for a minimum of seven days, and field testing will not be required. However, the cure time may be reduced provided the Contractor molds specimens, covers them, and performs cube tests according to ASTM C 1107. The tests shall verify the 6000 psi grout strength has been obtained, but in no case shall the cure time be less than three days.

For Contractor cube tests, each sample shall consist of three test specimens and a minimum of two samples will be required for each day of grouting. Additional samples may be requested by the Engineer. Specimens shall be cured underneath the cotton mats with the beams for a minimum of 48 hours before transport to the laboratory for testing. The laboratory shall be inspected for Hydraulic Cement – Physical Tests by the Cement and Concrete Reference Laboratory (CCRL).

Add the following paragraph to the end of Article 504.06

(f) Construction Inserts. All inserts, including those necessary for the fabrication and construction of the structure or portions thereof shall be cast into the member according to Article 3.5.2 of the Manual for Fabrication of Precast Prestressed Concrete Products.

Replace 1006.06(a) and (b) with the following.

- (a) Transverse Tie Rod Assemblies. Steel for transverse tie rod assemblies (i.e. rods, nuts, washers and coupling nuts) shall be according to ASTM F 1554 Grade 55 (Grade 380). After fabrication, the transverse tie assemblies shall be hot-dipped galvanized according to AASHTO M 232. The small articles may be zinc-coated by the mechanically deposited process according to AASHTO M 298, Class 50. The thickness of the mechanical galvanizing shall not exceed 6 mils (150  $\mu$ m).
- (b) Dowel Rods. Steel for dowel rods shall be according to ASTM F 1554 Grade 55 (Grade 380) or A706 Grade 60. Dowel rods shall be either epoxy coated according to AASHTO M 284 or galvanized according to AASHTO M 111.

Add the following Article to Section 1101.

1101.19 Mechanical Mixer. The mechanical mixer shall have paddles or blades that are suitable for uniformly mixing the material, and shall have sufficient capacity to allow for a continuous work operation.

**GRANULAR BACKFILL FOR STRUCTURES**

Effective: April 19, 2012

Revised: October 30, 2012

Revise Section 586 of the Standard Specifications to read:

**SECTION 586. GRANULAR BACKFILL FOR STRUCTURES**

**586.01 Description.** This work shall consist of furnishing, transporting and placing granular backfill for abutment structures.

**586.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Fine Aggregate.....	1003.04
(b) Coarse Aggregates .....	1004.05

**CONSTRUCTION REQUIREMENTS**

**586.03 General.** This work shall be done according to Article 502.10 except as modified below. The backfill volume shall be backfilled, with granular material as specified in Article 586.02, to the required elevation as shown in the contract plans. The backfill volume shall be placed in convenient lifts for the full width to be backfilled. Unless otherwise specified in the contract plans, mechanical compaction will not be required. A deposit of gravel or crushed stone placed behind drain holes shall not be required. All drains not covered by geocomposite wall drains or other devices to prevent loss of backfill material shall be covered by sufficient filter fabric material meeting the requirements of Section 1080 and Section 282 with either 6 or 8 oz/sq yd (200 or 270 g/sq m) material allowed, with free edges overlapping the drain hole by at least 12 in. (300 mm) in all directions.

The granular backfill shall be brought to the finished grade as shown in the contract plans. When concrete is to be cast on top of the granular backfill, the Contractor, subject to approval of the Engineer, may prepare the top surface of the fill to receive the concrete as he/she deems necessary for satisfactory placement at no additional cost to the Department.

**586.04 Method of Measurement.** This work will be measured for payment as follows.

(a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a).

(b) Measured Quantities. This work will be measured for payment in place and the volume computed in cubic yards (cubic meters). The volume will be determined by the method of average end areas behind the abutment.

**586.05 Basis of Payment.** This work will be paid for at the contract unit price per cubic yard (cubic meter) for GRANULAR BACKFILL FOR STRUCTURES.

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## **BRIDGE DECK CONSTRUCTION**

Effective: October 22, 2013

Revised: April 18, 2014

### **Revise the Second Paragraph of Article 503.06(b) to read as follows.**

“When the Contractor uses cantilever forming brackets on exterior beams or girders, additional requirements shall be as follows.”

### **Revise Article 503.06(b)(1) to read as follows.**

“(1) Bracket Placement. The spacing of brackets shall be per the manufacturer’s published design specifications for the size of the overhang and the construction loads anticipated. The resulting force of the leg brace of the cantilever bracket shall bear on the web within 6 inches (150 mm) of the bottom flange of the beam or girder.”

### **Revise Article 503.06(b)(2) to read as follows.**

“(2) Beam Ties. The top flange of exterior steel beams or girders supporting the cantilever forming brackets shall be tied to the bottom flange of the next interior beam. The top flange of exterior concrete beams supporting the cantilever forming brackets shall be tied to the top flange of the next interior beam. The ties shall be spaced at 4 ft (1.2 m) centers. Permanent cross frames on steel girders may be considered a tie. Ties shall be a minimum of 1/2 inch (13 mm) diameter threaded rod with an adjusting mechanism for drawing the tie taut. The ties shall utilize hanger brackets or clips which hook onto the flange of steel beams. No welding will be permitted to the structural steel or stud shear connectors, or to reinforcement bars of concrete beams, for the installation of the tie bar system. After installation of the ties and blocking, the tie shall be drawn taut until the tie does not vary from a straight line from beam to beam. The tie system shall be approved by the Engineer.”

### **Revise Article 503.06(b)(3) to read as follows.**

“(3) Beam Blocks. Suitable beam blocks of 4 in x 4 in (100 x 100 mm) timbers or metal structural shapes of equivalent strength or better, acceptable to the Engineer, shall be wedged between the webs of the two beams tied together, within 6 inches (150 mm) of the bottom flange at each location where they are tied. When it is not feasible to have the resulting force from the leg brace of the cantilever brackets transmitted to the web within 6 inches (150 mm) of the bottom flange, then additional blocking shall be placed at each bracket to transmit the resulting force to within 6 inches (150 mm) of the bottom flange of the next interior beam or girder.”

### **Delete the last paragraph of Article 503.06(b).**

**Revise the third paragraph of Article 503.16 to read as follows.**

“Fogging equipment shall be in operation unless the evaporation rate is less than 0.1 lb/sq ft/hour (0.5kg/sq m/hour) and the Engineer gives permission to stop. The evaporation rate shall be determined according to the following formula.

$$E = (T_c^{2.5} - rT_a^{2.5})(1 + 0.4V)x10^{-6} \text{ (English)}$$

$$E = 5[(T_c + 18)^{2.5} - r(T_a + 18)^{2.5}](V + 4)x10^{-6} \text{ (Metric)}$$

Where:

$E$  = Evaporation Rate, lb/ft<sup>2</sup>/h (kg/sq m/h)

$T_c$  = Concrete Temperature, °F (°C)

$T_a$  = Air Temperature, °F (°C)

$r$  = Relative Humidity in percent/100

$V$  = Wind Velocity, mph (km/h)

The Contractor shall provide temperature, relative humidity, and wind speed measuring equipment. Fogging equipment shall be adequate to reach or cover the entire pour from behind the finishing machine or vibrating screed to the point of curing covering application, and shall be operated in a manner which shall not accumulate water on the deck until the curing covering has been placed.”

**Revise the third paragraph of Article 503.16(a)(1) to read as follows.**

“At the Contractor’s option, a vibrating screed may be used in lieu of a finishing machine for superstructures with a pour width less than or equal to 24 ft (7.3 m). After the concrete is placed and consolidated, it shall be struck off with a vibrating screed allowing for camber, if required. The vibrating screed shall be of a type approved by the Engineer. A slight excess of concrete shall be kept in front of the cutting edge at all times during the striking off operation. After screeding, the entire surface shall be finished with hand-operated longitudinal floats having blades not less than 10 ft (3 m) in length and 6 in. (150 mm) in width. Decks so finished need not be straightedge tested as specified in 503.16(a)(2).”

**Delete the fifth paragraph of 503.16(a)(1).**

**Revise Article 503.16(a)(2) to read as follows.**

“(2) Straightedge Testing and Surface Correction. After the finishing has been completed and while the concrete is still plastic, the surface shall be tested for trueness with a 10 ft (3 m) straightedge, or a hand-operated longitudinal float having blades not less than 10 ft (3 m) in length and 6 in. (150 mm) in width. The Contractor shall furnish and use an accurate 10 ft (3 m) straightedge or float which has a handle not less than 3 ft (1 m) longer than 1/2 the pour width. The straightedge or float shall be held in contact with the surface and passed gradually from one side of the superstructure to the other. Advance along the surface

shall be in successive stages of not more than 1/2 the length of the straightedge or float. Any depressions found shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished.”

**Replace the second sentence of the first paragraph of Article 1020.13(a)(5) with the following sentences.**

“Cotton mats in poor condition will not be allowed. The cotton mats shall be placed in a manner which will not create indentations greater than 1/4.inch (6 mm) in the concrete surface. Minor marring of the surface is tolerable and is secondary to the importance of timely curing.”

**Revise Article 1020.14(b) to read as follows.**

“(b) Concrete in Structures. Concrete may be placed when the air temperature is above 40 °F (4 °C) and rising, and concrete placement shall stop when the falling temperature reaches 45 °F (7 °C) or below, unless otherwise approved by the Engineer.

(1) Bridge Deck Concrete. For concrete in bridge decks, slabs, and bridge approach slabs the Contractor shall schedule placing and finishing of the concrete during hours in which the ambient air temperature is forecast to be lower than 85 °F (30 °C). It shall be understood this may require scheduling the deck pour at night in order to utilize the temperature window available. The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 85 °F (30 °C).

(2) Non-Bridge Deck Concrete. Except as noted above, the temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

If concrete is pumped, the temperature restrictions above shall be considered at point of placement. When insulated forms are used according to Article 1020.13(d)(1), the maximum temperature of the concrete mixture immediately before placement shall be 80 °F (25 °C).When concrete is placed in contact with previously placed concrete, the temperature of the freshly mixed concrete may be increased by the Contractor to offset anticipated heat loss, but in no case shall the maximum concrete temperature be permitted to exceed the limits stated in this Article.”

**Revise Article 1103.13(a) to read as follows.**

“(a) Bridge Deck. The finishing machine shall be equipped with: (1) a mechanical strike off device; (2) either a rotating cylinder(s) or a longitudinal oscillating screed which transversely finishes the surface of the concrete. The Contractor may attach other equipment to the finishing machine to enhance the final finish when approved by the Engineer. The finishing machine shall produce a deck surface of uniform texture, free from porous areas, and with the required surface smoothness.



The finishing machine shall be operated on rails or other supports that will not deflect under the applied loads. The maximum length of rail segments supported on top of beams and within the pour shall be 10 ft (3 m). The supports shall be adjustable for elevation and shall be completely in place to allow the finishing machine to be used for the full length of the area to be finished. The supports shall be approved by the Engineer before placing of the concrete is started."

**Revise Article 1103.17(k) to read as follows.**

- "(k) Fogging Equipment. Fogging equipment shall be hand held fogging equipment for humidity control. The equipment shall be capable of atomizing water to produce a fog blanket by the use of pressure 2500 psi minimum (17.24 MPa) and an industrial fire hose fogging nozzle or equivalent. Fogging equipment attached to the finishing machine will not be permitted."

## REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

### ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

#### I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, 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.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

#### II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.

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 minorities and women 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 employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 its 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 their avenues of appeal.

## **6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency 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 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 minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

#### **10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 DOT-assisted contracts. 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 contracting agency deems appropriate.

**11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency 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](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

#### **III. NONSEGREGATED FACILITIES**

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color,

religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

#### **IV. Davis-Bacon and Related Act Provisions**

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

##### **1. Minimum wages**

a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, 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 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) 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.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.

(3) In the event the contractor, the laborers or mechanics to be employed in the 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 questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs 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.

## 2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, 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 contracting agency 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.

## 3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee ( e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each 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 Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

#### 4. Apprentices and trainees

##### a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

##### d. 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.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for

debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

#### **10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

#### **V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

#### **VI. SUBLETTING OR ASSIGNING THE CONTRACT**

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. 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 contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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 or propose 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 VI 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 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 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 contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

## **VII. SAFETY: ACCIDENT PREVENTION**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 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. 3704).

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.3704).

## **VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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, Form FHWA-1022 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:

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 under this title or imprisoned not more than 5 years or both."

## **IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

## **X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

### **1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded,"



as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first 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 entering into this transaction.

g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective 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.

\* \* \* \* \*

## **2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-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;

(3) 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 (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

### **2. Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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 exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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 dealings.

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.

\* \* \* \* \*

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

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 participating in covered transactions 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.

\* \* \* \* \*

**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is 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 its bid or proposal that the participant 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.