

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. This does not apply to Small Business Set-Asides.

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. This does not apply to Small Business Set-Asides.

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. These documents must be received three days before the letting date.

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

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

BID SUBMITTAL GUIDELINES AND CHECKLIST

In an effort to eliminate confusion and standardize the bid submission process the Contracts Office has created the following guidelines and checklist for submitting bids.

This information has been compiled from questions received from contractors and from inconsistencies noted on submitted bids. If you have additional questions please refer to the contact information listed below.

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

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. This page has the Item number 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 after you are awarded the contract.
- 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.

Use the following checklist to ensure completeness and the correct order in assembling your bid

Illinois Office Affidavit (Not applicable to federally funded projects) insert your affidavit after page 4 along with your Cost Adjustments for Steel, Bituminous and Fuel (if applicable).

Cover page (the sheet that has the item number on it) **followed by your bid (the 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). Include the subcontractor(s) name, address, general type of work to be performed and the dollar amount (if over \$50,000). If you will use subcontractor(s) but are uncertain who or the dollar amount; check “YES” but leave the lines blank.

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 Union Local Name and number or certified training programs that you have in place. **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 Form A that is filled out.

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 financial 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 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 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”.

Bid Bond – Submit your bid bond using the current Bid Bond Form provided in the proposal package. The Power of Attorney page should be stapled to the Bid Bond. If you are using an electronic bond, include your bid bond number on the form and attach the Proof of Insurance printed from the Surety 2000 Web Site.

Disadvantaged Business Utilization Plan and/or Good Faith Effort – The last item 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 for a Good Faith Effort, it should 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 10:20 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 page of the current letting.

QUESTIONS: pre-letting up to execution of the contract

Contractor/Subcontractor 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

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

79

RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting November 9, 2012

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. This does not apply to Small Business Set-Asides.

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. 89626
PEORIA County
Section 12-00356-01-PV (Peoria)
Various Routes
Project TIG-5093(161)
District 4 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

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

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

Page intentionally left blank

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. 89626
PEORIA County
Section 12-00356-01-PV (Peoria)
Project TIG-5093(161)
Various Routes
District 4 Construction Funds**

Project consists of infrastructure improvements including resurfacing, polymerized HMA surface and binder courses, storm sewers, curb and gutter, PCC sidewalk, traffic signals, pavement markings, lighting, landscaping, and all other incidental items to complete the work on areas bounded by Walnut Street to the north, Jefferson Street to the west and Persimmon Street to the south and the Illinois River to the east, located in the City of Peoria.

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

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
PEORIA	143	04	12-00356-01-PV (PEORIA)	TIG-5093/161/000	VARIOUS

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2000116	T-ACERX FREM AB 2	EACH	23.000 X	=		=	
A2001916	T-ACER SACR LE 2	EACH	17.000 X	=		=	
A2004512	T-GINKGO BIL AG 2	EACH	17.000 X	=		=	
A2004816	T-GLED TRI-I SK 2	EACH	5.000 X	=		=	
A2005016	T-GYMNOCOLA DIO 2	EACH	8.000 X	=		=	
A2005616	T-OSTRYA VIRG 2	EACH	17.000 X	=		=	
A2006516	T-QUERCUS BICOL 2	EACH	5.000 X	=		=	
A2007716	T-TAXODI DIS SB 2	EACH	20.000 X	=		=	
A2007848	T-TILIA AMER LEG 2	EACH	5.000 X	=		=	
A3005238	T-ZELKOVA SER GV 2	EACH	6.000 X	=		=	
C2C00324	S-ARONIA MELAN IB 2'C	EACH	128.000 X	=		=	
C2C01612	S-CORNUS SANG ARC 2'C	EACH	64.000 X	=		=	
C2C04675	S-PHYSO OP DM 2-1/2'C	EACH	52.000 X	=		=	
C2C058G3	S-RHUS AROMA GL CG 3G	EACH	43.000 X	=		=	
C2C06724	S-ROSA PAVE DWARF 2C	EACH	70.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 2
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
C2C078G5	S-ROSA X KNOCK OUT 5G	EACH	26.000 X	=		=	
C2C10218	S-SPIREA JAP LP 18C	EACH	85.000 X	=		=	
C2C11604	S-VIBURN CARL COMP 2C	EACH	23.000 X	=		=	
C2C11752	S-VIBURN DENT CHR 2' C	EACH	15.000 X	=		=	
C2002636	S-EUONY ALAT COMP 3'	EACH	14.000 X	=		=	
D2003524	E-TAXUS X MD DN 2'	EACH	48.000 X	=		=	
K0012975	P PL ORNAMENT T 4" P	UNIT	6.000 X	=		=	
K0012990	P PL ORNAMENT T GAL P	UNIT	16.000 X	=		=	
K0012993	P PL ORNAMENT T 3G P	UNIT	2.000 X	=		=	
K1001985	IRRIGATION SLEEVES	FOOT	49.000 X	=		=	
K1005481	SHRED BARK MULCH 3	SQ YD	1,130.000 X	=		=	
LR420025	PCC PVMT 7 SPL	SQ YD	1,454.000 X	=		=	
XX000959	TRASH RECEPTACLES	EACH	27.000 X	=		=	
XX004467	BR PAV SDWK RIGID BS	SQ FT	5,870.000 X	=		=	
XX005428	INTERN ILLUM ST SIGN	EACH	7.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 3
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX006429	SIDEWALK, SPECIAL	SQ FT	441.000 X	=		=	
XX006739	CONCRETE PAVERS TYP A	SQ FT	12,013.000 X	=		=	
XX007039	ST LIGHT ASSEM COM F1	EACH	129.000 X	=		=	
XX007040	ST LIGHT ASSEM COM F2	EACH	14.000 X	=		=	
XX007041	ST LIGHT ASSEM COM F3	EACH	4.000 X	=		=	
XX007151	PLANTER RAILING	FOOT	4,503.000 X	=		=	
XX007337	RPZ ASSEMBLY 1.5	EACH	1.000 X	=		=	
XX007503	SAN SEW SER OC 6 PVC	FOOT	525.000 X	=		=	
XX008662	REM EXIST LIGHT POLE	EACH	40.000 X	=		=	
XX008732	VAULT LID RESURFACING	L SUM	1.000 X	=		=	
XX008733	ELCBL C 6 1C	FOOT	4,432.000 X	=		=	
X0321158	PARK BENCHES	EACH	40.000 X	=		=	
X0322917	PRO SS CONN TO EX MAN	EACH	1.000 X	=		=	
X0323569	STEEL POST REMOVAL	EACH	13.000 X	=		=	
X0325323	MAN TA SAN 4 D T1F CL	EACH	3.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 4
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0327065	ENGNEERD SOIL SPL	TON	991.000 X	=		=	
X0327426	BRICK PAVER BANDING	SQ FT	9,825.000 X	=		=	
X0327427	DEC CONC BLK RET WALL	SQ FT	390.000 X	=		=	
X0327428	ST LIGHT ASSEM COM F4	EACH	5.000 X	=		=	
X0327429	PVC CL 200 PIPE 1.5	FOOT	5,023.000 X	=		=	
X0327430	PVC CL 200 PIPE 2	FOOT	1,737.000 X	=		=	
X0327431	IRR SYSTEM CONTROLLER	EACH	1.000 X	=		=	
X0327432	IRR SYSTEM PT OF CONN	EACH	1.000 X	=		=	
X0327433	IRR CONTROL WIRE 2" C	FOOT	1,737.000 X	=		=	
X0327434	IRR BED .9 GPH	SQ FT	9,825.000 X	=		=	
X0327435	IRR OPERAT INDICATOR	EACH	98.000 X	=		=	
X0840000	SAN SEW REMOV 8	FOOT	15.000 X	=		=	
X3510407	AGG BASE CSE CA-7	TON	1,690.000 X	=		=	
X3510416	AGG BASE CSE CA-16	TON	143.000 X	=		=	
X3510704	AGG BASE CSE FA-4	TON	38.000 X	=		=	

VARIOUS
 12-00356-01-PV (PEORIA)
 PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 5
 RUN DATE - 10/01/12
 RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X4200805	INTERSECTION INLAY	SQ FT	275.000	X	=	=	=
X4240420	PC CONC SIDEWALK 4 SP	SQ FT	72,982.000	X	=	=	=
X4241420	POROUS PCC SIDEWALK 4	SQ FT	3,035.000	X	=	=	=
X4401198	HMA SURF REM VAR DP	SQ YD	14,932.000	X	=	=	=
X5030225	CONC STRUCT SPL	CU YD	243.000	X	=	=	=
X5537800	SS CLEANED 12	FOOT	34.000	X	=	=	=
X5619310	VALVE BOX ASSY DZ	EACH	12.000	X	=	=	=
X5619320	VALVE BOX ASSY QC	EACH	27.000	X	=	=	=
X5619330	VALVE BOX ASSY AVR	EACH	98.000	X	=	=	=
X5619340	VALVE BOX ASSY MLF	EACH	98.000	X	=	=	=
X6011605	PIPE DRAINS 4 SPL	FOOT	3,604.000	X	=	=	=
X6014910	PLANTER DRAIN COMP	EACH	98.000	X	=	=	=
X6020082	INLETS TG-1	EACH	81.000	X	=	=	=
X6021065	INLETS TG-1 SPL	EACH	5.000	X	=	=	=
X6021814	INL-MN G-1 4D	EACH	11.000	X	=	=	=

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 6
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X6021816	INL-MN G-1 6D	EACH	2.000	X	=		
X6021824	INL-MN G-1 4D SPL	EACH	2.000	X	=		
X6022930	MAN TA 5 DIA SPL F&G	EACH	1.000	X	=		
X6025602	MAN ADJ F&G SPL	EACH	4.000	X	=		
X6026056	SAN MH ADJ NEW T1F CL	EACH	4.000	X	=		
X6028000	MAN RECONST SPL	EACH	5.000	X	=		
X6062400	CONC GUTTER SPL	FOOT	1,792.000	X	=		
X7010216	TRAF CONT & PROT SPL	L SUM	1.000	X	=		
X8040102	ELECT SERV INSTALL SP	EACH	3.000	X	=		
X8050135	SERV INSTALL TY C MOD	EACH	3.000	X	=		
X8211175	LUM LED HM 175W	EACH	7.000	X	=		
X8710022	FOCC62.5/1252MM12SM12	FOOT	2,093.000	X	=		
Z0007125	HANDRAIL REMOVAL	EACH	1.000	X	=		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000	X	=		
Z0019524	DRYWELL 4 DIA SPL F&G	EACH	3.000	X	=		

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 7
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0019554	DRYWELL TG-1 4 DIA	EACH	26.000 X	=		=	
Z0022800	FENCE REMOVAL	FOOT	119.000 X	=		=	
Z0030850	TEMP INFO SIGNING	SQ FT	375.000 X	=		=	
Z0033068	TS BATT BACKUP SYSTEM	EACH	3.000 X	=		=	
Z0034105	MATL TRANSFER DEVICE	TON	3,421.000 X	=		=	
Z0036900	PARK METERS REMOVED	EACH	31.000 X	=		=	
Z0042200	PC CONC PAVT SURF REM	SQ YD	430.000 X	=		=	
Z0056608	STORM SEW WM REQ 12	FOOT	482.000 X	=		=	
Z0056610	STORM SEW WM REQ 15	FOOT	71.000 X	=		=	
Z0056648	SS 1 WAT MN 12	FOOT	191.000 X	=		=	
Z0056668	SS 2 WAT MN 12	FOOT	1,722.000 X	=		=	
Z0056900	SAN SEW 8	FOOT	526.000 X	=		=	
Z0075496	CONC RETAIN WALL REM	FOOT	90.000 X	=		=	
20100110	TREE REMOV 6-15	UNIT	158.000 X	=		=	
20200100	EARTH EXCAVATION	CU YD	4,718.000 X	=		=	

VARIOUS
 12-00356-01-PV (PEORIA)
 PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 8
 RUN DATE - 10/01/12
 RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20201200	REM & DISP UNS MATL	CU YD	250.000 X	=		=	
20400800	FURNISHED EXCAVATION	CU YD	800.000 X	=		=	
20700110	POROUS GRAN EMBANK	TON	100.000 X	=		=	
21001000	GEOTECH FAB F/GR STAB	SQ YD	300.000 X	=		=	
21101615	TOPSOIL F & P 4	SQ YD	4,545.000 X	=		=	
25200100	SODDING	SQ YD	4,545.000 X	=		=	
28000510	INLET FILTERS	EACH	142.000 X	=		=	
31100100	SUB GRAN MAT A	TON	4,985.000 X	=		=	
31101000	SUB GRAN MAT B	TON	4,616.000 X	=		=	
35100100	AGG BASE CSE A	TON	1,617.000 X	=		=	
35501316	HMA BASE CSE 8	SQ YD	245.000 X	=		=	
35650500	BASE CSE WID 10	SQ YD	60.000 X	=		=	
40201000	AGGREGATE-TEMP ACCESS	TON	696.000 X	=		=	
40600100	BIT MATLS PR CT	GALLON	895.000 X	=		=	
40600115	P BIT MATLS PR CT	GALLON	2,240.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 9
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
40600837	P LEV BIND MM N70	TON	89.000 X	=		=	
40603080	HMA BC IL-19.0 N50	TON	294.000 X	=		=	
40603230	P HMA BC IL19.0 N50	TON	333.000 X	=		=	
40603560	P HMA SC "E" N50	TON	803.000 X	=		=	
40603565	P HMA SC "E" N70	TON	2,111.000 X	=		=	
40800050	INCIDENTAL HMA SURF	TON	56.000 X	=		=	
42000200	PCC PVT 7	SQ YD	3,795.000 X	=		=	
42001300	PROTECTIVE COAT	SQ YD	8,308.000 X	=		=	
42300400	PCC DRIVEWAY PAVT 8	SQ YD	2,631.000 X	=		=	
42400100	PC CONC SIDEWALK 4	SQ FT	74,846.000 X	=		=	
42400800	DETECTABLE WARNINGS	SQ FT	1,517.000 X	=		=	
44000100	PAVEMENT REM	SQ YD	21,904.000 X	=		=	
44000157	HMA SURF REM 2	SQ YD	1,781.000 X	=		=	
44000163	HMA SURF REM 3 1/2	SQ YD	273.000 X	=		=	
44000200	DRIVE PAVEMENT REM	SQ YD	10,441.000 X	=		=	

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
44000300	CURB REM	FOOT	2,317.000 X	=		=	
44000500	COMB CURB GUTTER REM	FOOT	10,850.000 X	=		=	
44000600	SIDEWALK REM	SQ FT	116,767.000 X	=		=	
44200909	CL B PATCH T3 6	SQ YD	41.000 X	=		=	
44200911	CL B PATCH T4 6	SQ YD	134.000 X	=		=	
44200970	CL B PATCH T2 10	SQ YD	7.000 X	=		=	
44200976	CL B PATCH T4 10	SQ YD	396.000 X	=		=	
44200998	CL B PATCH T3 12	SQ YD	20.000 X	=		=	
44201000	CL B PATCH T4 12	SQ YD	472.000 X	=		=	
44201031	CL B PATCH T2 15	SQ YD	140.000 X	=		=	
44201035	CL B PATCH T3 15	SQ YD	39.000 X	=		=	
44201037	CL B PATCH T4 15	SQ YD	2,721.000 X	=		=	
44201353	CL C PATCH T2 10	SQ YD	10.000 X	=		=	
44201377	CL C PATCH T2 12	SQ YD	49.000 X	=		=	
44201415	CL C PATCH T2 15	SQ YD	28.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 11
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
44201419	CL C PATCH T3 15	SQ YD	15.000 X	=		=	
50901760	PIPE HANDRAIL	FOOT	89.000 X	=		=	
550A0050	STORM SEW CL A 1 12	FOOT	1,021.000 X	=		=	
550A0340	STORM SEW CL A 2 12	FOOT	1,698.000 X	=		=	
550A0430	STORM SEW CL A 2 30	FOOT	84.000 X	=		=	
55100400	STORM SEWER REM 10	FOOT	50.000 X	=		=	
55100500	STORM SEWER REM 12	FOOT	938.000 X	=		=	
55100700	STORM SEWER REM 15	FOOT	16.000 X	=		=	
55100900	STORM SEWER REM 18	FOOT	4.000 X	=		=	
55101200	STORM SEWER REM 24	FOOT	51.000 X	=		=	
55101400	STORM SEWER REM 30	FOOT	43.000 X	=		=	
55101900	STORM SEWER REM 48	FOOT	21.000 X	=		=	
59300100	CONTR LOW-STRENG MATL	CU YD	3,046.000 X	=		=	
60218300	MAN TA 4 DIA T1F OL	EACH	1.000 X	=		=	
60218400	MAN TA 4 DIA T1F CL	EACH	28.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 12
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60221100	MAN TA 5 DIA T1F CL	EACH	5.000 X	=		=	
60223800	MAN TA 6 DIA T1F CL	EACH	5.000 X	=		=	
60224446	MAN TA 7 DIA T1F CL	EACH	3.000 X	=		=	
60234200	INLETS TA T1F OL	EACH	6.000 X	=		=	
60240215	INLETS TB T1F CL	EACH	5.000 X	=		=	
60255500	MAN ADJUST	EACH	21.000 X	=		=	
60255800	MAN ADJ NEW T1F CL	EACH	2.000 X	=		=	
60260400	INLETS ADJ NEW T1F CL	EACH	3.000 X	=		=	
60500040	REMOV MANHOLES	EACH	10.000 X	=		=	
60500060	REMOV INLETS	EACH	56.000 X	=		=	
60600605	CONC CURB TB	FOOT	1,601.000 X	=		=	
60603800	COMB CC&G TB6.12	FOOT	13,878.000 X	=		=	
60605000	COMB CC&G TB6.24	FOOT	82.000 X	=		=	
60608300	COMB CC&G TM2.12	FOOT	999.000 X	=		=	
60608572	COMB CC&G TM4.18	FOOT	977.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 13
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
61141600	STORM SEWER SPEC 48	FOOT	21.000 X	=		=	
66900200	NON SPL WASTE DISPOS	CU YD	255.000 X	=		=	
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000 X	=		=	
66900530	SOIL DISPOSAL ANALY	EACH	1.000 X	=		=	
67000400	ENGR FIELD OFFICE A	CAL MO	24.000 X	=		=	
67100100	MOBILIZATION	L SUM	1.000 X	=		=	
70106800	CHANGEABLE MESSAGE SN	CAL MO	24.000 X	=		=	
70300100	SHORT TERM PAVT MKING	FOOT	4,300.000 X	=		=	
70300510	PAVT MARK TAPE T3 L&S	SQ FT	63.000 X	=		=	
70300520	PAVT MARK TAPE T3 4	FOOT	26,537.000 X	=		=	
70300570	PAVT MARK TAPE T3 24	FOOT	514.000 X	=		=	
70301000	WORK ZONE PAVT MK REM	SQ FT	5,832.000 X	=		=	
78000200	THPL PVT MK LINE 4	FOOT	7,113.000 X	=		=	
78000500	THPL PVT MK LINE 8	FOOT	11,660.000 X	=		=	
78000600	THPL PVT MK LINE 12	FOOT	300.000 X	=		=	

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 14
RUN DATE - 10/01/12
RUN TIME - 183830

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
78004210	PREF PL PM TB INL L4	FOOT	900.000 X	=		=	
78006100	PREF THPL PM LTR-SYM	SQ FT	576.000 X	=		=	
78006140	PREF THPL PM LINE 8	FOOT	3,039.000 X	=		=	
78006180	PREF THPL PM LINE 24	FOOT	483.000 X	=		=	
78300100	PAVT MARKING REMOVAL	SQ FT	3,783.000 X	=		=	
81028350	UNDRGRD C PVC 2	FOOT	14,742.000 X	=		=	
81028370	UNDRGRD C PVC 3	FOOT	190.000 X	=		=	
81028390	UNDRGRD C PVC 4	FOOT	533.000 X	=		=	
81400100	HANDHOLE	EACH	22.000 X	=		=	
81400700	HANDHOLE PCC	EACH	12.000 X	=		=	
81400720	DBL HANDHOLE PCC	EACH	3.000 X	=		=	
81702130	EC C XLP USE 1C 6	FOOT	37,854.000 X	=		=	
81702140	EC C XLP USE 1C 4	FOOT	8,016.000 X	=		=	
82500370	LT CONT BASEM 240V200	EACH	3.000 X	=		=	
83600200	LIGHT POLE FDN 24D	FOOT	645.000 X	=		=	

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
83600300	LIGHT POLE FDN 30D	FOOT	35.000 X	=		=	
85700200	FAC T4 CAB	EACH	3.000 X	=		=	
87301245	ELCBL C SIGNAL 14 5C	FOOT	6,046.000 X	=		=	
87301255	ELCBL C SIGNAL 14 7C	FOOT	857.000 X	=		=	
87301515	ELCBL C LEAD 18 3PR	FOOT	1,299.000 X	=		=	
87502510	TS POST GALVS 17	EACH	9.000 X	=		=	
87702840	STL COMB MAA&P 22	EACH	1.000 X	=		=	
87702860	STL COMB MAA&P 26	EACH	2.000 X	=		=	
87702870	STL COMB MAA&P 28	EACH	1.000 X	=		=	
87702910	STL COMB MAA&P 36	EACH	1.000 X	=		=	
87702950	STL COMB MAA&P 44	EACH	1.000 X	=		=	
87702960	STL COMB MAA&P 46	EACH	1.000 X	=		=	
87800100	CONC FDN TY A	FOOT	27.000 X	=		=	
87800200	CONC FDN TY D	FOOT	11.000 X	=		=	
87800400	CONC FDN TY E 30D	FOOT	40.000 X	=		=	

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 89626

VARIOUS
 12-00356-01-PV (PEORIA)
 PEORIA

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87800415	CONC FDN TY E 36D	FOOT	37.000 X	=		=	
87900200	DRILL EX HANDHOLE	EACH	1.000 X	=		=	
88040070	SH P LED 1F 3S BM	EACH	12.000 X	=		=	
88040090	SH P LED 1F 3S MAM	EACH	10.000 X	=		=	
88040110	SH P LED 1F 4S BM	EACH	2.000 X	=		=	
88040120	SH P LED 1F 4S MAM	EACH	2.000 X	=		=	
88102717	PED SH LED 1F BM CDT	EACH	22.000 X	=		=	
88200110	TS BACKPLATE LOUVERED	EACH	26.000 X	=		=	
88500100	INDUCTIVE LOOP DETECT	EACH	10.000 X	=		=	
88600100	DET LOOP T1	FOOT	2,332.000 X	=		=	
88800100	PED PUSH-BUTTON	EACH	22.000 X	=		=	
89502375	REMOV EX TS EQUIP	EACH	7.000 X	=		=	

TOTAL \$

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

VARIOUS
12-00356-01-PV (PEORIA)
PEORIA

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 89626

ECMS002 DTGECM03 ECMR003 PAGE 17
RUN DATE - 10/01/12
RUN TIME - 183830

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

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

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

8. **AUTHORITY TO DO BUSINESS IN ILLINOIS.** Section 20-43 of the Illinois Procurement Code (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. **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)

10. **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.

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.

II. ASSURANCES

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

A. Conflicts of Interest

1. The Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

RETURN WITH BID

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

B. Negotiations

1. The Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

C. Inducements

1. The Code provides:

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

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

D. Revolving Door Prohibition

1. The Code provides:

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.

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

E. Reporting Anticompetitive Practices

1. The Code provides:

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.

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

F. Confidentiality

1. The Code provides:

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.

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

RETURN WITH BID

G. Insider Information

1. The Code provides:

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

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

III. CERTIFICATIONS

The certifications hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. Section 50-2 of the 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

1. The Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

(d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the 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.

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

B. Felons

1. The Code provides:

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

1. 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

1. The Code provides:

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

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the 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

1. The Code provides:

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

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the 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 500/50-12 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the 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

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

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

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

G. Bid-Rigging/Bid Rotating

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

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

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

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

RETURN WITH BID

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

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

H. International Anti-Boycott

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

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

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

I. Drug Free Workplace

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

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

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

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

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

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

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

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

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

RETURN WITH BID

J. Disclosure of Business Operations in Iran

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

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

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

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

Check the appropriate statement:

Company has no business operations in Iran to disclose.

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

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

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

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 business entity certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. 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: _____

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 ___

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

Yes ___ No ___

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

1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___
2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____
-
3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess 100% of the annual salary of the Governor? Yes ___ No ___
4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes ___ No ___

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

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

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

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

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

RETURN WITH BID

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

(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 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: _____ Date _____
Signature of Individual or Authorized Representative

NOT APPLICABLE STATEMENT

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

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

_____ Date _____
Signature of Authorized Representative

The bidder has a continuing obligation to supplement these disclosures under Sec. 50-35 of the 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. 89626
PEORIA County
Section 12-00356-01-PV (Peoria)
Project TIG-5093(161)
Various Routes
District 4 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. 89626
PEORIA County
Section 12-00356-01-PV (Peoria)
Project TIG-5093(161)
Various Routes
District 4 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.



Item No. _____

Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

_____ as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in 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, submit a DBE Utilization Plan that is accepted and approved by the Department; and if, after award by the Department, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to make the required DBE submission or to enter into such contract and to give the specified bond, the PRINCIPAL pays to the Department the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the Department may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

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

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by

their respective officers this _____ day of _____ A.D., _____ .

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By _____
(Signature & Title)

By: _____
(Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
County of _____

I, _____, a Notary Public in and for said County, do hereby certify that

_____ and _____
(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

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

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

My commission expires _____

Notary Public

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

Electronic Bid Bond ID#

Company / Bidder Name



Signature and Title

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. 89626
PEORIA County
Section 12-00356-01-PV (Peoria)
Project TIG-5093(161)
Various Routes
District 4 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

1. The Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

(d) Certification. Every bid submitted to and contract executed by the State, and every subcontract subject to Section 20-120 of the 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.

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

B. Felons

1. The Code provides:

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

2. Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the 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

1. The Code provides:

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

The contractor or bidder or subcontractor, respectively, certifies that it, or any affiliate, is not barred from being awarded a contract or subcontract under the 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

1. The Code provides:

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

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the 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 500/50-12 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the 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.

**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)**

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

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

(a) State employment, currently or in the previous 3 years, including contractual employment of services.

Yes ___ No ___

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

1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ___ No ___

2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, provide the name the State agency for which you are employed and your annual salary. _____

RETURN WITH SUBCONTRACT

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

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

(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 at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m. November 9, 2012. 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. 89626
PEORIA County
Section 12-00356-01-PV (Peoria)
Project TIG-5093(161)
Various Routes
District 4 Construction Funds**

Project consists of infrastructure improvements including resurfacing, polymerized HMA surface and binder courses, storm sewers, curb and gutter, PCC sidewalk, traffic signals, pavement markings, lighting, landscaping, and all other incidental items to complete the work on areas bounded by Walnut Street to the north, Jefferson Street to the west and Persimmon Street to the south and the Illinois River to the east, located in the City of Peoria.

- 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, 2012

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

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec.

Page No.

No Supplemental Specifications this year.

CHECK SHEET
RECURRING SPECIAL PROVISIONS

Adopted January 1, 2012

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

<u>CHECK SHEET #</u>	<u>RECURRING SPECIAL PROVISIONS</u>	<u>PAGE NO.</u>
1	X Additional State Requirements For Federal-Aid Construction Contracts (Eff. 2-1-69) (Rev. 1-1-10)	1
2	X Subletting of Contracts (Federal-Aid Contracts) (Eff. 1-1-88) (Rev. 5-1-93)	4
3	X EEO (Eff. 7-21-78) (Rev. 11-18-80)	5
4	Specific Equal Employment Opportunity Responsibilities Non Federal-Aid Contracts (Eff. 3-20-69) (Rev. 1-1-94)	15
5	Required Provisions - State Contracts (Eff. 4-1-65) (Rev. 1-1-12)	20
6	Asbestos Bearing Pad Removal (Eff. 11-1-03)	25
7	Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal (Eff. 6-1-89) (Rev. 1-1-09)	26
8	Haul Road Stream Crossings, Other Temporary Stream Crossings, and In-Stream Work Pads (Eff. 1-2-92) (Rev. 1-1-98)	27
9	Construction Layout Stakes Except for Bridges (Eff. 1-1-99) (Rev. 1-1-07)	28
10	X Construction Layout Stakes (Eff. 5-1-93) (Rev. 1-1-07)	31
11	Use of Geotextile Fabric for Railroad Crossing (Eff. 1-1-95) (Rev. 1-1-07)	34
12	Subsealing of Concrete Pavements (Eff. 11-1-84) (Rev. 1-1-07)	36
13	Hot-Mix Asphalt Surface Correction (Eff. 11-1-87) (Rev. 1-1-09)	40
14	X Pavement and Shoulder Resurfacing (Eff. 2-1-00) (Rev. 1-1-09)	42
15	PCC Partial Depth Hot-Mix Asphalt Patching (Eff. 1-1-98) (Rev. 1-1-07)	43
16	Patching with Hot-Mix Asphalt Overlay Removal (Eff. 10-1-95) (Rev. 1-1-07)	45
17	Polymer Concrete (Eff. 8-1-95) (Rev. 1-1-08)	46
18	PVC Pipeliner (Eff. 4-1-04) (Rev. 1-1-07)	48
19	Pipe Underdrains (Eff. 9-9-87) (Rev. 1-1-07)	49
20	Guardrail and Barrier Wall Delineation (Eff. 12-15-93) (Rev. 1-1-12)	50
21	Bicycle Racks (Eff. 4-1-94) (Rev. 1-1-12)	54
22	Temporary Modular Glare Screen System (Eff. 1-1-00) (Rev. 1-1-07)	56
23	Temporary Portable Bridge Traffic Signals (Eff. 8-1-03) (Rev. 1-1-07)	58
24	Work Zone Public Information Signs (Eff. 9-1-02) (Rev. 1-1-07)	60
25	Night Time Inspection of Roadway Lighting (Eff. 5-1-96)	61
26	English Substitution of Metric Bolts (Eff. 7-1-96)	62
27	English Substitution of Metric Reinforcement Bars (Eff. 4-1-96) (Rev. 1-1-03)	63
28	Calcium Chloride Accelerator for Portland Cement Concrete (Eff. 1-1-01)	64
29	Portland Cement Concrete Inlay or Overlay for Pavements (Eff. 11-1-08) (Rev. 1-1-12)	65
30	Quality Control of Concrete Mixtures at the Plant (Eff. 8-1-00) (Rev. 1-1-11)	68
31	Quality Control/Quality Assurance of Concrete Mixtures (Eff. 4-1-92) (Rev. 1-1-11).....	76

CHECK SHEET
LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

Adopted January 1, 2012

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

<u>CHECK SHEET #</u>	<u>LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS</u>	<u>PAGE NO.</u>
LRS 1	Reserved	89
LRS 2	<input checked="" type="checkbox"/> Furnished Excavation (Eff. 1-1-99) (Rev. 1-1-07)	90
LRS 3	<input checked="" type="checkbox"/> Work Zone Traffic Control Surveillance (Eff. 1-1-99) (Rev. 1-1-10).....	91
LRS 4	<input type="checkbox"/> Flaggers in Work Zones (Eff. 1-1-99) (Rev 1-1-07).....	92
LRS 5	<input type="checkbox"/> Contract Claims (Eff. 1-1-02) (Rev. 1-1-07).....	93
LRS 6	<input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals (Eff. 1-1-02) (Rev. 1-1-12).....	94
LRS 7	<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals (Eff. 1-1-02) (Rev. 1-1-12).....	100
LRS 8	Reserved	106
LRS 9	<input type="checkbox"/> Bituminous Surface Treatments (Eff. 1-1-99) (Rev. 1-1-11).....	107
LRS 10	Reserved	108
LRS 11	<input type="checkbox"/> Employment Practices (Eff. 1-1-99)	109
LRS 12	<input type="checkbox"/> Wages of Employees on Public Works (Eff. 1-1-99) (Rev. 1-1-10).....	111
LRS 13	<input type="checkbox"/> Selection of Labor (Eff. 1-1-99) (Rev. 1-1-12).....	112
LRS 14	<input checked="" type="checkbox"/> Paving Brick and Concrete Paver Pavements and Sidewalks (Eff. 1-1-04) (Rev. 1-1-09).....	113
LRS 15	<input type="checkbox"/> Partial Payments (Eff. 1-1-07)	116
LRS 16	<input type="checkbox"/> Protests on Local Lettings (Eff. 1-1-07)	117
LRS 17	<input type="checkbox"/> Substance Abuse Prevention Program (Eff. 1-1-08) (Rev. 1-8-08).....	118

INDEX OF SPECIAL PROVISIONS

ITEM	PAGE NO.
DESCRIPTION OF WORK.....	1
FAILURE TO COMPLETE WORK ON TIME.....	1
DATE OF COMPLETION (PLUS WORKING DAYS).....	1
WORKING RESTRICTIONS	1
RESPONSIBILITY FOR DAMAGE CLAIMS.....	2
CONTRACTOR'S INSURANCE	3
GUARANTEE PERIOD	3
EXISTING UNDERGROUND FACILITIES	3
J.U.L.I.E. SYSTEM.....	3
COOPERATION WITH UTILITY COMPANIES.....	4
COOPERATION BETWEEN CONTRACTORS.....	4
GREATER PEORIA SANITARY DISTRICT (GPSD) COORDINATION	4
ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION	5
SALVAGING EXISTING MATERIAL	5
CITY SIGNS.....	5
CONSTRUCTION DEBRIS	5
TRAFFIC CONTROL AND PROTECTION (SPECIAL)	6
TRAFFIC CONTROL PLAN	6
TEMPORARY INFORMATION SIGNING.....	7
CONSTRUCTION ACCESS.....	8
ENGINEERS FIELD OFFICE.....	8
PAVEMENT REMOVAL.....	8
PORTLAND CEMENT CONCRETE PAVEMENT SURFACE REMOVAL	9
NON-SPECIAL WASTE	9
REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES.....	10
PROOF ROLLING.....	10
SUBGRADE TREATMENT.....	11

ENVIRONMENTAL REVIEWS..... 11

EMBANKMENT 12

BORROW AND FURNISHED EXCAVATION 12

EMBANKMENT (RESTRICTIONS)..... 12

EMBANKMENT (SMALL EMBANKMENT)..... 13

SUBBASE GRANULAR MATERIAL 13

PCC AUTOMATIC BATCHING EQUIPMENT 13

PARKING METERS TO BE REMOVED 14

CONCRETE GUTTER (SPECIAL)..... 14

FILLING EXISTING SIDEWALK VAULTS 14

VAULT LID RESURFACING 15

PAYMENT FOR USE OF MATERIAL TRANSFER DEVICE 24

TEMPERATURE CONTROL FOR CONCRETE PLACEMENT 24

FRAMES AND GRATES FOR TYPE G-1 STRUCTURES 24

INLETS, TYPE G-1 AND INLET-MANHOLE, TYPE G-1, 4'-DIA. 24

MANHOLES TO BE ADJUSTED AND MANHOLES TO BE ADJUSTED WITH NEW
 TYPE 1 FRAME, CLOSED LID..... 24

DRYWELL, TYPE G-1, 4' DIAMETER..... 25

DRYWELL, 4' DIAMETER, SPECIAL FRAME AND GRATE 25

MANHOLE, TYPE A, 5' DIAMETER WITH SPECIAL FRAME AND GRATE 26

STORM SEWER (WATER MAIN REQUIREMENTS)..... 26

STORM SEWER (SPECIAL) 48 INCH 28

STORM SEWERS TO BE CLEANED, 12" 28

PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE 28

PLUG EXISTING STORM SEWERS 29

STORM SEWER REMOVAL..... 29

STORM SEWER GRADE CHANGE..... 29

SIDEWALK, SPECIAL..... 29

INCIDENTAL HOT-MIX ASPHALT SURFACING..... 30

CLASS B PATCHES / CLASS C PATCHES 30

HOT-MIX ASPHALT SURFACE COURSE SURFACE TESTS..... 31

PORTLAND CEMENT CONCRETE PAVEMENT 7" (SPECIAL)..... 31
 PCC AUTOMATIC BATCHING EQUIPMENT 31
 COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.18..... 31
 BRICK PAVERS (ROADWAY)..... 32
 CONCRETE PAVERS, TYPE A 34
 BRICK PAVER SIDEWALK ON RIGID BASE..... 37
 FENCE REMOVAL 41
 HANDRAIL REMOVAL..... 41
 STEEL POST REMOVAL 41
 CONCRETE RETAINING WALL REMOVAL..... 41
 REMOVE EXISTING LIGHT POLE..... 42
 STREETScape SPECIAL PROVISIONS 43
 TOPSOIL FURNISH AND PLACE, 4" 43
 SODDING..... 43
 ENGINEERED SOIL (SPECIAL) 43
 SHREDDED BARK MULCH 3" 44
 POROUS PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH, (SPECIAL)..... 44
 PLANTER RAILING 46
 AGGREGATE BASE COURSE, TYPE CA-7 46
 AGGREGATE BASE COURSE, TYPE CA-16 47
 AGGREGATE BASE COURSE, TYPE FA-4 47
 DECORATIVE CONCRETE BLOCK RETAINING WALL 47
 CONCRETE STRUCTURES (SPECIAL)..... 47
 PUBLIC ART DISPLAY 48
 SIDEWALK ACCESSIBLE RAMPS 48
 PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH, SPECIAL 48
 SUBBASE GRANULAR MATERIAL, TYPE B..... 49
 INTERSECTION INLAY 49
 BRICK PAVER BANDING 50
 PLANT MATERIAL 51
 PARK BENCHES 52

TRASH RECEPTACLES 52

PLANTER DRAIN, COMPLETE 53

PIPE DRAINS 4" (SPECIAL)..... 53

SANITARY SEWER SPECIAL PROVISIONS (GPSD)..... 54

 MANHOLES TO BE RECONSTRUCTED (SPECIAL)..... 54

 MANHOLES TO BE ADJUSTED WITH FRAME AND GRATE (SPECIAL) 60

 SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED
 LID 61

 MANHOLES, TYPE A, SANITARY, 4' - DIAMETER, TYPE 1 FRAME, CLOSED LID..... 61

 SANITARY SEWER 8" 63

 SANITARY SEWER REMOVAL 8" 66

 SANITARY SEWER SERVICE (OPEN CUT), 6" PVC 66

IRRIGATION SPECIAL PROVISIONS 68

 IRRIGATION SYSTEM - POINT OF CONNECTION 68

 RPZ ASSEMBLY, 1.5" 68

 IRRIGATION SYSTEM – CONTROLLER..... 68

 PVC CLASS 200 PIPE, 1.5", OR 2" 69

 VALVE BOX ASSEMBLY, DRIP ZONE 69

 VALVE BOX ASSEMBLY, QUICK COUPLER..... 70

 VALVE BOX ASSEMBLY, AIR/VACUUM RELIEF & MANUAL LINE FLUSH 70

 IRRIGATION BED .9 GPH..... 70

 OPERATION INDICATOR..... 71

 IRRIGATION CONTROL WIRE IN 2" CONDUIT..... 71

 IRRIGATION SLEEVE 71

ELECTRICAL SPECIAL PROVISIONS..... 72

 STREET LIGHTING – RESPONSIBILITY OF BIDDER 72

 STREET LIGHTING - RESPONSIBILITY OF CONTRACTOR..... 72

 DELIVERY OF MATERIALS 72

 APPROVAL OF STREET LIGHTING MATERIALS..... 72

 GUARANTEES 73

 ELECTRIC SERVICE INSTALLATION, SPECIAL 73

LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 200AMP 73

LIGHT POLE FOUNDATION, 24" DIAMETER..... 73

LIGHT POLE FOUNDATION, 30" DIAMETER..... 74

STREET LIGHTING ASSEMBLY COMPLETE TYPE F1..... 74

STREET LIGHTING ASSEMBLY COMPLETE TYPE F2..... 74

STREET LIGHTING ASSEMBLY COMPLETE TYPE F3..... 75

STREET LIGHTING ASSEMBLY COMPLETE TYPE F4..... 75

ELECTRICAL CONDUCTORS - SLACK REQUIREMENTS 76

STREET LIGHTING ACCEPTANCE 76

STREET LIGHTING WIRING TESTS..... 76

STREET LIGHTING VOLTAGE REGULATION AND CURRENT BALANCE TESTS 77

WIRING TEST LOG SHEET 78

TRAFFIC SIGNAL SPECIAL PROVISIONS..... 79

LOCATION OF UNDERGROUND STATE AND CITY OF PEORIA MAINTAINED
 ELECTRICAL FACILITIES 79

OPERATION OF EXISTING TRAFFIC SIGNALS..... 79

FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL..... 79

INDUCTIVE LOOP DETECTOR..... 81

SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET
 MOUNTED 81

SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM
 MOUNTED 81

SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET
 MOUNTED 81

SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM
 MOUNTED 81

SERVICE INSTALLATION, TYPE C (MODIFIED) 85

DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE 86

HANDHOLE, PORTLAND CEMENT CONCRETE..... 86

ELECTRIC CABLE IN CONDUIT, NO. 6 1/C 87

TRAFFIC SIGNAL POST, GALVANIZED, 17 FEET 87

PEDESTRIAN PUSH BUTTON 88
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH
COUNTDOWN TIMER 88
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT 89
CONCRETE FOUNDATION, TYPE A 90
CONCRETE FOUNDATION, TYPE D 90
CONCRETE FOUNDATION, TYPE E, 30" DIAMETER 91
CONCRETE FOUNDATION, TYPE E, 36" DIAMETER 91
INTERNALLY ILLUMINATED STREET NAME SIGN 91
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 22 FT. 92
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. 92
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT. 92
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. 92
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. 92
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT. 92
LUMINAIRE, LED HORIZONTAL MOUNT 175 WATT 93
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 2-MM12F & SM12F 93
TRAFFIC SIGNAL BATTERY BACKUP SYSTEM 96
NPDES PERMIT 104
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) 104
LR 107-4 – SPECIAL PROVISION FOR INSURANCE 113

INDEX LOCAL ROADS AND STREETS SPECIAL PROVISIONS

<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"/> Safety Edge	April 1, 2011	
LR 102-1		<input type="checkbox"/> Protests on Local Lettings	Jan. 1, 2007	Jan. 2, 2012
LR 102-2		<input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals	Jan. 1, 2001	Jan. 2, 2012
LR 102-3		<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals	Jan. 1, 2001	Jan. 2, 2012
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	113	<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, 2012
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	June 1, 2012	
LR 400-5		<input type="checkbox"/> Cold In-Place Recycling (CIR) With Emulsified Asphalt	June 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	June 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 1032-2		<input type="checkbox"/> Multigrade Cold Mix Asphalt	Jan. 1, 2007	Feb. 1, 2007
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the November 9, 2012 Letting

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

File Name	Pg #		Special Provision Title	Effective	Revised
80240			Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80275	114	X	Agreement to Plan Quantity	Jan. 1, 2012	
80274			Aggregate Subgrade Improvement	April 1, 2012	Aug 1, 2012
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173	115	X	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Jan. 1, 2012
80241			Bridge Demolition Debris	July 1, 2009	
80276			Bridge Relief Joint Sealer (NOTE: This special provision was previously named "Concrete Joint Sealer")	Jan. 1, 2012	Aug 1, 2012
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
80291			Calcium Chloride Accelerator for Class PP-2 Concrete	April 1, 2012	
80292			Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	
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	
80294			Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 feet	April 1, 2012	
80277	118	X	Concrete Mix Design - Department Provided	Jan 1, 2012	
80261			Construction Air Quality – Diesel Retrofit	June 1, 2010	
80237	119	X	Construction Air Quality – Diesel Vehicle Emissions Control	April 1, 2009	Jan. 2, 2012
80239	121	X	Construction Air Quality – Idling Restrictions	April 1, 2009	
80177			Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
80029	123	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80272	133	X	Drainage and Inlet Protection Under Traffic	April 1, 2011	Jan. 1, 2012
80296	135	X	Errata for the 2012 Standard Specifications	April 1, 2012	Aug 1, 2012
80228	136	X	Flagger at Side Roads and Entrances	April 1, 2009	
80265	137	X	Friction Aggregate	Jan. 1, 2011	
80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2009
* 80303	141	X	Granular Materials	Nov. 1, 2012	
* 80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	
80169			High Tension Cable Median Barrier	Jan. 1, 2007	April 1, 2009
80246	142	X	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80109			Impact Attenuators	Nov. 1, 2003	Jan. 1, 2012
80110			Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2012
80045	144	X	Material Transfer Device	June 15, 1999	Jan. 1, 2009
80203	146	X	Metal Hardware Cast into Concrete	April 1, 2008	Jan. 1, 2012
80297			Modified Urethane Pavement Marking	April 1, 2012	
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80253			Movable Traffic Barrier	Jan. 1, 2010	Jan. 1, 2012
80231	147	X	Pavement Marking Removal	April 1, 2009	
80298			Pavement Marking Tape Type IV	April 1, 2012	
80254	148	X	Pavement Patching	Jan. 1, 2010	
80022	149	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80290			Payrolls and Payroll Records	Jan. 2, 2012	
80278	151	X	Planting Woody Plants	Jan. 1, 2012	Aug 1, 2012
* 80305			Polyurea Pavement Markings	Nov. 1, 2012	
80279	153	X	Portland Cement Concrete	Jan. 1, 2012	
80299			Portland Cement Concrete Inlay or Overlay	April 1, 2012	
80280	193	X	Portland Cement Concrete Sidewalk	Jan. 1, 2012	

<u>File Name</u>	<u>Pg #</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80300	194	X	Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	
80218			Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2012
80219			Preventive Maintenance – Cape Seal	Jan. 1, 2009	April 1, 2012
80220			Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	April 1, 2012
80221			Preventive Maintenance – Slurry Seal	Jan. 1, 2009	April 1, 2012
80281	197	X	Quality Control/Quality Assurance of Concrete Mixtures	Jan. 1, 2012	
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306	210	X	Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS) (NOTE: The Special Provisions "Reclaimed Asphalt Pavement (RAP)" and "Reclaimed Asphalt Shingles (RAS)" were combined to create this special provision.	Nov. 1, 2012	
80283	221	X	Removal and Disposal of Regulated Substances	Jan. 1, 2012	
80224			Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	Jan. 1, 2012
80271			Safety Edge	April 1, 2011	
* 80307			Seeding	Nov. 1, 2012	
80152	222	X	Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	April 1, 2012
80132	226	X	Self-Consolidating Concrete for Precast and Precast Prestressed Products	July 1, 2004	April 1, 2012
80284			Shoulder Rumble Strips	Jan. 1, 2012	
80285	228	X	Sidewalk, Corner or Crosswalk Closure	Jan. 1, 2012	
80127	229	X	Steel Cost Adjustment	April 2, 2004	April 1, 2009
80255			Stone Matrix Asphalt	Jan. 1, 2010	Jan. 1, 2012
80143	233	X	Subcontractor Mobilization Payments	April 2, 2005	April 1, 2011
80075			Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
* 80308	234	X	Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Nov. 1, 2012	
80286			Temporary Erosion and Sediment Control	Jan. 1, 2012	
80225			Temporary Raised Pavement Marker	Jan. 1, 2009	
80256			Temporary Water Filled Barrier	Jan. 1, 2010	Jan. 1, 2012
80301			Tracking the Use of Pesticides	Aug 1, 2012	
80287			Type G Inlet Box	Jan. 1, 2012	
80273	235	X	Traffic Control Deficiency Deduction	Aug. 1, 2011	
20338			Training Special Provisions	Oct. 15, 1975	
80270	236	X	Utility Coordination and Conflicts	April 1, 2011	Jan. 1, 2012
* 80288	242	X	Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2012
* 80302	248	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 have been deleted from use:

80172 Reclaimed Asphalt Pavement (RAP)
80282 Reclaimed Asphalt Shingles (RAS)

The following special provisions are either in the 2012 Standard Specification, the 2012 Recurring Special Provisions, or the special provision Portland Cement Concrete:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80186	Alkali-Silica Reaction for Cast-in-Place Concrete	The special provision Portland Cement Concrete	Aug. 1, 2007	Jan. 1, 2009
80213	Alkali-Silica Reaction for Precast and Precast Prestressed Concrete	The special provision Portland Cement Concrete	Jan. 1, 2009	
80207	Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas	Article 107.22	Nov. 1, 2008	Nov., 1, 2010
80166	Cement	Section 1001	Jan. 1, 2007	April 1, 2011
80260	Certification of Metal Fabricator	Article 106.08	July 1, 2010	
80094	Concrete Admixtures	Section 1021 and the special provision Portland Cement Concrete	Jan. 1, 2003	April 1, 2009

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80226	Concrete Mix Designs	The special provision Portland Cement Concrete	April 1, 2009	
80227	Determination of Thickness	Articles 353.12, 353.13, 353.14, 354.09, 355.09 356.07, 407.10, 482.06 and 483.07	April 1, 2009	
80179	Engineer's Field Office Type A	Articles 670.02 and 670.07	April 1, 2007	Jan. 1, 2011
80205	Engineer's Field Office Type B	Articles 670.04 and 670.07	Aug. 1, 2008	Jan. 1, 2011
80189	Equipment Rental Rates	Articles 105.07 and 109.04	Aug. 2, 2007	Jan. 2, 2008
80249	Frames and Grates	Articles 609.02 and 609.04	Jan. 1, 2010	
80194	HMA - Hauling on Partially Completed Full-Depth Pavement	Article 407.08	Jan. 1, 2008	
80245	Hot-Mix Asphalt - Anti-Stripping Additive	Article 1030.04	Nov. 1, 2009	
80250	Hot-Mix Asphalt - Drop-Offs	Article 701.07	Jan. 1, 2010	
80259	Hot-Mix Asphalt - Fine Aggregate	Articles 1003.01 and 1003.03	April 1, 2010	
80252	Improved Subgrade	Articles 302.04, 302.07 302.08, 302.10, 302.11 310.04, 310.08, 310.10 310.11 and 311.05	Jan. 1, 2010	
80266	Lane Closure, Multilane, Intermittent or Moving Operation, for Speeds ≤ 40 MPH	Article 701.19	Jan. 1, 2011	Jan. 2, 2011
80230	Liquidated Damages	Article 108.09	April 1, 2009	April 1, 2011
80267	Long-Span Guardrail over Culvert	Articles 630.07 and 630.08	Jan. 1, 2011	
80262	Mulch and Erosion Control Blankets	Articles 251.03, 251.04, 251.06, 251.07 and 1081.06	Nov. 1, 2010	April 1, 2011
80180	National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction	Article 105.03	April 1, 2007	Nov. 1, 2009
80208	Nighttime Work Zone Lighting	Section 702	Nov. 1, 2008	
80232	Pipe Culverts	Article 542.03, 542.04, 542.11 and 1040.04	April 1, 2009	April 1, 2010
80263	Planting Perennial Plants	Section 254 and Article 1081.02	Jan. 1, 2011	
80210	Portland Cement Concrete Inlay or Overlay	Recurring CS #29	Nov. 1, 2008	
80217	Post Clips for Extruded Aluminum Signs	Article 1090.03	Jan. 1, 2009	
80268	Post Mounting of Signs	Article 701.14	Jan. 1, 2011	
80171	Precast Handling Holes	Articles 540.02, 540.06, 542.02, 542.04, 550.02, 550.06, 602.02, 602.07 and 1042.16	Jan. 1, 2007	
80015	Public Convenience and Safety	Article 107.09	Jan. 1, 2000	
80247	Raised Reflective Pavement Markers	Article 781.03	Nov. 1, 2009	April 1, 2010
80131	Seeding	Articles 250.07 and 1081.04	July 1, 2004	July 1, 2010
80264	Selection of Labor	Recurring CS #5	July 2, 2010	
80234	Storm Sewers	Article 550.02, 550.03, 550.06, 550.07, 550.08 and 1040.04	April 1, 2009	April 1, 2010
80087	Temporary Erosion Control	Articles 280.02, 280.03 280.04, 280.07, 280.08 and 1081.15	Nov. 1, 2002	Jan. 1, 2011
80257	Traffic Barrier Terminal, Type 6	Article 631.07	Jan. 1, 2010	
80269	Traffic Control Surveillance	Article 701.10	Jan. 1, 2011	
80258	Truck Mounted/Trailer Mounted Attenuators	Articles 701.03, 701.15 and 1106.02	Jan. 1, 2010	

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

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

**STATE OF ILLINOIS
PEORIA COUNTY**

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2012, the latest edition of the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", the "Manual of Test Procedures For Materials" in effect on the date of invitation for bids, and the "Supplemental Specifications and Recurring Special Provisions", as indicated on the Check Sheet included herein, which apply to and govern the construction of the TIGER II Improvements, Section 12-00356-01-PV, in Peoria County, Illinois. In case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.

DESCRIPTION OF WORK

This work consists of furnishing all labor, materials, and equipment necessary improve the 22 block area bounded by Persimmon Street, Jefferson Avenue, Walnut Street, and Water Street, including the following streets: Jefferson Avenue, Commercial Street, Adams Street, Persimmon Street, Maple Street, Elm Street, Oak Street, State Street, and Walnut Street. Improvements include hot mix asphalt overlay, Portland cement concrete pavement, curb & gutter, concrete sidewalks with brick bandings, porous concrete sidewalks, brick parking areas, storm sewer systems, street lighting systems, landscape planters, traffic signals, and all miscellaneous appurtenant and incidental items shown in the plans and as described in these Special Provisions.

FAILURE TO COMPLETE WORK ON TIME

Should the Contractor fail to complete work by the completion dates, or within such extra time they may have been allowed by extension, the Contractor shall be liable to the City of Peoria at a rate of \$2,500.00 per day for every calendar day over the contract time to cover all costs incurred for engineering, inspection and other expenses incurred by the City of Peoria by reason of the Contractor's failure to complete the work within the specified time, and such amount shall be deducted from the monies due the Contractor, not as a penalty, but as damages sustained.

DATE OF COMPLETION (PLUS WORKING DAYS)

The Contractor shall schedule his operations so as to complete all work, except as specified below, and open the entire roadway to traffic on or before November 30, 2014. The Contractor shall note that this completion date is based on an expedited work schedule. The contractor shall complete any remaining planting and sodding work by May 31, 2015. The Contractor will be allowed 20 working days after the May 31, 2015 completion date, for landscaping punch list and maintenance.

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. In no case shall the dates for completion be extended beyond those stated above.

WORKING RESTRICTIONS

Construction activities shall cease by 3:30 PM on Friday, with equipment properly stored and clean up completed. Work on Saturdays/Sundays requires prior approval of the Engineer.

Peoria Chiefs Stadium

Work on streets and intersections immediately surrounding the Peoria Chiefs Stadium shall be suspended two hours prior to any baseball games (Peoria Chiefs, Bradley University, High School, etc.) or special events unless otherwise approved by the Engineer and stadium management. Pedestrian ADA access to the stadium from all directions and parking areas must be maintained and available for all events at the stadium. Locations of temporary handicap parking will also need to be coordinated and provided around the stadium. While most baseball games and events occur during the early evening hours, a number of day time games and special events are held throughout the year. From April through June a variety of special school days are held in conjunction with games. These events involve large numbers of grade school students arriving by bus. Contractor shall coordinate with stadium management on dates for such events and additional access requirements for school bus unloading and loading.

River Front Events

No work will be allowed during major River Front Events such as:

- Louie Louie Festival
- Memorial Day Festivities
- Steam Boat Festival
- Universal Rhythm Assembly
- Independence Day Festivities
- Taste of Peoria (no work after 4:00 pm)
- Grand Nationals
- River City Soul Fest
- Erin Feis
- Blues Fest
- Labor Day
- Oktoberfest

There are numerous events scheduled for the River Front area from May thru October. The majority of the events begin Friday evening and continue through Saturday and Sunday. The Contractor shall accommodate these events by ensuring truck movements, equipment operations, storage of materials and truck or equipment parking do not interfere with vehicular or pedestrian traffic entering or leaving these events. Dust and noise levels shall be held to a minimum, as to not interfere as required by the Engineer.

The contractor should obtain a current copy of these events from the Peoria Park District.

Additional work restrictions are outlined in Article 107 of the Standard Special Provisions.

RESPONSIBILITY FOR DAMAGE CLAIMS

The Contractor shall indemnify and hold harmless the CITY of PEORIA, its officers and employees against all loss, damage or expense that it or they may sustain as a result of any suits, actions, or claims of any character brought on account of injury to or death of any person or persons, including all persons performing any work under this contract, which may arise in any way in connection with the work to be performed under this contract, including but not limited to, suits, actions or claims arising under "An Act Providing for the Protection and Safety of Persons In and About the Construction, Repairing, Alteration or Removal of Buildings, Bridges, Viaducts, and Other Structures, and to Provide For the Enforcement Thereof", approved June 3, 1907, (Ill. Rev. Stats., Ch. 48, Sec. 60, et seq.), as amended. The Contractor shall also indemnify and hold harmless the CITY OF PEORIA, its officers and employees from all suits, actions, or claims of any character brought because of any injuries or damages received or sustained by any person, persons or property, on account of, or in consequence of, any neglect by Contractor or a Subcontractor in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect or misconduct of said Contractor; or because of any claim or amounts recovered for any infringements of patent, trademark or copyright; or from any claims or amounts arising or recovered under

the "Workmen's Compensation Act", or any other law, ordinance, order or decree, and so much of the money due the said Contractor under and by virtue of his contract as shall be considered necessary by the Department for such purposes, may be retained for the use of the ENGINEERING DIVISION; or, in case no money is due, his surety shall be held until such suits, actions or claims have been settled and suitable evidence to that effect furnished to the Department.

CONTRACTOR'S INSURANCE

Article 107.27 of the Standard Specifications shall be modified as follows:

Add the following to paragraph (b):

(4) Owner's Protective Liability and Property Damage Insurance

The Contractor shall obtain Owner's Protective Liability and Property Damage Insurance in an amount not less than \$1,000,000 per occurrence and \$2,000,000 aggregate. If endorsements to the commercial general liability insurance policy cannot be made, then separate policies providing such protection must be furnished by the Contractor.

All Liability insurance policies shall name the City of Peoria, its officers, directors, employees, agents, representatives, subsidiaries, successors, and assigns, as additional insureds, shall be primary to any other insurance carried by the City of Peoria and shall provide coverage consistent with ISO CG 20 26, and shall maintain the required coverages, naming the City of Peoria as an additional insured, for a period of not less than three years from the date the City of Peoria and Contractor execute an Agreement to Final Quantities.

Revise paragraph (d) as follows:

Umbrella Liability. The Contractor shall take out and maintain during the life of the project such Umbrella or Excess Liability coverage as shall protect him and any Subcontractor performing work covered by this project, from claims for damages in an amount not less than \$2,000,000 per occurrence and \$5,000,000 annual aggregate.

GUARANTEE PERIOD

The Contractor warrants all work performed under this contract is free from defects and was performed in accordance with the Contract Documents for a period of one (1) year from the date of agreement of final quantities, as agreed in writing, by the City Engineer after all parties have signed the document. In case of acceptance of a part of the work for use prior to the agreement to final quantities, the guarantee for the part so accepted shall be for a period of one (1) year from the date of such partial acceptance, in writing, by the City Engineer. Work performed due to this warranty requirement shall be guaranteed for a period of one (1) year. The Guarantee Period may be further amended in the Roadwork Special Provision.

EXISTING UNDERGROUND FACILITIES

The City of Peoria assumes no responsibility for the presence, specific size or location of underground distribution systems of the several public utility corporations. No responsibility for the protection of said underground systems will be assumed by the City of Peoria. If such protection is found to be necessary for water mains, gas mains, steam mains, underground electrical distribution systems, underground telephone circuit systems or any other underground systems of non-city/non-county Ownership, the cost of same, in whole or in part, is disclaimed of the City of Peoria.

J.U.L.I.E. SYSTEM

The J.U.L.I.E. (Joint Utility Locating Information for Excavators) must be notified prior to starting construction so that the respective utilities may have adequate time to locate and mark their underground facilities. Phone: 1-800-892-0123. The following information may be requested by J.U.L.I.E.:

County Name: Peoria
Township Name: Peoria City
Section Numbers: 9

COOPERATION WITH UTILITY COMPANIES

It is understood and agreed that the Contractor has considered, in his bid, all the permanent and temporary utility appurtenances in their present or relocated positions and that no additional compensation will be allowed for any delays, inconvenience or damage sustained by him due to any interference from the said utility appurtenances or the operations of moving them.

The Illinois American Water Company will be relocating portions of the existing 8 inch water main on State Street. The relocation may be taking place during the same construction time frame as the Warehouse District Improvements on State Street. The Contractor will be responsible to coordinate with the water main contractor during construction. Once the existing appurtenances (i.e. existing sidewalk, driveway, pavement, etc) are removed, the water main contractor will be allowed access to the water main relocation areas. The Contractor will give the water main contractor two weeks' notice prior to making the site available to them.

All utilities, within the limits of the proposed construction, owned by various utility companies, will be relocated and/or adjusted by the utility owner as required by the proposed improvements unless noted for payment in the plans. Costs associated with relocation and/or adjustment of existing utilities will be the responsibility of the utility owner.

<u>Company</u>	<u>Contact</u>	<u>Phone Number</u>
Ameren – electric	Jon Reick	693-4697
Ameren – gas	Kent Kowalske	693-4839
AT&T	John O’Flaherty	635-2169
IL American Water	Matt White	208-8366
Greater Peoria San. Dist.	James Sloan	678-9046
	John Boyle	678-9035
Comcast Corp.	Kirk Kromphardt	686-2677
Windstream	David Ferreira	253-0930
iTV3	Brandon Hendricks	208-2418
Caterpillar (Fiber Optic)	Bob Stecken	578-7922

COOPERATION BETWEEN CONTRACTORS

At least one project will be ongoing immediately adjacent to and/or within the limits of the proposed improvements during the duration of construction. Washington Street, between Maple Street and Walnut Street will be under construction starting in the Spring of 2013 and concluding in 2014. Work on many of the side streets matches into work in the adjacent project. The contractor will need to coordinate with the City of Peoria and their contractor relative to schedule and progress of work to ensure time critical portions of both projects are completed in a timely manner to minimize delays in progress of either project. Traffic control and progress of work will need to be coordinated by the contractors of both projects.

GREATER PEORIA SANITARY DISTRICT (GPSD) COORDINATION

Included in the plans are repairs to existing sanitary sewer facilities operated by the Greater Peoria Sanitary District (GPSD). The contractor shall coordinate with GPSD prior to starting work on any sanitary sewer improvements to allow GPSD personnel to be on site during various aspects of the work. Additionally, buried structures (manholes, lampsholes, etc.) and/or sewer lines currently shown as being abandoned may be found during pavement removal and earth excavation. When these buried structures and/or sewer lines are encountered, the contractor shall notify the Engineer immediately so that the GPSD can be contacted to investigate. In most instances, GPSD will replace these existing structures using a contractor already doing similar work for GPSD. The contractor shall coordinate schedules and site access with the GPSD contractor to allow all improvements to be completed concurrently within the project schedule.

ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION

All removal items and excavated material remain the property of the City of Peoria unless the City indicates a desire to the Contractor that he should dispose of the removed items and/or excavated material outside the limits of the improvement as the Contractor may provide. Should the City desire to keep the removed items and/or excavated material and have it disposed of at a location outside the improvement limits, the Contractor shall haul to the City's designated disposal site, at no additional cost to the City, providing the disposal site is within the limits of the City of Peoria.

Excavated material to remain on the job site shall be placed as directed by the Engineer for the City of Peoria.

SALVAGING EXISTING MATERIAL

All existing municipally-owned street castings, frames and grates on inlets and manholes, signs and posts in usable condition within the limits of the improvement shall, if not required for further use in the construction of the improvement, be carefully excavated and preserved by the Contractor. Said street castings, frames and grates on inlets and manholes, signs and posts if desired by the City, shall be picked up and hauled from the job site by the City.

The cost of salvaging existing municipally-owned street castings, frames and grates on inlets and manholes, signs and posts, as outlined herein, will not be paid for separately, but the cost shall be included in the contract unit price for the item of construction involved.

CITY SIGNS

The contractor, at his own expense, shall be required, as directed by the Engineer, to relocate or remove and reinstall all street, traffic, parking, etc. signs belonging to the City within the limits of the improvement. All signs which interfere with construction operations shall be removed, stored in a place away from work, and replaced by the contractor after the improvement has been completed if they are not required for traffic control. Signs which are required for traffic control shall be reinstalled at a temporary location acceptable to the Engineer, in a workmanlike manner, visible to traffic, and maintained straight and neat for the duration of the temporary setting. Signs shall not be moved until progress of the work demands the relocation. The cost of this item shall be included in the contract unit price bid for the item of work which necessitated the removal.

CONSTRUCTION DEBRIS

In accordance with Public Act 90-761 the following shall be added to the third paragraph of Article 202.03 of the "Standard Specifications for Road and Bridge Construction":

The Contractor shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled or treated. This documentation must be maintained by the Contractor for 3 years.

A sample of a construction debris manifest has been placed at the back of this contract book, for use in documenting any debris removed from the site.

This documentation shall be included in applicable item of construction and shall not be paid for separately.

TRAFFIC CONTROL AND PROTECTION (SPECIAL)

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

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans.

Method of Measurement: All traffic control (except Temporary Pavement Markings) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis.

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

Temporary pavement markings will be paid for separately unless shown on a Standard.

TRAFFIC CONTROL PLAN

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

Special attention is called to Section 701 and Articles 107.09 and 107.14 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

Pedestrian Traffic Control: Pedestrian access to businesses must be maintained at all times. When an existing sidewalk is removed or is otherwise impassable, the Contractor must install the necessary signs and barricades to direct pedestrian traffic to an alternate pedestrian route. Sidewalk Closed signs (Code No. R11-1102) must be placed at each end of the closed sidewalk section. Type I, Type II, or Type III barricades must be installed in sufficient number to completely close the pathway. Barricades across and along a pathway must have a continuous cane detectable horizontal bar between 4" and 6" above the pavement. Access to and from alternate pedestrian routes must be ADA compliant and must be kept free of any obstructions and hazards. Where construction activates involve sidewalks on both sides of the street, the work must be staged so the both sides of the street are not under construction at the same time and no more than one corner at a time is out of services.

Requirements:

- 1) Barricades may be Type I, II, III or fencing with screen.
- 2) Barricades across and along a pathway must have a continuous cane detectable horizontal bar between 4" and 6" above the pavement.
- 3) Access to and from alternate pedestrian routes must be ADA compliant.
- 4) Alternate pedestrian routes must be a hard surface transversable by a wheel chair.
- 5) Temporary ramps between must be ADA compliant.
- 6) Use one "Sidewalk Closed" sign at each end of each sidewalk section being reconstructed at the location where the alternate pedestrian route begins.
- 7) At each point of closure, sufficient numbers of barricades must be used to completely close the pathway.
- 8) Pedestrian walkways/ routes must be maintained free of any obstructions and hazards such as holes, debris, mud, construction equipment, stored materials, etc. and must be broom swept daily or as directed by the Engineer.
- 9) Where construction activities involve sidewalks on both sides of the street, the work must be staged so that both sidewalks are not out of service at the same time.
- 10) The Contractor must maintain pedestrian access to adjacent properties by installing ADA compliant plywood walkways and/ or ramps from the curb line to adjacent property entrances or from the existing sidewalk to the street as directed by the Engineer. Pedestrian access to adjacent properties must be uninterrupted until the walk is fully restored.

The Contractor shall contact the City of Peoria at least 72 hours in advance of beginning work.

STANDARDS: 701301, 701311, , 701501, 701502, 701601, 701602, 701606, 701701, 701801, 701901

DETAILS: MUTCD TA-20 and TA-27

SPECIAL PROVISIONS:

Supplemental Specifications, Std Spec 701, Work Zone Traffic Control And Protection
Supplemental Specifications, Std Spec 1106, Work Zone Traffic Control Devices

TEMPORARY INFORMATION SIGNING

This work shall consist of furnishing, installing, maintaining, relocating for various states of construction and eventually removing temporary informational signs. Included in this item may be ground mount signs, skid mount signs, truss mount signs, bridge mount signs, and overlay sign panels which cover portions of existing signs.

Materials.

Materials shall be according to the following Articles of Section 1000 - Materials:

	<u>Item</u>	<u>Article/Section</u>
a.)	Sign Base (Notes 1 & 2)	1090
b.)	Sign Face (Note 3)	1091
c.)	Sign Legends	1092
d.)	Sign Supports	1093
e.)	Overlay Panels (Note 4)	1090.02

Note 1. The Contractor may use 5/8 inch (16 mm) instead of 3/4 inch (19 mm) thick plywood.

Note 2. Type A sheeting can be used on the plywood base.

Note 3. All sign faces shall be Type A except all orange signs shall meet the requirements of Article 1106.01.

Note 4. The overlay panels shall be 0.08 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIREMENTS

Installation.

The sign sizes and legend sizes shall be verified by the Contractor prior to fabrication.

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Article 701.14 and Article 720.04. The signs shall be 7 ft (2.1 m) above the near edge of the pavement and shall be a minimum of 2 ft (600 mm) beyond the edge of the paved shoulder. A minimum of two (2) posts shall be used.

Method Of Measurement.

This work shall be measured for payment in square feet (square meters) edge to edge (horizontally and vertically).

All hardware, posts or skids, supports, bases for ground mounted signs, connections, which are required for mounting these signs will be included as part of this pay item.

Basis Of Payment.

This work shall be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

CONSTRUCTION ACCESS

The Contractor shall present a plan of the access that will be used during construction of said project, by the Contractor or Subcontractor, to the Engineer at the time of the Pre-Construction Meeting. The Engineer and Contractor shall both examine the plan noting any areas of concern before construction begins.

Upon completion of the project, the Engineer shall examine the streets prior to approving final payment to the Contractor. Any areas that have been damaged, due to construction activity, shall be repaired by the Contractor to the satisfaction of the Engineer. When work is complete, the Contractor shall arrange, within a reasonable time period, to clean up and restore areas where equipment or material has been stored on the right-of-way or easement. This work shall be included in the cost of the contract.

The Engineer may restrict the movement of construction vehicles on the completed surface in order to prevent damage to these surfaces.

ENGINEERS FIELD OFFICE

Contractor shall lease or otherwise arrange for use of existing office space in the Downtown Peoria area near the project site in lieu of a standalone field office trailer. Location shall be in accordance with Article 670 of the Standard Special Provisions for Engineer's Field Office, Type A including all amenities and basis of payment.

PAVEMENT REMOVAL

The existing pavement structures within the project limits vary both in type and thickness throughout. The best available information, based on original construction plans and some pavement coring, is shown in the existing typical sections. No additional compensation will be allowed for sections of pavement that may deviate from the type and depth information provided on the existing typical sections.

PORTLAND CEMENT CONCRETE PAVEMENT SURFACE REMOVAL

This work involves the partial depth removal of existing concrete pavement to a depth of 2" minimum below the existing roadway surface as shown on the plans and as directed by the engineer in general accordance with Section 440 of the Standard Specifications, the plans, and as modified by this Special Provision.

BASIS OF PAYMENT:

All labor, equipment, and materials required for this work shall be paid for at the Contract unit price per Square Yard for PORTLAND CEMENT CONCRETE PAVEMENT SURFACE REMOVAL at the depth shown in the plans.

NON-SPECIAL WASTE

This work shall be done in accordance with applicable articles of the Standard Specifications, the project special provision for REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES, and at locations as described below from the adjacent Washington Street Stage 2 Improvements (Section No. 12-00355-03-PV).

Applicable Sections of the Final Preliminary Site Investigation (PSI) Report

Refer to: FAP 64 (US 24)
 Job No. C94-010-11
 Edmund Street to Hamilton Boulevard
 Peoria
 Peoria County
 ISGS #2380 Sequence #16421
 Andrews Work Order #033

Attached is a copy of the completed Preliminary Site Investigation (PSI) Report submitted May 25, 2012 by Andrews Engineering regarding the above referenced project. Based on the recommendations of the PSI report, if the District wants to pursue construction in the area of soil contamination, then the Contractor shall be responsible for hiring an Environmental Firm with at least five (5) documented leaking underground storage tanks (LUST) cleanups or that is pre-qualified in hazardous waste by the Department to remediate the soil contamination and monitor for worker protection.

An estimated quantity of potentially non-special waste has been included in the PSI report. The impacted soils would be classified as a non-special waste.

(The following list is an excerpt from the Preliminary Site Investigation (PSI) Report detailing the locations within the proposed project limits that are of concern.)

- 15. Station 45+35 to Station 46+00 0 to 50 feet LT (Vacant Industrial Buildings, Site 2380-29, 1001 SW Washington Street) – non-special waste.
 Contaminants of concern sampling parameters: VOCs.

*Any waste generated as a special waste or a waste not certified as a non-special waste from this project should be manifested off-site using the generator number associated with Peoria County. **The generator number for Peoria County is 1438995017.***

Pay Item Number	Pay Item	Unit of Measure	Quantity
66900200	NON-SPECIAL WASTE DISPOSAL	Cubic Yards	255
66900450	SPECIAL WASTE PLANS AND REPORTS	Lump Sum	1
66900530	SOIL DISPOSAL ANALYSIS	Each	1

It is the opinion of this office in consultation with Chief Council, that the remedial work be documented for potential illegal trespass action. If you have any questions or comments, please contact Steven Gobelman at 217/785-4246.

BASIS OF PAYMENT:

This work will be measured and paid for at the contract unit price per Cubic Yard for NON-SPECIAL WASTE DISPOSAL, per Lump Sum for SPECIAL WASTE PLANS AND REPORTS, and per Each for SOIL DISPOSAL ANALYSIS. These items shall include all work outlined in the Standard Specifications, this special provision, the special provision for REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES, and as detailed in the plans.

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

This work shall be according to Section 669 of the Standard Specifications and the following:

Revise the second and third sentence of the first paragraph of Article 669.08 to read: "The affected area shall be monitored with a photo ionization detector (PID) utilizing a lamp of 10.6 eV or greater or an instrument with a flame ionization detector (FID). Any reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring it to be properly managed as either a non-special waste, non-hazardous special waste, or hazardous waste."

Revise the fourth and fifth sentence of the second paragraph of Article 669.08 to read: "When the analytical results indicate that detected levels are at or below the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to the proposed Subpart F of 35 Illinois Administrative Code (IAC) 1100.605, the soil excavated shall be included in the storm sewer or earth excavation, as appropriate, and backfill shall be in accordance to Article 205 and/or 208. When the analytical results indicate that detected levels are above the most stringent MAC for chemical constituents in uncontaminated soil established pursuant to the proposed Subpart F of 35 IAC 1100.605, the soil excavated shall be considered a waste and managed appropriately."

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is pre-qualified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

General. This Special Provision will likely require the Contractor to subcontract for the execution of certain activities.

All contaminated materials shall be managed as non-special waste. This work shall include monitoring and potential sampling, analytical testing, and management of a material contaminated by regulated substances.

- A) The Environmental Firm shall continuously monitor for worker protection and the Contractor shall manage and dispose of all soils excavated within the following areas as classified below. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit whichever is less. Soil samples or analysis without the approval of the Engineer will be at no additional cost to the Department. Phase I Preliminary Engineering information is available through the District's Environmental Studies Unit.

PROOF ROLLING

Effective April 23, 2004 Revised January 1, 2007

This work shall consist of proof rolling the subgrade with a fully loaded tandem axle dump truck and driver at the direction of the Engineer. The truck shall travel the subgrade in all of the proposed lanes of traffic in the presence of the Engineer.

This work will not be paid for separately, but considered included in the various earthwork pay items.

SUBGRADE TREATMENT

Effective July 1, 1990 Revised April 25, 2008

Revise first sentence of first paragraph of Article 301.04 as follows:

“When compacted, the subgrade shall have a minimum dry density of 95 percent of the standard laboratory dry density and a minimum immediate bearing value (IBV) of 6.0.”

Delete the second paragraph (including subparagraphs a, b, and c) of Article 301.04 of the Standard Specifications and replace it with the following:

“In cut sections the contractor responsible for the rough grading shall obtain not less than 95% of the standard laboratory density and not more than 110% of the optimum moisture for the top 1' (300mm) of the subgrade.

The Contractor may, at his/her option, add a drying agent to lower the moisture content as specified. The drying agent must be approved by the Engineer prior to use. Additional compensation will not be allowed for the use of a drying agent, but will be considered as included in the cost of the various earthwork items.”

In the first sentence of the third paragraph delete “above steps have” and replace with “work has.”

ENVIRONMENTAL REVIEWS

Prior to use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

Prior to any waste materials being removed from the construction site, the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental recourse documentation shall include the following:

BDE Form 2289 (Environmental Survey Request)
A location map showing the size limits and location of the use area
Signed Property Owner Agreement Form –D4 PIO100
Color photographs depicting the use area
Borrow Area Entry Agreement form – D4 PIO101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

EMBANKMENT

Effective: July 1, 1990 Revised: November 1, 2007

Revise the third paragraph of Article 205.06 of the Standard Specifications to read:

All embankment shall be constructed with not more than 110% of optimum moisture content, determined according to AASHTO T 99 (Method C). The 110% of optimum moisture limit may be waived in free draining granular material when approved by the Engineer.

The Contractor may, at his option, add a drying agent to lower the moisture content as specified above. The drying agent must be approved by the Engineer prior to use. Extra compensation will not be allowed for the use of a drying agent but will be considered included in the cost of the various items of excavation.

BORROW AND FURNISHED EXCAVATION

Effective March 7, 2000 Revised April 27, 2007

Add the following to the requirements of Article 204:

“Soils which demonstrate the following properties shall be restricted to the interior of the embankment and shall be covered on both sides and top with a minimum of 3 feet (900mm) of non-restricted soil not considered detrimental in terms of erosion potential or excess volume change. A restricted soil is defined as having any one of the following properties:”

A grain size distribution with less than 35% passing the number 75um (#200) sieve.

A plasticity index of less than 12.

A liquid limit in excess of 50.

“All restricted and non-restricted embankment materials shall have the following minimum strengths for the indicated moistures:”

Immediate Bearing Value	Shear Strength At 95% Density *	Moisture
3.0	1000PSF (50 Kpa)	120%
4.0	1300 PSF (62 Kpa)	110%

*Granular Soils $\phi=35^\circ$

EMBANKMENT (RESTRICTIONS)

Effective January 21, 2005

Revised August 3, 2007

Add the following to the requirements of Article 205.04:

Gravel, crushed stone or soils having less than 35% passing the number 200 sieve and other materials as allowed by Article 202.03 of the Standard Specifications are further restricted. These further restricted materials are also limited to the interior of the embankment and shall have a minimum cover of 3' (1 m) of non-restricted soil (see "Borrow and Furnished Excavation" Special Provision). Alternating layers of further materials may only be incorporated in to the embankment by using one of the following procedures:

The further restricted materials shall be placed in 4" lifts and disked with underlying lift material until a uniform and homogeneous material is formed having more than 35% passing the number 200 sieve.

Sand, gravel or crushed stone embankment when placed on the existing ground surface will be drained using a 10' (3 m) French drain consisting of nonwoven geotechnical fabric at the toe of the foreslope spaced 150' (46 m) apart. At locations requiring a French drain the 3' (1m) cohesive cap shall not be installed within the 10' by 10' riprap area. If the Engineer determines that the existing ground is granular free draining soil, the French drain may be deleted.

Sand, gravel or crushed stone embankment when placed on top of a cohesive embankment will be drained with a permanent 4" (100 mm) underdrain system. The underdrain system shall consist of a longitudinal underdrain on both sides of the embankment and traverse underdrains spaced at 250' (75 m) centers. The underdrain shall consist of a 2' (0.6 m) deep by 1' (0.3 m) wide trench, backfilled with FA4 sand and a 4" (100 mm) diameter underdrain. In addition, both sides of the embankment will have a 6" (150 mm) diameter pipe drain which will drain the underdrain system and outletted into a permanent drainage structure or outletted by a headwall at the toe of the embankment.

The above work will not be paid for separately but shall be included in the cost of Earth Excavation, Furnished excavation, or Borrow Excavation.

EMBANKMENT (SMALL EMBANKMENT)

Effective October 1, 1999 Revised January 1, 2007

Revised the third paragraph of Article 205.06 of the Standard Specifications to read:

All material used for embankment shall not contain more than 120% of the optimum moisture except for the top 2 ft. (600 mm).

The top 2 ft. (600 mm) of all embankments shall not contain more than 110% of the optimum moisture determined according to AASHTO T99 (Method C). The 110% of optimum moisture limit may be waived in free draining granular material when approved by the Engineer.

SUBBASE GRANULAR MATERIAL

Effective November 5, 2004

This work shall be in accordance with Section 311 of the Standard Specifications and as specified herein.

All Subbase Granular Material shall have a minimum IBR of 40.

PCC AUTOMATIC BATCHING EQUIPMENT

Effective April 23, 2010

Portland cement concrete provided shall be produced from batch plants that conform to the requirements of Article 1103.03 (a) and (b) of the Standard Specifications for Road and Bridge Construction. Semi-automatic batching will not be allowed.

In addition, the batching plant shall be a computerized plant interfaced with a printer and shall print actual batch weights, added water, tempering water, mixing time, and amount of each additive per batch. At the discretion of the Engineer, archived electronic versions of batch proportions will be acceptable. Truck delivery tickets will still be required as per

Article 1020.11 (a)(7).

PARKING METERS TO BE REMOVED

This work shall consist of removing existing parking meters, including post, and any associated hardware. Meters shall remain the property of the City of Peoria and shall be delivered to the City of Peoria as directed by the Engineer. Posts shall become the property of the Contractor and shall be disposed of according to Article 202.03.

Measurement: Parking Meters to be Removed will be paid for as each per post location regardless of the number of meters attached to the post.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per each for PARKING METERS TO BE REMOVED.

CONCRETE GUTTER (SPECIAL)

This work shall be in accordance with the applicable portions of Section 606 of the Standard Specifications and as detailed in the plans.

Concrete Gutter (Special) will be constructed at the locations shown in the plans and connect to the Portland Cement Concrete Pavement 7" portion of the paver parking lanes shown in the plans. Concrete Gutter (Special) will be measured for payment in feet along the roadway edge of pavement.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per foot for CONCRETE GUTTER (SPECIAL) and shall include all labor, material, and equipment necessary to perform the work.

FILLING EXISTING SIDEWALK VAULTS

When an existing vault is discovered under existing sidewalk being removed the Engineer shall be notified immediately.

This work shall consist of filling and abandoning the existing vaults that may be discovered while removing existing sidewalk adjacent to buildings. The contractor shall contract to have each vault discovered inspected by an Illinois Licensed Structural Engineer to evaluate the condition of the existing wall between the open vault and basement of the building. The condition of the vault and basement walls shall be videotaped and photographed prior to being filled. The vault will then be filled using controlled low strength material in lifts of a thickness to be determined by the Structural Engineer to avoid surcharging and compromising the existing wall. Each lift shall cure sufficiently to support itself and the next lift of material prior to placing the subsequent lift.

Where existing vault walls conflict with proposed planter boxes or utilities, the wall shall be removed to a depth of two (2) feet below the conflicting proposed feature and for a distance of five (5) feet on either side of the feature.

The Structural Engineer shall prepare a report for each vault detailing the condition of the existing wall vault/basement wall including photos; evaluation of the need to partially remove the outer vault walls to avoid conflicts with proposed features, and recommendations for backfilling the vault.

Prior to back filling the vault the existing vault/basement wall shall have a waterproofing membrane installed on the outside face of the wall. Membrane shall be a bituminous based liquid product or approved equal.

Product shall be applied directly to the wall as directed by the manufacturer and in accordance with applicable portions of Article 581 of the Standard Specifications.

All controlled low strength material shall be provided and placed in accordance with Section 593 of the Standard Specifications, the detail in the plans, and as directed by the contracted Structural Engineer.

Sturdy pedestrian barriers shall be employed around the perimeter of the open vault until the vault is completely filled and brought back to level with the surrounding sidewalk. The open vault shall also be protected from filling with water, in any form, during the course of back filling. Covers, tarps, and pumps may be required to keep the open vault dry and to avoid water infiltrating the basement of the building. Should water or fill material infiltrate the basement the Contractor will be responsible for removing the water and fill material before cleaning the affected areas of the basement to the satisfaction of the Engineer and building owner, no additional compensation will be allowed for this cleanup work.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per Cubic Yard for FILLING EXISTING SIDEWALK VAULTS, which price shall include all labor, structural engineering inspection and report, equipment, videotaping of existing conditions, and material (including the waterproofing membrane, controlled low strength material, pedestrian barricades, and protection from water) for filling existing sidewalk vaults to the satisfaction of the Engineer.

VAULT LID RESURFACING

Description. This work shall consist of the preparation of the existing vault lid and the construction of a microsilica concrete overlay to the specified thickness. The Contractor shall coordinate with the adjacent building owner to protect any items located under the vault lid. Any damage and required replacement to these items shall be the responsibility of the Contractor.

Materials. Materials shall meet the requirements of the following Articles of Section 1000:

<u>Item</u>	<u>Article/Section</u>
(a) Microsilica	1010
(b) Portland Cement Concrete (Notes 1-6)	1020
(c) Packaged Rapid Hardening Mortar or Concrete	1018
(d) Concrete Curing Materials	1022.02

Note 1: Cement shall be Type I portland cement. Fine aggregate shall be natural sand and the coarse aggregate shall be crushed stone or crushed gravel. The gradation of the coarse aggregate shall be CA 11, CA 13, CA 14 or CA 16.

Note 2: Mix Design Criteria.

Article 1020.04 shall not apply. The microsilica concrete mix design shall meet the following requirements:

Cement Factor	565 lb./cu. yd. (335 kg/cu. m)
Microsilica Solids	33 lb./cu. yd. (20 kg/cu. m)
Water/Cement Ratio (including water in the slurry)	0.37 to 0.41
Mortar Factor	0.88 to 0.92
Slump	3 to 6 in. (75 to 150 mm)

Air Content 5.0 to 8.0 percent
Compressive Strength (14 days) 4000 psi (27,500 kPa) minimum
Flexural Strength (14 days) 675 psi (4,650 kPa) minimum

Note 3: Admixtures.

Article 1020.05(b) shall apply except as follows:

High-range water reducing admixtures (superplasticizers) shall be added as determined by the Engineer.

Note 4: Fly Ash.

Article 1020.05(c)(1) shall apply except as follows:

Only Class C fly ash may be used to partially replace portland cement. The amount of cement replaced and replacement ratio shall be the same as for Class BS concrete.

Note 5: Ground Granulated Blast-Furnace Slag.

Ground granulated blast-furnace slag may be used according to Article 1020.05(c)(2). The amount of cement replaced and replacement ratio shall be the same as for Class BS concrete.

Note 6: Mixing.

The mixing requirements shall be according to Article 1020.11, except as follows:

(a) Water-based microsilica slurry:

(1) Truck Mixer:

- Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.
- Add remaining water.
- Mix 30-40 revolutions at 12-15 RPM.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

(2) Stationary Mixer:

- The microsilica slurry shall be diluted into the water stream or weigh box prior to adding into mixer. Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.
- Add remaining water.
- After mixing cycle is completed deposit into truck mixer.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

(b) Densified microsilica (bulk):

(1) Truck Mixer:

- Same as (a)1 above except the densified microsilica shall be added with the cement.

(2) Stationary Mixer:

- Same as (a)2 above except the densified microsilica shall be added with the cement.

(c) **Densified microsilica (bag):**

Bagged microsilica shall be kept dry. No bag or material containing moisture shall be introduced into the concrete mixer.

(1) **Truck Mixer:**

- Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80 percent of the water.
- Add cement, fly ash (if used), and aggregates.
- Add remaining water.
- Mix 30-40 revolutions at 12-15 RPM.
- Add microsilica.
- Mix 70-80 revolutions at 12-15 RPM.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

(2) **Stationary Mixer:**

- Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80% of the water.
- Add cement, fly ash (if used), and aggregates.
- Add remaining water.
- After mixing cycle is completed deposit into truck mixer.
- Add microsilica to truck.
- Mix 70-80 revolutions at 12-15 RPM.
- Add high range water-reducing admixture.
- Mix 60-70 revolutions at 12-15 RPM.

Equipment: The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

(a) **Surface Preparation Equipment.** Surface preparation equipment shall be according to the applicable portions of Section 1100 and the following:

- (1) **Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
- (2) **Mechanical Blast Cleaning Equipment.** Mechanical blast cleaning may be performed by high-pressure waterblasting or shotblasting. Mechanical blast cleaning equipment shall be capable of removing weak concrete at the surface, including the microfractured concrete surface layer remaining as a result of mechanical scarification; shall be capable of removing rust and old concrete from reinforcement bars; and shall have oil traps.

Mechanical high-pressure waterblasting equipment shall be mounted on a wheeled carriage and shall include multiple nozzles mounted on a rotating assembly, and shall be operated with a 7000 psi (48 MPa) minimum water pressure. The distance between the nozzles and the deck surface shall be kept constant and the wheels shall maintain contact with the deck surface during operation.

- (3) **Hand-Held Blast Cleaning Equipment.** Blast cleaning using hand-held equipment may be performed by high-pressure waterblasting or abrasive blasting. Hand-held blast cleaning equipment shall have oil traps.

Hand-held high-pressure waterblasting equipment that is used in areas inaccessible to mechanical blast cleaning equipment shall have a minimum water pressure of 7000 psi (48 MPa).

- (4) Mechanical Scarifying Equipment. Scarifying equipment shall be a power-operated, mechanical scarifier capable of uniformly scarifying or removing the old concrete surface and new patches to the depths required in a satisfactory manner. Other types of removal devices may be used if their operation is suitable and they can be demonstrated to the satisfaction of the Engineer.
 - (5) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a computerized, self-propelled robotic machine with gauges and settings that can be easily verified. The equipment shall use water according to Section 1002. The equipment shall be capable of removing in a single pass, sound concrete to the specified depth, and operating at a 16,000 psi (110 MPa) minimum water pressure with a 55 gal/min (208 L/min) minimum water flow rate.
 - (6) (6) Vacuum Cleanup Equipment. The equipment shall be equipped with fugitive dust control devices capable of removing wet debris and water all in the same pass. Vacuum equipment shall also be capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.
 - (7) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 45 lb. (20 kg) class. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.
- (b) Pull-off Test Equipment. Equipment used to perform pull-off testing shall be either approved by the Engineer, or obtained from one of the following approved sources:

James Equipment
007 Bond Tester
800-426-6500

Germann Instruments, Inc.
BOND-TEST Pull-off System
847-329-9999

SDS Company
DYNA Pull-off Tester
805-238-3229

Pull-off test equipment shall include all miscellaneous equipment and materials to perform the test and clean the equipment, as indicated in the Illinois Test procedure 304 and 305 "Pull-off Test (Surface or Overlay Method)". Prior to the start of testing, the Contractor shall submit to the Engineer a technical data sheet and material safety data sheet for the epoxy used to perform the testing. For solvents used to clean the equipment, a material safety data sheet shall be submitted.

- (c) Concrete Equipment: Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.
- (d) Finishing Equipment. Finishing equipment shall be according to Article 503.03.
- (e) Mechanical Fogging Equipment. Mechanical fogging equipment shall be according to 503.03.

cleaning operations. All damage caused by the Contractor shall be corrected, at the Contractor's expense, to the satisfaction of the Engineer.

The Contractor shall control the runoff water generated by the various construction activities in such a manner as to minimize, to the maximum extent practicable, the discharge of untreated effluent into adjacent waters, and shall properly dispose of the solids generated according to Article 202.03. The Contractor shall submit a water management plan to the Engineer specifying the control measures to be used. The control measures shall be in place prior to the start of runoff water generating activities. Runoff water shall not be allowed to constitute a hazard to adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

The Contractor shall verify that the equipment used will not overload the structural capacity of the vault lid. Reinforcing steel may be encountered in the vault lid.

(a) Vault Lid Preparation:

- (1) Vault Lid Scarification. The scarification work shall consist of removing the designated concrete vault lid surface using mechanical and hydro-scarifying equipment as specified. The areas designated shall be scarified to the depth specified on the plans. The depth specified shall be measured from the existing concrete vault lid surface to the top of peaks remaining after scarification. In areas of the vault lid not accessible to the scarifying equipment, power-driven hand tools will be permitted. Power driven hand tools shall be used for removal around areas to remain in place.

The Contractor shall use mechanical scarification equipment to remove an initial depth of concrete roughening the concrete vault lid surface to facilitate hydro-scarification. At a minimum, the last 1/2 in. (13 mm) of removal shall be accomplished with hydro-scarification equipment. If the Contractor's use of mechanical scarifying equipment results in exposing, snagging, or dislodging the top mat of reinforcing steel, the mechanical scarifying depth shall be reduced as necessary immediately. If the exposing, snagging, or dislodging the top mat of reinforcing steel cannot be avoided, the mechanical scarifying shall be stopped immediately and the remaining removal shall be accomplished using the hydro-scarification equipment. All damage to the existing reinforcement resulting from the Contractor's operation shall be repaired or replaced at the Contractor's expense as directed by the Engineer. Replacement shall include the removal of any additional concrete required to position or splice the new reinforcing steel. Undercutting of exposed reinforcement bars shall only be as required to replace or repair damaged reinforcement. The Contractor shall take care not to damage reinforcement bars or expansion joints which are to remain in place. Any damage to reinforcement bars or expansion joints shall be corrected at the Contractor's expense. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

Just prior to performing hydro-scarification, the vault lid shall be sounded, with unsound areas marked on the deck by the Engineer. A trial section, in an area of sound concrete, on the existing vault lid surface will be designated by the Engineer to calibrate the equipment settings to remove sound concrete to the required depth, in a single pass, and provide a highly roughened bondable surface. The trial section shall consist of approximately 30 sq. ft. (3 sq. m). After calibration in an area of sound concrete, the equipment shall be moved to a second trial section, as designated by the Engineer, in an area containing unsound concrete to verify the calibrated settings are sufficient to remove the unsound concrete. If the calibrated settings are insufficient to remove the unsound concrete, the equipment may be moved back to an area of sound concrete and the calibration settings verified. If the equipment cannot be calibrated to produce the required results in an area of sound concrete, it shall be removed and additional

hydro-scarification equipment capable of producing the required results shall be supplied by the Contractor.

After the equipment settings are established, they shall be supplied to the Engineer. These settings include the following:

- a) Water pressure
- b) Water flow rate
- c) Nozzle type and size
- d) Nozzle travel speed
- e) Machine staging control (step/advance rate)

Hydro-scarification may begin after the calibration settings have been approved by the Engineer.

The removal depth shall be verified by the Engineer, as necessary. If sound concrete is being removed below the desired depth, the equipment shall be recalibrated.

After hydro-scarification the vault lid shall be thoroughly vacuum cleaned in a timely manner before the water and debris are allowed to dry and re-solidify to the vault lid. The uses of alternative cleaning and debris removal methods to minimize driving heavy vacuum equipment over exposed deck reinforcement may be used subject to the approval of the Engineer.

(2) Vault Lid Patching. After vault lid scarification and cleaning, the Engineer will sound the scarified vault lid and survey the existing reinforcement condition. All remaining unsound concrete and unacceptably corroded reinforcement bars will be marked for additional removal and/or repairs as applicable. All designated repairs and reinforcement treatment shall be completed as noted below:

- a) Where, in the judgment of the Engineer, the bond between existing concrete and reinforcement steel within the patch area has been destroyed, the concrete adjacent to the bar shall be removed to a depth that will permit new concrete to bond to the entire periphery of the exposed bar. A minimum of 1 in. (25 mm) clearance will be required.
- b) Care shall be exercised during concrete removal to protect the reinforcement bars and structural steel from damage. Any damage to the reinforcement bars or structural steel to remain in place shall be repaired or replaced. All existing reinforcement bars shall remain in place except as herein provided for corroded bars. Tying of loose bars will be required. Reinforcing bars which have been cut or have lost 25 percent or more of their original cross sectional area shall be supplemented by new in kind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. An approved mechanical bar splice capable of developing in tension at least 125 percent of the yield strength of the existing bar shall be used when it is not feasible to provide the minimum bar lap. No welding of bars will be permitted.
- c) Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, or other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer.

- d) In areas where unsound concrete extends below the specified removal depth and hydro-scarification completely removes unsound concrete, a full-depth repair is only required when the bottom mat of reinforcement is exposed.
 - e) All full-depth patches shall be struck off to the scarified vault lid surface and then roughened with a suitable stiff bristled broom or wire brush to provide a rough texture designed to promote bonding of the overlay. Hand finishing of the patch surface shall be kept to a minimum to prevent overworking of the surface.
 - f) All full-depth repairs shall be completed prior to final surface preparation.
 - g) Any removal required or made below the specified depth for scarification of the vault lid, which does not result in full-depth repair, shall be filled with the overlay material at the time of the overlay placement.
 - h) Epoxy coating, on existing reinforcement bars, damaged during hydro-scarification shall not be repaired.
 - i) Undercutting of exposed reinforcement bars shall only be as required to replace or repair damaged or corroded reinforcement.
- (3) Final Surface Preparation. Any areas determined by the Engineer to be inaccessible to scarifying equipment shall be thoroughly blast cleaned with hand-held equipment.

If spoils from the scarification operation are allowed to dry and re-solidify on the deck surface, the deck surface shall be cleaned with mechanical blast cleaning equipment.

Final surface preparation shall also include the cleaning of all dust, debris, concrete fines and other foreign substances from the deck surface including vertical faces of curbs, previously placed adjacent overlays, barrier walls up to a height of 1 in. (25 mm) above the overlay, depressions, and beneath reinforcement bars. Hand-held high-pressure waterblasting equipment shall be used for this operation.

The Department may require surface pull-off testing of areas inaccessible to scarifying equipment. Testing shall be in according to the Illinois Test Procedure 304 "Pull-off Test (Surface Method)". The Contractor shall provide the test equipment. The Engineer shall determine each test location, and each individual test shall have a minimum strength of 175 psi (1,207 kPa). In the case of a failing test, the Contractor shall adjust the blast cleaning method and re-clean the area. Testing will be repeated until satisfactory results are attained.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, and other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

All dust, concrete fines, debris, including water, resulting from the surface preparation shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final cleaning, the area shall be carefully protected with well-anchored white polyethylene sheeting.

- (b) Pre-placement Procedure. Prior to placing the overlay, the Engineer will inspect the deck surface. All contaminated areas shall be blast cleaned again at the Contractor's expense.

Before placing the overlay, the finishing machine shall be operated over the full length of vault segment to be overlaid to check support rails for deflection and confirm the minimum overlay thickness. All necessary adjustments shall be made and another check performed, unless otherwise directed by the Engineer.

- (c) Placement Procedure: Concrete placement shall be according to Article 503.07 and the following:

(1) Bonding Method. The deck shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition with water for at least 12 hours before placement of the overlay. Any excess water shall be removed by compressed air or by vacuuming prior to the beginning of overlay placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the overlay.

- (2) Overlay Placement. Placement of the concrete shall be according to Article 503.16.

Internal vibration shall be performed along edges, adjacent to bulkheads, and where the overlay thickness exceeds 3 in. (75 mm). Internal vibration along the longitudinal edges of a pour shall be performed with a minimum of 2 hand-held vibrators, one on each edge of the pour. Hand finishing shall be performed along the edges of the pour and shall be done from sidewalks, curbs or work bridges.

A construction dam or bulkhead shall be installed in case of a delay of 30 minutes or more in the concrete placement operation.

All construction joints shall be formed. When required by the Engineer the previously placed overlay shall be sawed full-depth to a straight and vertical edge before fresh concrete is placed. The Engineer will determine the extent of the removal. When longitudinal joints are not shown on the plans, the locations shall be subject to approval by the Engineer and shall not be located in the wheel paths.

- (3) Limitations of Operations:

a) Weather limitations. Temperature control for concrete placement shall be according to 1020.14(b). The concrete protection from low air temperatures during the curing period shall be according to Article 1020.13(d). Concrete shall not be placed when rain is expected during the working period. If night placement is required, illumination and placement procedures will be subject to approval of the Engineer. No additional compensation will be allowed if night work is required.

b) Other Limitations. Concrete delivery vehicles driven on the structure shall be limited to a maximum load of 6 cu. yd. (4.6 cu. m).

Truck mixers, concrete pumps, or other heavy equipment will not be permitted on any portion of the deck where the top reinforcing mat has been exposed. Conveyors, buggy ramps and pump piping shall be installed in a way that will not displace undercut reinforcement bars. Air compressors may be operated on the deck only if located directly over a pier and supported off undercut reinforcement bars. Compressors will not be allowed to travel over undercut reinforcement bars.

Concrete removal may proceed during final cleaning and concrete placement on adjacent portions of the deck, provided the removal does not interfere in any way with the cleaning or placement operations.

Water or contaminants from the hydro-scarification shall not be permitted in areas where the new overlay has been placed until the overlay has cured a minimum of 24 hours.

No concrete shall be removed within 6 ft. (1.8 m) of a newly-placed overlay until the concrete has obtained a minimum compressive strength of 3000 psi (20,700 kPa) or flexural strength of 600 psi (4,150 kPa).

- (4) Curing Procedure. The surface shall be continuously wet cured for at least 7 days according to Article 1020.13(a)(5) Wetted Cotton Mat Method. When the cotton mats have been pre-dampened, excess water shall not be allowed to drip from the cotton mats onto the overlay during placement of the mats.
- (5) Opening to Traffic. No pedestrians or construction equipment will be permitted on the overlay until after the specified cure period and the concrete has obtained a minimum compressive strength of 4000 psi (27,500 kPa) or flexural strength of 675 psi (4,650 kPa) unless permitted by the Engineer.
- (6) Overlay Testing. The Engineer reserves the right to conduct pull-off tests on the overlay to determine if any areas are not bonded to the underlying concrete, and at a time determined by the Engineer. The overlay will be tested according to the Illinois Test Procedure 305 "Pull-off Test (Overlay Method)", and the Contractor shall provide the test equipment. Each individual test shall have a minimum strength of 150 psi (1,034 kPa). Unacceptable test results will require removal and replacement of the overlay at the Contractor's expense, and the locations will be determined by the Engineer. When removing portions of an overlay, the saw cut shall be a minimum depth of 1 in. (25 mm).

If the overlay is to remain in place, all core holes due to testing shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent material.

For a rapid set mortar mixture, one part packaged rapid set cement shall be combined with two parts fine aggregate, by volume; or a packaged rapid set mortar shall be used. For a rapid set concrete mixture, a packaged rapid set mortar shall be combined with coarse aggregate according to the manufacturer's instructions; or a packaged rapid set concrete shall be used. Mixing of a rapid set mortar or concrete shall be according to the manufacturer's instructions.

Basis of Payment. The work described above and as detailed in the plans will be paid for at the contract unit price per lump sum for VAULT LID RESURFACING. This includes all equipment, labor, material, and testing necessary to complete the work.

When corroded reinforcement bars are encountered in the performance of this work and replacement is required, the Contractor will be paid according to Article 109.04.

No payment will be allowed for removal and replacement of reinforcement bars damaged by the Contractor in the performance of his/her work or for any increases in dimensions needed to provide splices for these replacement bars.

PAYMENT FOR USE OF MATERIAL TRANSFER DEVICE

Effective APRIL 23, 2010

This work shall be performed as specified in the plans and specifications herein.

No Payment will be made for tonnages of HMA items required to be placed with a material transfer device, but were not able to be placed with a material transfer device.

The maximum tonnage eligible for payment when placed with the material transfer device will be limited to the final pay quantity of the pay items placed.

TEMPERATURE CONTROL FOR CONCRETE PLACEMENT

Effective: August 3, 2007

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

FRAMES AND GRATES FOR TYPE G-1 STRUCTURES

Frames and Grates shall be cast iron Neenah R-3246-A with Type R Diagonal Reversible grate, or approved equal.

INLETS, TYPE G-1 AND INLET-MANHOLE, TYPE G-1, 4'-DIA.

This work shall consist of furnishing all labor, equipment, and material for the construction of INLETS, TYPE G-1 and INLET-MANHOLE, TYPE G-1, 4' DIAMETER and Combination Concrete Curb and Gutter in accordance with Sections 602 and 606 of the Standard Specifications. The drainage structures shall be constructed in accordance with the following District 4 Details:

- Inlets, Type G-1: 602001-D4
- Inlet-Manhole, Type G-1, 4' Diameter: 602021-D4

There are locations where inlets shall be installed over existing storm sewers or tile.

Delete the first paragraph in Articles 606.14 and 606.15.

BASIS OF PAYMENT:

Payment for connection of existing storm sewers or tile, where required, and for transitional Combination Concrete Curb and Gutter will be included in "INLETS, TYPE G-1" and "INLET-MANHOLE, TYPE G-1, 4' DIAMETER" in accordance with details shown in the plans.

This work will be paid for at the contract price each for INLETS, TYPE G-1 and INLET-MANHOLE, TYPE G-1, 4' DIAMETER.

MANHOLES TO BE ADJUSTED AND MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID

This work shall consist of an elevation adjustment of the existing frame and grate to the finish grade of the project improvements. This work shall be measured and paid for at the contract unit price bid per each item to be adjusted in accordance with Sections 602 of the Standard Specifications except as modified herein.

HDPE and Recycled Rubber riser and adjusting rings will not be allowed on this contract. In addition, only solid and rigid, one-piece assembly adjusting rings fabricated entirely from gray or ductile iron will be allowed. Adjustable band adjusting rings will not be allowed on this contract. Any adjusting ring to be utilized on this project shall be reviewed and approved by the Engineer and City at the Pre-Construction Meeting. The contract unit price bid per each for the respective adjustment items shall include all work required completing the adjustment items and no additional compensation will be allowed.

DRYWELL, TYPE G-1, 4' DIAMETER

This work shall consist of furnishing and installing Drywells, Type G-1 including all equipment, labor, and materials for the construction of DRYWELL, TYPE G-1 in accordance with Section 602 and 606 of the Standard Specifications and the details in the plans.

Add "DRYWELL, TYPE G-1, 4' DIAMETER" to Article 602.16 of the Standard Specifications. Delete the second and third paragraph in Article 602.12. Delete the first paragraph in Articles 606.14 and 606.15.

Prior to backfilling, the bottom 8' of the drywell shall be wrapped in extruded HDPE netting with ½" nominal openings similar to OB250, manufactured by Industrial Netting Inc., or approved equivalent. Drywell shall be backfilled with drainage rock, CA-7 in lifts not exceeding 12" in depth and shall be compacted by mechanical means to the satisfaction of the Engineer. Geo-textile drainage fabric meeting the standard detailed in Section 1080.05 of the Standard Specifications, in locations shown in the detail, shall also be included in this work. After setting the drywell, a filter fabric shall be installed in the interior on the bottom of drywell and on the wall of the lower two feet of the interior of the barrel to prevent sedimentation from construction activities. The Contractor shall be responsible for periodic inspection, maintenance, and removal of silt collected on the fabric to the satisfaction of the Engineer. All filter fabric shall be removed from the interior of the drywell by the contractor at direction of the Engineer.

BASIS OF PAYMENT:

Payment for transitional Combination Concrete Curb and Gutter will be included in "DRYWELL, TYPE G-1, 4' DIAMETER" in accordance with details shown in the plans.

This work, as indicated above, including netting, fabric, and drainage rock, CA-7 shall be paid at the contract unit price per each for DRYWELL, TYPE G-1, 4' DIAMETER.

DRYWELL, 4' DIAMETER, SPECIAL FRAME AND GRATE

This work shall consist of furnishing and installing Drywells, Special Frame and Grate including all equipment, labor, and materials for the construction of DRYWELL, SPECIAL FRAME AND GRATE with Section 602 of the Standard Specifications.

Frames and Grates shall be Neenah R-4341-A Ditch Gate, Stool Type, or approved equivalent.

Add "DRYWELL, SPECIAL FRAME AND GRATE" to Article 602.16 of the Standard Specifications. Delete the second and third paragraph in Article 602.12.

Prior to backfilling, the bottom 8' of the drywell shall be wrapped in extruded HDPE netting with ½" nominal openings similar to OB250, manufactured by Industrial Netting Inc., or approved equivalent. Drywell shall be backfilled with drainage rock, CA-7 in lifts not exceeding 12" in depth and shall be compacted by mechanical means to the satisfaction of the Engineer. Geo-textile drainage fabric meeting

the standard detailed in Section 1080.05 of the Standard Specifications, in locations shown in the detail, shall also be included in this work. After setting the drywell, a filter fabric shall be installed in the interior on the bottom of drywell and on the wall of the lower two feet of the interior of the barrel to prevent sedimentation from construction activities. The Contractor shall be responsible for periodic inspection, maintenance, and removal of silt collected on the fabric to the satisfaction of the Engineer. All filter fabric shall be removed from the interior of the drywell by the contractor at direction of the Engineer.

BASIS OF PAYMENT:

This work, as indicated above, including netting, fabric, and drainage rock, CA-7 shall be paid at the contract unit price per each for DRYWELL, 4' DIAMETER, SPECIAL FRAME AND GRATE.

MANHOLE, TYPE A, 5' DIAMETER WITH SPECIAL FRAME AND GRATE

This work shall consist of constructing manholes of the specified size and type at the locations shown in the plans with a frame and grate in accordance with Section 602 of the Standard Specifications. The frame and grate to be installed is a Neenah R-4341A.

This work will be paid for at the contract unit price per each for MANHOLE, TYPE A, 5' DIAMETER WITH SPECIAL FRAME AND GRATE.

STORM SEWER (WATER MAIN REQUIREMENTS)

Effective January 1, 2011

This work consists of constructing storm sewer to meet water main standards, as required by the IEPA or when otherwise specified. The work shall be performed in accordance with applicable parts of Section 550 of the Standard Specifications, applicable sections of the current edition of the IEPA Regulations (Title 35 of the Illinois Administrative Code, Subtitle F, Chapter II, Section 653.119), the applicable sections of the current edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and as herein specified.

This provision shall govern the installation of all storm sewers which do not meet IEPA criteria for separation distance between storm sewers and water mains. Separation criteria for storm sewers placed adjacent to water mains and water service lines are as follows:

- (1) Water mains and water service lines shall be located at least 10 feet (3.05 meters) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, or sewer service connections.
- (2) Water mains and water service lines may be located closer than 10 feet (3.05 meters) to a sewer line when:
 - (a) Local conditions prevent a lateral separation of 10 feet (3.05 meters); and
 - (b) The water main or water service invert is 18 inches (460 mm) above the crown of the sewer; and
 - (c) The water main or water service is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
- (3) A water main or water service shall be separated from a sewer so that its invert is a minimum of 18 inches (460 mm) above the crown of the drain or sewer whenever water mains or services cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main or water services located within 10 feet (3.05 meters) horizontally of any sewer or drain crossed.

When it is impossible to meet (1), (2) or (3) above, the storm sewer shall be constructed of concrete pressure pipe, slip-on or mechanical joints ductile iron pipe, or PVC pipe equivalent to water main standards of construction. Construction shall extend on each side of the crossing until the perpendicular distance from the water main or water service to the sewer or drain line is at least 10 feet (3.05 meters). Storm sewer meeting water main requirements shall be constructed of the following pipe materials:

Concrete Pressure Pipe

Concrete pressure pipe shall conform to the latest ANSI/AWWA C300, C301, C302, or C303. Joints shall conform to Article 41-2.07B of the "Standard Specifications for Water and Sewer Main Construction in Illinois."

Ductile Iron Pipe

Ductile Iron pipe shall conform to ANSI A 21.51 (AWWA C151), class or thickness designed per ANSI A 21.50 (AWWA C150), tar (seal) coated and/or cement lined per ANSI A 21.4 (AWWA C104), with a mechanical or rubber ring (slip seal or push on) joints.

Joints for ductile iron pipe shall be in accordance with the following applicable specifications.

1. Mechanical Joints - AWWA C111 and C600
2. Push-On Joints - AWWA C111 and C600

Plastic Pipe

Plastic pipe shall be marked with the manufacturer's name (or trademark); ASTM or AWWA specification; Schedule Number, Dimension Ratio (DR) Number or Standard Dimension Ratio (SDR) Number; and Cell Class. The pipe and fittings shall also meet NSF Standard 14, and bear the NSF seal of approval. Fittings shall be compatible with the type of pipe used. The plastic pipe options shall be in accordance with the following:

1. Polyvinyl Chloride (PVC) conforming to ASTM Standard D 1785. Schedule 80 is the minimum required for all pipe sizes, except when the pipe is to be threaded, and then it shall be Schedule 120. It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
2. Polyvinyl Chloride (PVC) conforming to ASTM D 2241. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.
3. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM f 441. A minimum of Schedule 80 is required for all pipe sizes. Threaded joints are not allowed. It shall be made from CPVC compound meeting ASTM D 1784, Class 23447.
4. Chlorinated Polyvinyl Chloride (CPVC) conforming to ASTM F 442. A minimum wall thickness of SDR 26 is required for all pipe sizes (Note: The lower the SDR number, the higher the wall thickness and pressure rating). It shall be made from CPVC compound meeting ASTM D 1784.
5. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C900. A minimum of wall thickness of DR 25 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

6. Polyvinyl Chloride (PVC) conforming to ANSI/AWWA C905. A minimum of wall thickness of DR 26 is required for all pipe sizes (Note: The lower the DR number, the higher the wall thickness and pressure rating). It shall be made from PVC compound meeting ASTM D 1784, Class 12454.

Joining of plastic pipe shall be by push-on joint, solvent welded joint, heat welded joint, flanged joint, or threaded joint, in accordance with the pipe manufacturer's instructions and industry standards. Special precautions shall be taken to insure clean, dry contact surfaces when making solvent or heat welded joints. Adequate setting time shall be allowed for maximum strength.

Elastomeric seals (gaskets) used for push-on joints shall comply with ASTM Standard F477.

Solvent cement shall be specific for the plastic pipe material and shall comply with ASTM D 2564 (PVC) or ASTM F 493 (CPVC) and be approved by NSF.

For water-sewer line crossings only, storm sewer meeting water main requirements may also be constructed of reinforced concrete sewer pipe. The pipe shall conform to ASTM C 76 with a joint and rubber gasket meeting ASTM C 443. The joint shall meet the leakage performance test in ASTM C 443. The pipe manufacturer must demonstrate to Illinois Department of Transportation personnel that the joints pass the leakage performance test prior to installation of the pipe. The pipe class shall meet the requirements of Section 550 of the *Standard Specifications for Road and Bridge Construction*.

This work will be measured and paid for at the contract unit price per foot (meter) for STORM SEWER (WATER MAIN REQUIREMENTS) of the diameter specified.

STORM SEWER (SPECIAL) 48 INCH

This work shall be completed in accordance with the applicable portions of Sections 602 of the Standard Specifications and details in the plans. This work shall consist of installing a 48 inch Storm Sewer Special to the lines and grades as shown in the plans. This storm sewer pipe shall be made of ductile iron and will replace an existing section of brick storm sewer structure between two new storm sewer structures.

When required, this work shall consist of furnishing equipment, labor and material to storm sewer shall be connected to an existing drainage structures. The Contractor shall exercise proper care so as not damage drainage structures when cutting holes for pipe drains or underdrains. Storm Sewers shall be grouted in place. The method and materials used to cut holes in drainage structures and grout pipes shall be approved by the Engineer.

This work will be measured and paid for at the contract unit price per each for STORM SEWER (SPECIAL) 48 INCH, and no additional compensation will be allowed.

STORM SEWERS TO BE CLEANED, 12"

This work shall consist of removing all debris from the designated storm sewer pipe so that the pipe can convey water to its capacity.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per foot for STORM SEWERS TO BE CLEANED, 12".

PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE

This work shall be completed in accordance with the applicable portions of Sections 602 of the Standard Specifications and details in the plans.

When required, this work shall consist of furnishing equipment, labor and material to storm sewer shall be connected to an existing drainage structures. The Contractor shall exercise proper care so as not damage drainage structures when cutting holes for pipe drains or underdrains. Storm Sewers shall be grouted in place. The method and materials used to cut holes in drainage structures and grout pipes shall be approved by the Engineer.

This work will be measured and paid for at the contract unit price per each for PROPOSED STORM SEWER CONNECTION TO EXISTING MANHOLE.

PLUG EXISTING STORM SEWERS

This work shall be done in accordance with Article 550.05 and consist of plugging existing storm sewers that will remain in-place.

Where noted on the plans, the contractor shall construct the plug by completely filling the end of the pipe with concrete. Concrete shall be forced into the end of the pipe for a distance of sixteen (16) inches, or one-half the pipe diameter, whichever is greater.

STORM SEWER REMOVAL

This work shall consist of removing and disposing of Storm Sewers in accordance with Section 551 of the Standard Specifications, except as modified herein. Storm Sewer Removal shall consist of the complete removal and disposal, to the satisfaction of the Engineer, of all storm sewers regardless of size or material, conflicting with the construction or otherwise indicated on the plans for removal. Any holes or depressions left after removing a sewer or culvert pipe that will be under or within two feet of proposed improvements, shall be filled with controlled low strength material (CLSM). The remaining ground surface shall be graded, compacted, and leveled to the satisfaction of the Engineer.

All labor, equipment and materials necessary for Storm Sewer removal shall be included in the contract unit price bid per foot for STORM SEWER REMOVAL of the diameter specified and no additional compensation will be allowed.

STORM SEWER GRADE CHANGE

The Contractor shall be aware that at times the Engineer may require a change in storm sewer elevation due to a utility or other obstruction. If such a grade change does not alter the pipe type, any additional excavation, sheeting, or shoring required shall be considered included in the cost of the storm sewer. However, if the revised grade results in a change in pipe type, as set forth in Article 550.03 of the Standard Specifications, payment will be for the revised type of storm sewer.

SIDEWALK, SPECIAL

This work shall be in general accordance with Section 424 of the Standard Specifications, the plans, and as modified by the special provision.

Work will consist of constructing concrete handicap ramps for access to existing buildings. Specific locations, dimensions, grades, and construction details are included in the plans. The contractors will be required to construct the ramps in accordance with the Americans with Disabilities Act (ADA) and Public Right of Way Accessibility Guidelines (PROWAG).

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per square foot for SIDEWALK, SPECIAL and shall include all labor, material, and equipment necessary to perform the work.

Handrail for ramps shall be paid for separate per foot as PIPE HANDRAIL as shown in the plan details.

INCIDENTAL HOT-MIX ASPHALT SURFACING

Locations of incidental hot-mix asphalt surfacing as shown on the plans and as directed by the Engineer shall be constructed according to Section 408 of the Standard Specifications except as specified herein.

Incidental Hot-Mix Asphalt will be placed behind the back of curb as shown in the plans and will be used to stabilize the cut and fill slopes along Commercial Street between Station 1708+00 and +/- 1712+50 at a depth of two (2) inches.

Add the following to Article 408:

The priming shall be applied according to Article 406.05 by methods approved by the Engineer. Aggregate base preparation shall be performed to the satisfaction of the Engineer. The bituminous prime material which will be subject to traffic shall be covered immediately following its application with fine aggregate as outlined in Article 406.05.a.1.

The hot-mix asphalt mixture shall be Polymerized Hot-Mix Asphalt Surface Course, Mix "D", N50. The mixture may be spread and finished by approved hand methods or a finishing machine approved by the Engineer. Thickness shall match the existing pavement or as directed by the Engineer.

Revise Article 408.04 to read as follows:

Method of Measurement: Aggregate for covering the prime coat will not be paid for separately but shall be included in this work. Preparation of the aggregate base will not be paid for separately but shall also be included in this work.

Revise Article 408.05 to read as follows:

BASIS OF PAYMENT:

All of this work including labor, materials, and equipment will be paid for at the contract unit price per ton for INCIDENTAL HOT-MIX ASPHALT SURFACING.

CLASS B PATCHES / CLASS C PATCHES

This work shall consist of placement of pavement patching with the class and type of patch specified at designated locations in accordance with Section 442 of the Standard Specifications.

The proposed pavement patching shall be constructed in accordance with Section 442 of the Standard Specifications with the exception of Section 442.05 (Pavement Removal). Pavement removal along proposed curb line patches shall be included in the pay item for PAVEMENT REMOVAL. Pavement removal for cross road pavement patching related to storm sewer work shall be included in the cost of the specified storm sewer pipe.

BASIS OF PAYMENT:

This work shall be paid at the contract unit price per square yard for CLASS B PATCHES or CLASS C PATCHES, of the type and thickness specified.

HOT-MIX ASPHALT SURFACE COURSE SURFACE TESTS

Effective: November 1, 2003

Revised January 1, 2007

The Contractor shall provide a person to operate the straight edge in accordance with Article 406.11 of the Standard Specifications and communicate with IDOT personnel to minimize the surface course bumps. If surface course bumps cannot be removed at this time, IDOT personnel will record the locations and provide deductions as stated in Article 406.11.

PORTLAND CEMENT CONCRETE PAVEMENT 7" (SPECIAL)

This work shall consist of constructing a full depth concrete pavement, on a prepared subbase in accordance with Section 420, at locations and as detailed in the plans.

The pavement shall be doveled to both the adjacent curb and gutter section and the concrete gutter (special) section.

Weep holes, as shown in the plans, may be performed during construction or drilled after the concrete has cured. Weep holes shall be filled with pea gravel meeting CA 18 gradation requirements per Article 1004.

METHOD OF MEASUREMENT:

This work will be measured for payment in place and the area computed in square feet.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE PAVEMENT 7" (SPECIAL) and shall include all labor, material, and equipment necessary to perform the work.

PCC AUTOMATIC BATCHING EQUIPMENT

Effective April 23, 2010

Portland cement concrete provided shall be produced from batch plants that conform to the requirements of Article 1103.03 (a) and (b) of the Standard Specifications for Road and Bridge Construction. Semi-automatic batching will not be allowed.

In addition, the batching plant shall be a computerized plant interfaced with a printer and shall print actual batch weights, added water, tempering water, mixing time, and amount of each additive per batch. At the discretion of the Engineer, archived electronic versions of batch proportions will be acceptable. Truck delivery tickets will still be required as per Article 1020.11 (a)(7).

COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.18

Effective May 30, 2012

This work shall consist of constructing concrete curb and gutter, of the type and size as specified on the plans in accordance with Section 606 of the Standard Specifications.

BASIS OF PAYMENT:

This work will be measured and paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.18.

BRICK PAVERS (ROADWAY)

All paving bricks shall be in accordance with Article 1041.03 and as detailed here in.

Materials

Paver style, size, color, and requirements will be as described for each Concrete Paver Type.

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.
- Joint filler sand gradation report.

Delivery, Storage & Handling

1. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers packaging with identification labels intact.
 - a) Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.
 - b) Deliver concrete pavers to the site in steel banded, plastic banded or plastic wrapped packaging capable of transfer by fork lift or clamp lift.
 - c) Unload pavers at job site in such a manner that no damage occurs to the product.
2. Storage and Protection: Store materials protected such that they are kept free from mud, dirt, and other foreign materials.
 - a) Cover bedding sand and joint sand with waterproof covering if needed to prevent exposure to rainfall or removal by wind. Secure the covering in place.

Quality Assurance

1. Quality Control Plan
 - a) The installer and manufacturer shall establish, provide and maintain a quality control plan. The quality control plan shall provide reasonable assurance that the materials and completed construction submitted for acceptance will conform to the contract requirements. Although guidelines are established and certain requirements are specified, they are a minimum and the installer and manufacturer shall assume full responsibility for meeting all requirements.
 - b) The installer and manufacturer shall agree upon a method for measuring the clusters at the factory and in the field. That method shall be submitted in writing to the owner for approval.
 - c) The Quality Control Plan shall contain at a minimum, but not limited to, the following elements:
 - i. The manufacturer's quality control procedures.
 - ii. The manufacturer's production records showing at a minimum the date of manufacture, a mix design designation, mold number, mold cycles, and sequential pallet numbers. Copies of such records shall be made available to the owner upon request.
 - iii. A description of the anticipated growth (due to mold wear) in the cluster size and a plan for managing the growth so as to not interfere with placement by paving machine(s), if mechanically installed.

- iv. The installer's quality control procedures, including but not limited to, dimensional control methods, paving machine(s) head adjustment, typical daily work schedule to insure that all pavers placed on the bedding course on any given day are adjusted as required and vibrated, and installation of void filler completed at the end of that work day. (Exception: The installation of the void filler may not be installed for the first and second day due to start-up procedures.)

2. Sampling and Testing

- a) The manufacturer shall employ an independent testing company, qualified to undertake tests in accordance with the applicable standards specified herein. Test results shall be provided to the installer and the owner, upon request.
- b) Pavers shall be tested for density and dimensional variation, compressive strength (ASTM C140), density and absorption (ASTM C140) and abrasion resistance (ASTM C418).
 - i. The initial testing frequency shall be one set of tests for each 400 full-sized pavers delivered to the site or at any time a change in the manufacturing process, mix design, cement, aggregate or other material occurs.
 - ii. The following number of full-sized pavers shall be randomly sampled for each test: five (5) for dimensional variation; three (3) for density and absorption; three (3) for compressive strength; and three (3) for abrasion resistance.
- c) When any of the individual test results fail to meet the specified requirements, the cube of pavers represented by that test sample shall be rejected. The manufacturer shall provide additional testing of paver samples taken from both before and after the rejected test sample to determine the sequence of the paver production run that should be rejected.
- d) Additional testing, as described above, shall be carried out at no additional expense to the owner. The sequence of pavers found to be defective shall, if they have been delivered to the site, be removed from the site promptly at no expense to the owner or installer.
- e) Pavers shall be sound and free from defects that would interfere with the proper placing of the pavers or impair the strength or performance of the construction.

3. Method Statement

- a) The installer and manufacturer shall each prepare a Method Statement describing the overall plan to complete the work. This plan shall include at a minimum:
 - i. The quality control plan.
 - ii. A description of the anticipated mold life, rate and effect of mold wear on pavers produced, individual mold runs, and a mold rotation plan.
 - iii. Clear diagrams of the site showing the proposed starting point of the installation and the proposed direction of installation.
 - iv. A method of measuring the clusters at the factory and in the field.
 - v. A description of the anticipated growth in cluster size due to mold wear and a plan for dealing with that growth or other dimensional variances.
 - vi. A description of the personnel and equipment to be employed for each portion of the work including manufacture, installation and quality control.
 - vii. The manufacturer's proposed daily production rate and mold life for this project and supply data demonstrating experience on similar past projects. Installer shall state the proposed daily installation rate.

4. Qualifications

- a) Every manufacturer and installer shall demonstrate that they have supplied and/or installed pavers for projects of a similar nature, with regard to installation and production capacity. Qualifications shall be submitted at the time of bid, without exception.
 - i. Paver Manufacturer's Qualifications:
 - The manufacturer shall demonstrate a minimum of 5 years successful experience in the manufacture of interlocking concrete block pavers.

- The manufacturer shall have sufficient production capacity and established quality control procedures to produce, transport, and deliver the required number of pavers with the quality specified, without causing a delay to the work.
 - The manufacturer shall have suitably experienced personnel and a management capability sufficient to produce the number of quality pavers as depicted on the contract plans and as specified herein.
- ii. Paver Installer's Qualifications
- Installer shall provide installation history, including references in writing with contact information, demonstrating to the satisfaction of the owner their ability to perform the paver installation and related work indicated in the plans and specifications.
 - The installer shall have suitably experienced personnel and a management capability sufficient to execute the work shown on the contract plans and specified herein.
 - The installer's foreman shall demonstrate, including references, a minimum of 5 years experience in the installation of unit paver systems similar in size and nature to this project.

Installation Conditions

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

CONCRETE PAVERS, TYPE A

This work shall consist of constructing and installing brick pavers in an asphalt setting bed as detailed here in and at locations shown on the plans or as directed by the Engineer. See BRICK PAVERS (ROADWAY) for information on Submittals, Delivery, Storage, Handling, Quality Assurance, and Installation Requirements for brick pavers.

MATERIALS

CONCRETE PAVERS

1. Shall consist of the following for Style, Size and Color or approved equal:
2. Crestline molded brick paver as produced by the Belden Brick Company
3. Dutch Chamfered Edge
4. Victorian Color
5. 2 3/4" x 4" x 8" bricks
6. Performance Requirements
7. Comply with ADA regulations.
8. Compressive Strength: Minimum 8,800 PSI individual and 10,000 PSI for the Average of 5 per ASTM C 1272-07F (Heavy Vehicular)
9. Flexural Strength: Minimum 600 PSI
10. Water Absorption: 5% to 6% ASTM 936
11. Freeze Thaw: Less than 1% loss of dry weight (Section 8 of ASTM C-67)
12. Size: ±4" x ±8" (nominal) x thickness varies depending on manufacturer.
13. Abrasion Index: Max 0.11 per ASTM C 1272-07F (Heavy Vehicular)

ASPHALT SETTING BED AGGREGATE

1. Provide Asphalt Setting Bed Aggregate as follows:
 - a) Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.

- b) Do not use limestone screenings, stone dust, or sand for bedding sand material that do not conform to the grading requirements of ASTM D 1073.
 - c) Do not use mason sand or sand conforming to ASTM C 144 for bedding sand.
2. Grading Requirements for Asphalt Setting Bed Aggregate – ASTM D 1073:

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	75 to 100
No. 16 (1.18 mm)	50 to 74
No. 30 (0.600 mm)	28 to 52
No. 50 (0.300 mm)	8 to 30
No. 100 (0.150 mm)	0 to 12
No 200 (0.075 mm)	0 to 5

ASPHALT TACK COAT

1. Tack coat shall be in accordance with Article 406.05(b) for Grade SS-1 or SS-1h.

ASPHALT SETTING BED FOR PAVERS

1. Mixture: The approximate proportion of materials shall be 7% asphalt binder and 93% asphalt setting bed aggregate. The dried fine aggregate shall be combined with asphalt binder and the mix shall be heated to 300-325 degrees F at an asphalt plant. The Contractor shall determine the exact proportions to produce the appropriate mixture for construction of the asphalt setting bed to meet construction requirements.
2. Asphalt Binder: Asphalt binder (7%) to be used in the asphalt setting bed shall conform to AASHTO MP-1, with a performance grade of SBS-PG70-28 or SBS-PG76-28.

NEOPRENE ASPHALT ADHESIVE FOR PAVERS

Neoprene asphalt adhesive shall conform to the following:

1. Mastic (Asphalt adhesive):
 - Solids (base): 75 + 1%
 - Pounds/Gallon: 8 – 8.5 pounds
 - Solvent: Varsol (over 100-degrees F flash)
2. Base (2% Neoprene, 10% Fiber, 88% Asphalt):
 - Melting Point: ASTM D-36, 200-degree F Minimum
 - Penetration: 77% F 100 gram load, 5 second (.1 mm), 23-27
 - Ductility: ASTM D-137-79 @ 25-degree C, 5 cm per minute, 125 cm minimum

EXECUTION

PRIME CONCRETE SLAB

1. Clean Concrete Base
2. Prime concrete tray surface with asphalt tack coat.

PLACING ASPHALT SETTING BED

1. Prior to asphalt setting bed installation, install protective covering over adjacent concrete gutter (special) and curb and gutter to avoid pavement staining and other surface damage.
2. Install the setting bed over the concrete surface, place 3/4" deep control bars directly over the base.
 - a) If grade must be adjusted, set wood chocks under depth control bars to establish proper grade.
 - b) Set two bars parallel to each other to serve as guides for the striking board.
 - c) The depth control bars must be set carefully to bring pavers, when laid, to proper grade.
3. Place some asphalt setting bed material between parallel depth control bars. Pull the bedding material with the striking board over the bars several times.
 - a) After each passage, low porous spots must be showered with fresh asphalt material to produce a smooth, firm, and even setting bed.

- b) As soon as this initial panel is completed, advance the first bar to the next position, in readiness for striking the next panel.
 - c) Carefully fill up any depressions that remain after removing the depth control bars and wood chocks.
4. The setting bed shall be rolled with a 600-pound, walk-behind, power roller to a nominal depth of $\frac{3}{4}$ " while still hot; the thickness shall be adjusted so that when the concrete pavers are placed, the top surface of the pavers will be at the required finished grade.
 5. After the setting bed has cooled, a coating of neoprene asphalt adhesive shall be applied by brushing, moping, squeegeeing, or troweling over the top surface of the asphalt setting bed so as to provide a bond under the pavers; if the adhesive is troweled, the trowel shall be serrated with serrations not to exceed one-sixteenth ($\frac{1}{16}$) of an inch.
 6. Limitations: placement of the setting bed and application of the modified asphalt adhesive will comply with Article 406.05(b) except that the application rate shall be 30 to 50 sq ft per gallon applied by brush, mop, squeegee, or trowel depending on viscosity. Adhesive shall be applied at least 2 hours prior to setting of the pavers.

INSTALLATION OF PAVERS

1. After the modified asphalt adhesive is applied, carefully place the pavers by hand in courses as shown in the plans with hand tight joints and uniform top surfaces.
2. Good alignment must be kept and the pattern shall be that shown on the plans.
3. Fill gaps at the edges of the paved area with cut pavers or edge units.
4. Cut pavers, to be placed along the edge, with a double blade paver splitter or masonry saw.
5. Adjust paver pattern at pavement edges such that cutting of edge pavers is minimized.
6. All cut pavers exposed shall be no smaller than one-third of a whole paver measured in the long direction (approximately $2\frac{5}{8}$ ") and no smaller than two-thirds of a whole paver measured in the short direction (approximately $2\frac{9}{16}$ ").
7. Cut pavers edges are to abut pavers only; a paver spacer bar must abut the cut edge of a paver.
8. Do not place cut paver edges against concrete.
9. Keep skid steer and forklift equipment off newly laid pavers that have not received initial compaction and joint sand.

JOINT TREATMENT

1. Simultaneously spread and sweep dry joint sand into joints continuously until full.
2. All work within 6 ft of the laying face shall be left with sand-filled joints at the end of each day. Cover the laying face or any incomplete areas with plastic sheets overnight if not closed with cut and compacted pavers with joint sand to prevent exposed bedding sand from becoming saturated from rainfall.
3. A joint sand stabilizer shall be used for all jointing sand. The stabilizer shall be of a type recommended by the paver manufacturer for the proposed use and traffic conditions. Application of the stabilizer shall be according to the manufacturer's directions and should not result in discoloration of the pavers or adjacent concrete and should not peel over time. Special care should be taken to ensure the stabilizer does not adhere any sand to surface of the pavers or the adjacent concrete tray. If proprietary jointing sand is recommended by the manufacturer the specifications of the sand shall be submitted for approval by the Engineer prior to ordering the material.
4. After the initial placement of joint sand the pavers shall be rolled with a light rubber tired roller with sufficient pressure to achieve a full bond between the pavers and setting bed. The roller should not be used in vibrating mode and should travel perpendicular to the crosswalk being constructed. Plywood may need to be laid on the surface to prevent damaging the edges of the pavers. Rolling should occur during the warmest part of the day prior to final setting of the adhesive. Care should be taken to ensure that the alignment of the pavers is not altered.
5. After rolling, additional joint sand should be added to the joints as necessary to ensure that the sand has fully penetrated to the bottom of the joints. When no further signs of sand settlement are seen the pavers should be rolled again prior to applying sand stabilizer per the manufacturer's directions.

6. Remove excess sand as directed by the manufacturer of the joint sand stabilizer and as directed by the Engineer.
7. Surface shall be broom cleaned after removal of excess joint sand. Mechanical sweeping or pressure washing of the pavers will not be allowed to avoid damaging the joint sand.
8. Final joints will be from 0" to a maximum of 1/16" for concrete pavers.

FIELD QUALITY CONTROL

1. The final surface tolerance from grade elevations shall not deviate more than $\pm 3/16$ inch under a 10 foot straightedge.
2. Check final surface elevations for conformance to drawings.
3. The surface elevation of pavers shall be 1/8 inch to 1/4 inch above adjacent drainage inlets, concrete collars or channels.
4. Lippage: No greater than 1/8 inch difference in height between adjacent pavers.

CLEANING

1. Clean concrete pavers in accordance with the manufacturer's written recommendations.
2. Sweep excess sand from paved surfaces and remove from site.
3. Remove all excess materials and debris from site.

PROTECTION

1. After work in this section is complete, the Contractor shall be responsible for protecting work from damage due to subsequent construction activity on the site including paving operations immediately adjacent to this work.

METHOD OF MEASUREMENT:

This work will be measured for payment in place and the area computed in square feet.

BASIS OF PAYMENT:

This work shall be paid for at the contract unit price per square foot for CONCRETE PAVERS, TYPE A and shall include all required labor, materials, and equipment.

BRICK PAVER SIDEWALK ON RIGID BASE

This work shall consist of constructing and installing crosswalks composed of clay pavers in a full depth concrete tray, on a prepared subbase as detailed here in and at locations shown on the plans or as directed by the Engineer. See BRICK PAVERS (ROADWAY) for information on Submittals, Delivery, Storage, Handling, Quality Assurance, and Installation Requirements for brick pavers.

MATERIALS

FULL DEPTH CONCRETE TRAY

1. Materials for the Full Depth Concrete Tray shall be in accordance with Articles 420, 1020, and 1006.10 of the standard specifications.

CONCRETE PAVERS

1. Shall consist of the following for Style, Size and Color or approved equal:
 - a) Crestline molded brick paver as produced by the Belden Brick Company
 - b) Dutch Chamfered Edge
 - c) Victorian Color
 - d) 2 3/4" x 4" x 8" bricks
2. Performance Requirements
 - a) Comply with ADA regulations.
 - b) Compressive Strength: Minimum 8,800 PSI individual and 10,000 PSI for the Average of 5 per ASTM C 1272-07F (Heavy Vehicular)
 - c) Flexural Strength: Minimum 600 PSI

- d) Water Absorption: 5% to 6% ASTM 936
- e) Freeze Thaw: Less than 1% loss of dry weight (Section 8 of ASTM C-67)
- f) Size: ±4" x ±8" (nominal) x thickness varies depending on manufacturer.
- g) Abrasion Index: Max 0.11 per ASTM C 1272-07F (Heavy Vehicular)

ASPHALT SETTING BED AGGREGATE

- 3. Provide Bituminous Setting Bed Aggregate as follows:
 - a) Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.
 - b) Do not use limestone screenings, stone dust, or sand for bedding sand material that do not conform to the grading requirements of ASTM D 1073.
 - c) Do not use mason sand or sand conforming to ASTM C 144 for bedding sand.
- 4. Grading Requirements for Asphalt Setting Bed Aggregate – ASTM D 1073:

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	75 to 100
No. 16 (1.18 mm)	50 to 74
No. 30 (0.600 mm)	28 to 52
No. 50 (0.300 mm)	8 to 30
No. 100 (0.150 mm)	0 to 12
No 200 (0.075 mm)	0 to 5

ASPHALT TACK COAT

- 1. Tack coat shall be in accordance with Article 406.05(b) for Grade SS-1 or SS-1h.

ASPHALT SETTING BED FOR PAVERS

- 1. Mixture: The approximate proportion of materials shall be 7% bituminous binder and 93% bituminous setting bed aggregate. The dried fine aggregate shall be combined with bituminous binder and the mix shall be heated to 300-325 degrees F at an asphalt plant. The Contractor shall determine the exact proportions to produce the appropriate mixture for construction of the bituminous setting bed to meet construction requirements.
- 2. Asphalt Binder: Asphalt binder (7%) to be used in the bituminous setting bed shall conform to AASHTO MP-1, with a performance grade of SBS-PG70-28 or SBS-PG76-28.

NEOPRENE ASPHALT ADHESIVE FOR PAVERS

Neoprene bituminous adhesive shall conform to the following:

- 1. Mastic (Asphalt adhesive):
 - Solids (base): 75 + 1%
 - Pounds/Gallon: 8 – 8.5 pounds
 - Solvent: Varsol (over 100-degrees F flash)
- 2. Base (2% Neoprene, 10% Fiber, 88% Asphalt):
 - Melting Point: ASTM D-36, 200-degree F Minimum
 - Penetration: 77% F 100 gram load, 5 second (.1 mm), 23-27
 - Ductility: ASTM D-137-79 @ 25-degree C, 5 cm per minute, 125 cm minimum

JOINT FILLER SAND

- 1. Provide joint filler sand as follows:
 - a) Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.
- 2. Grading Requirements for Joint Filler Sand – ASTM C33

Sieve Size	Percent Passing
3/8 inch (9.5 mm)	100
No. 4 (4.75 mm)	95 to 100

No. 8 (2.36 mm)	80 to 100
No. 16 (1.18 mm)	50 to 85
No. 30 (0.600 mm)	25 to 60
No. 50 (0.300 mm)	5 to 30
No. 100 (0.150 mm)	0 to 10
No 200 (0.075 mm)	0 to 3

EXECUTION

CONTINUATION OF PREVIOUSLY BUILT CROSSWALK

Some crosswalks may have only been partially constructed by others during previous work and ended with a temporary concrete band to help retain the clay pavers. At these locations the existing temporary concrete band shall be saw cut on all three sides and removed so as to leave a level and smooth working surface with which to continue the full depth concrete tray and clay paver surface. A longitudinal construction joint shall be used to connect the old and new concrete. The cost for this work shall be included in the unit price for BRICK PAVER SIDEWALK ON RIGID BASE.

FULL DEPTH CONCRETE TRAY

1. Construct full depth concrete tray in accordance with Article 420 of the Standard Specifications and as shown in the plans.
2. Use Class PV Concrete in accordance with Article 1020.
3. Weep holes, as shown in the plans, may be performed during construction or drilled after the concrete has cured. Weep holes shall be filled with pea gravel meeting CA 18 gradation requirements per Article 1004.

PRIME CONCRETE SLAB

1. Clean Full Depth Concrete Tray.
2. Prime concrete tray surface with bituminous tack coat.

PLACING ASPHALT SETTING BED

1. Prior to asphalt setting bed installation, install protective covering over adjacent PCC sidewalk/pavement to avoid pavement staining and other surface damage.
2. Install the setting bed over the concrete tray surface, place 3/4" deep control bars directly over the base.
 - a) If grade must be adjusted, set wood chocks under depth control bars to establish proper grade.
 - b) Set two bars parallel to each other to serve as guides for the striking board.
 - c) The depth control bars must be set carefully to bring pavers, when laid, to proper grade.
3. Place some bituminous setting bed material between parallel depth control bars. Pull the bedding material with the striking board over the bars several times.
 - a) After each passage, low porous spots must be showered with fresh bituminous material to produce a smooth, firm, and even setting bed.
 - b) As soon as this initial panel is completed, advance the first bar to the next position, in readiness for striking the next panel.
 - c) Carefully fill up any depressions that remain after removing the depth control bars and wood chocks.
4. The setting bed shall be rolled with a 600-pound, walk-behind, power roller to a nominal depth of 3/4" while still hot; the thickness shall be adjusted so that when the concrete pavers are placed, the top surface of the pavers will be at the required finished grade.
5. After the setting bed has cooled, a coating of neoprene bituminous adhesive shall be applied by brushing, moping, squeegeeing, or troweling over the top surface of the bituminous setting bed so as to provide a bond to the pavers; if the adhesive is troweled, the trowel shall be serrated with serrations not to exceed one-sixteenth (1/16) of an inch.
6. Limitations: placement of the setting bed and application of the modified bituminous adhesive will comply with Article 406.05(b) except that the application rate shall be 30 to 50 sq ft per gallon

applied by brush, mop, squeegee, or trowel depending on viscosity. Adhesive shall be applied at least 2 hours prior to setting of the pavers.

INSTALLATION OF PAVERS

1. After the modified bituminous adhesive is applied, carefully place the pavers by hand in courses as shown in the plans with hand tight joints and uniform top surfaces.
2. Good alignment must be kept and the pattern shall be that shown on the plans.
3. Fill gaps at the edges of the paved area with cut pavers or edge units.
4. Cut pavers, to be placed along the edge, with a double blade paver splitter or masonry saw.
5. Adjust paver pattern at pavement edges such that cutting of edge pavers is minimized.
6. 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").
7. Cut pavers edges are to abut pavers only; a paver spacer bar must abut the cut edge of a paver.
8. Do not place cut paver edges against concrete.
9. Keep skid steer and forklift equipment off newly laid pavers that have not received initial compaction and joint sand.

JOINT TREATMENT

1. Simultaneously spread and sweep dry joint sand into joints continuously until full.
2. All work within 6 ft of the laying face shall be left with sand-filled joints at the end of each day. Cover the laying face or any incomplete areas with plastic sheets overnight if not closed with cut and compacted pavers with joint sand to prevent exposed bedding sand from becoming saturated from rainfall.
3. A joint sand stabilizer shall be used for all jointing sand. The stabilizer shall be of a type recommended by the paver manufacturer for the proposed use and traffic conditions. Application of the stabilizer shall be according to the manufacturer's directions and should not result in discoloration of the pavers or adjacent concrete and should not peel over time. Special care should be taken to ensure the stabilizer does not adhere any sand to surface of the pavers or the adjacent concrete tray. If proprietary jointing sand is recommended by the manufacture the specifications of the sand shall be submitted for approval by the Engineer prior to ordering the material.
4. After the initial placement of joint sand the pavers shall be rolled with a light rubber tired roller with sufficient pressure to achieve a full bond between the pavers and setting bed. The roller should not be used in vibrating mode and should travel perpendicular to the crosswalk being constructed. Plywood may need to be laid on the surface to prevent damaging the edges of the pavers. Rolling should occur during the warmest part of the day prior to final setting of the adhesive. Care should be taken to ensure that the alignment of the pavers is not altered.
5. After rolling, additional joint sand should be added to the joints as necessary to ensure that the sand has fully penetrated to the bottom of the joints. When no further signs of sand settlement are seen the pavers should be rolled again prior to applying sand stabilizer per the manufacturer's directions.
6. Remove excess sand as directed by the manufacturer of the joint sand stabilizer and as directed by the Engineer.
7. Surface shall be broom cleaned after removal of excess joint sand. Mechanical sweeping or pressure washing of the pavers will not be allowed to avoid damaging the joint sand.
8. Final joints will be from 0" to a maximum of 1/16" for concrete pavers.

FIELD QUALITY CONTROL

1. The final surface tolerance from grade elevations shall not deviate more than $\pm 3/16$ inch under a 10 foot straightedge.
2. Check final surface elevations for conformance to drawings.
3. The surface elevation of pavers shall be 1/8 inch to 1/4 inch above adjacent drainage inlets, concrete collars or channels.
4. Lippage: No greater than 1/8 inch difference in height between adjacent pavers.

CLEANING

1. Clean concrete pavers in accordance with the manufacturer's written recommendations.
2. Sweep excess sand from paved surfaces and remove from site.
3. Remove all excess materials and debris from site.

PROTECTION

1. After work in this section is complete, the Contractor shall be responsible for protecting work from damage due to subsequent construction activity on the site including paving operations immediately adjacent to this work.

METHOD OF MEASUREMENT:

This work will be measured for payment in place and the area computed in square feet.

BASIS OF PAYMENT:

This work shall be paid for at the contract unit price per square foot for BRICK PAVER SIDEWALK ON RIGID BASE and shall include all required labor, materials, and equipment.

FENCE REMOVAL

This work shall consist of removing existing fencing, including posts, fabric, foundations and any associated hardware. Contractor shall coordinate the removal of all materials with the City. See project Special Provision ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION for coordination of removed materials.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per linear foot for FENCE REMOVAL.

HANDRAIL REMOVAL

This work shall consist of removing existing handrail, including connecting chains/bars, foundations and any associated hardware. See project Special Provision ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION for coordination of removed materials.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per each for HANDRAIL REMOVAL.

STEEL POST REMOVAL

This work shall consist of removing existing steel posts, including connecting chains, foundations and any associated hardware. See project Special Provision ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION for coordination of removed materials.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per each for STEEL POST REMOVAL.

CONCRETE RETAINING WALL REMOVAL

This work shall consist of removing existing retaining walls in their entirety, including any foundations. See project Special Provision ITEMS DESIGNATED FOR REMOVAL AND EXCAVATION for coordination of removed materials.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per linear foot for CONCRETE RETAINING WALL REMOVAL.

REMOVE EXISTING LIGHT POLE

This work shall consist of removing existing light poles, including pole, luminaire, wiring, foundation and any associated hardware. All wiring associated with the light pole being removed shall be cut at underground conduit and abandoned in. All removed materials shall remain the property of the City of Peoria unless the Contractor is otherwise directed for disposal.

BASIS OF PAYMENT:

This work will be paid for at the contract unit price per each for REMOVE EXISTING LIGHT POLE.

STREETSCAPE SPECIAL PROVISIONS

TOPSOIL FURNISH AND PLACE, 4"

This work shall consist of furnishing and placing topsoil and shall be performed in accordance with Section 211 of the Standard Specifications except as modified herein. Revise Article 211.07(b) to read: In cut and fill sections, all disturbed areas not improved with pavement, sidewalks or shoulders will require 4 inches of imported topsoil. Contractor shall have one soil test conducted per site the topsoil is imported from. The test shall consist of an Illinois Department of Highways Textural Classification, organic content percentage, pH level, and nutrient levels. Submit the soil test results a minimum of 60 days prior to the start of work. Do not proceed without written approval of the owner.

All costs associated with placing Topsoil in the areas designated on the plans or obtaining and placing topsoil from outside the right-of-way if required as determined in the field will be paid for at the contract unit price bid per square yard for TOPSOIL FURNISH AND PLACE, 4".

SODDING

This work shall consist of preparing the ground surface and furnishing, transporting, and placing sod and other materials required in the sodding operations. All work shall be performed in accordance with Section 252 of the "Standard Specifications for Road and Bridge Construction." Fertilizer requirements as follow shall be included in the contract unit price per square yard for Sodding, and no additional compensations shall be allowed.

The sod shall be a minimum of a 3 bluegrass mixture. Submit the complete mix breakdown for review and approval by the Landscape Architect a minimum of 72 hours prior to delivery.

Fertilizer nutrients shall have a mixture of ten (10%) percent nitrogen, ten (10%) percent phosphoric acid, and ten (10%) percent water soluble potash, or any other approved mixture having the 10-10-10 ratio requirement, and shall be applied at such a rate that each acre to be sodded shall receive a total of 180 pounds of fertilizer nutrient. Submit a cut sheet from the fertilizer manufacture for review and approval by the Landscape Architect a minimum of 72 hours prior to delivery.

This work shall be paid for at the contract unit price bid per square yard for SODDING, and shall be payment in full for all material, labor, tools and equipment required to complete this item of work, as specified.

ENGINEERED SOIL (SPECIAL)

This work shall consist of furnishing and installing Engineered Soil (Special).

The engineered soil shall consist of 2:1 mixture of coarse sand to compost, based on volume.

The coarse sand shall meet the specifications of an FA1 in accordance with Section 1003 of the Standard Specifications. The preferred sand component shall consist at least 95% SiO₂. Manufactured sand or stone dust is not allowed. The sand shall be washed and drained to remove clay and silt prior to mixing.

The compost shall have a particle size gradation in which 98% passes through a 0.75-inch screen; contain less than 1% combined glass, metal and plastic; have at least 40% organic matter and less than 60% ash; a carbon to nitrogen ration of 10-20:1; a pH between 6-8; electrical conductivity below 10 dSm⁻¹; and moisture content between 35% and 50% by weight.

The engineered soil mix shall be mixed off-site in a dedicated soil mixing facility. It shall be free of rocks, stumps, roots, brush or other material over 1 inch in diameter. No other materials shall be mixed with the

soil that may be harmful to plant growth or prove a hindrance to planting, infiltration or maintenance. The engineered soil shall have a pH between 5.5 and 6.5 and have adequate nutrients to support plant growth. The blended engineered soil shall have a minimum laboratory hydraulic conductivity per ASTM D2434 of 7 inches per hour.

Samples of the engineered soil shall be taken for every 100 tons of blended soil. A certified laboratory analysis shall be submitted to the engineer indicating compliance with the material specifications above. Similarly, a laboratory test of the permeability of the engineered soil sample shall be conducted to ASTM D2434 and submitted to the engineer a minimum of 14 days prior to installation.

Engineered soil shall be placed in planter boxes as shown in the details. Soil shall be placed in 12-inch lifts and compacted by periodic wetting (0.3 gal/SF), but not jetting. Vibratory plate-style compactors are prohibited for use in compacting the engineered soils. Construction traffic shall be prohibited from driving on the engineered soils once placed in the planter boxes. Once placed, Contractor shall be responsible for prohibiting the deposition of silt or fines from adjacent construction activities through the use of filter fabric barriers or other means until acceptance by the Owner.

Upon placement of the final lift to the grades shown on the plans and prior to installation of the plant materials, an infiltration test shall be performed on the in situ engineered soils. In coordination with and in the presence of the engineer, a volume of water equal to a four-inch depth over the surface area of the planter shall be gently discharged into the bed. If any ponding greater than ½ inch in depth over an area of 5 square foot or more remain 48 hours after the water is placed, the engineered soils in the area exhibiting ponding shall be hand disked to a depth of 24 inches and the test repeated until ponding no longer occurs after 48 hours.

This work shall be weighed, computed in tons and paid for at the contract unit price per ton for ENGINEERED SOIL (SPECIAL), including all labor, equipment, testing, and materials to complete in place.

SHREDDED BARK MULCH 3"

This work shall consist of furnishing and installing shredded bark mulch in accordance with Section 253 and Section 254 of the Standard Specifications. Mulch for all planting beds shall be hardwood bark mulch, derived from deciduous hardwood trees free of disease and insects. Particle sizes shall be no longer than 3" in length. The mulch shall be mechanically screened and/or shredded for uniform size. Submit a sample for review and written approval by the Landscape Architect a minimum of 14 days prior to delivery.

This work shall be measured in length and width and the area computed in square yards and paid for at the contract unit price per square yard for SHREDDED BARK MULCH 3" for the type of material specified on the plans and shall include all labor, tools, materials and equipment needed to complete this work.

POROUS PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH, (SPECIAL)

This work shall consist of furnishing and installing porous concrete (special) where shown on the construction plans.

Materials shall include Portland Cement, in accordance with Section 1001.01(a) of the Standard Specifications. Fly Ash, conforming to AST C16, may be used in amounts not to exceed 25% of the cementitious material or Ground Iron Blast-Furnace Slag, conforming to ASTM C989, may be used in amounts not to exceed 50% by weight of the total cementitious material.

Water shall be provided in accordance with Section 1002 of the Standard Specifications. CA-16 Coarse Aggregate shall be provided in accordance with Section 1004 of the Standard Specifications and shall be a natural washed, rounded gravel, not chips or flakes. No Fine Aggregate shall be used in the mix.

Admixtures shall include an air entrainment admixture, a polycarboxylate high range water reducing admixture, and a hydration stabilizer in conformance with Section 1021 of the Standard Specifications. Curing materials shall be limited to polyethylene sheets (minimum 6 ml) in accordance with Section 1022.03 of the Standard Specifications.

The contractor shall furnish a proposed mix design with proportions of materials prior to the commencement of work in compliance of ASTM C1688. The composition of the proposed porous concrete mixture shall be submitted for review and approval and shall comply with the following provisions unless an alternative composition is demonstrated to comply with the project requirements.

Cementitious Material	Water/Cement Ratio	Coarse Aggregate	Void Content	Hydration Stabilizer	Water Reducer
600-620 lbs/cy	0.30-0.34	2400-2600 lbs/cy	20 – 25%	6-8 oz/cwt depending on weather conditions	Start at 6 oz/cwt.

Porous concrete shall be placed on compacted subgrade in locations and thickness shown on the detail in the construction plans. Form materials are permitted to be of wood, steel or other material sufficient to support the placement equipment and the porous concrete and shall be of full depth of the pavement. Equipment used in mixing, transporting and placement of pervious concrete shall meet Section 1020.03 of the Standard Specifications. The porous concrete mixture shall be transported to the site and discharged within (1) one hour of the introduction of mixwater to the cement. Delivery time may be extended to 90 minutes when dosages of hydration stabilizer are increased to maintain the concrete, as the direction and approval of the Engineer.

Each truckload will be visually inspected for the consistency of the concrete mixture. Hydration stabilizer may be added at the point of discharge to achieve desired consistency, at the direction of the Engineer. A minimum of 70 revolutions at the designated design speed shall be counted prior to further discharge following the addition of any water.

The contractor shall moisten the aggregate base with water just prior to placing porous concrete. Concrete shall be deposited into the forms by truck chute, conveyor or buggy. The use of a concrete pump is prohibited. Placement shall be done with a Roller Screed property weighted with water or sand. A Rolled Joint Former, a cross roller with a flange welded midsection for rolling joints in plastic concrete, shall be used for constructing joints as shown on the plans. The depth of the joint shall be between 1/4 and 1/3 the depth of the concrete. Joints shall be placed in plastic concrete immediately after roller compaction and prior to curing.

Traditional concrete testing procedures based on strength and slump control are not applicable to porous concrete pavement materials. Instead, the contractor shall be responsible for sampling plastic concrete in accordance with ASTM C172 for each 150 cubic yards (one minimum per day) and tested for unit weight per ASTM C1688. The unit weight of the sample shall be within 5% of the design unit weight identified in the approved mix design. Any concrete that does not pass shall be removed.

Additional in-situ testing of the porous concrete include both the inverse slump flow test and the hand squeeze test. The inverse slump flow test shall be performed by filling an inverted slump cone with the plastic porous concrete without any compacting or rodding. The cone shall be filled to roughly the top. With a smooth, even motion, the slump cone shall be lifted to knee height and given a jostle or mild shake to loosen the material and allow it to begin to flow. If the material flows from the cone, the material is at the correct consistency for placement. If the material remains lodged in the cone, than it shall be considered too stiff for placement and additional water or admixture should be added in accordance with the methods described above.

The hand squeeze test shall be performed in the field by the Engineer or Certified Pervious Concrete Contractor. A sample of plastic concrete shall be taken from each truck load and hand-squeezed and released. A mix that crumbles (too dry) or in which the paste flows away from the aggregate (too wet) shall be rejected and will require mitigation to achieve a passing test. The correct amount of water will impart a wet metallic appearance or sheen on the material.

Curing procedures shall begin 3-5 minutes after jointing. Prior to covering, the pavement shall be sprayed with soybean oil, at a rate of 0.005 Gal/SF. The pavement shall be covered in a minimum 6-mil thick polyethylene sheet. There shall be a minimum of 12" overhand on each side of the form with enough extra plastic to properly anchor the sides down. The plastic sheeting shall be pulled tight over the concrete to provide a consistent interface and minimize wrinkles in the sheet contacting the surface of the concrete. Any holes, tears or cuts in the plastic shall be taped or repaired to prevent moisture loss and to prevent air infiltration under the plastic. The edges shall be anchored with 2x4's and sandbags. Mud clamps or construction trash will not be allowed. No wind-driven billowing plastic is allowable during the entire 7-day cure. The curing cover shall remain securely in place for a minimum of 7 days, uninterrupted. No vehicular traffic shall be permitted on the pavement until the end of the 7 day cure and no truck traffic shall be permitted for 14 days after placement.

Upon removal of the plastic after a minimum of 7 days, extreme care shall be taken to prevent construction debris, particularly sand, silt and dirt, from being deposited on the porous concrete. Construction staging shall be coordinated to minimize exposure to fines from soils from adjacent construction activities. The contractor shall be responsible for preventing clogging of the porous pavement from adjacent construction activities until acceptance by the owner. The Contractor shall be responsible for vacuuming any fines that accumulate on the pervious pavement prior to acceptance by the owner, incidental to the contract.

Payment for all labor, equipment and materials required by this special provision will be made at the contract unit price per square foot for POROUS PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH, (SPECIAL).

PLANTER RAILING

This work shall consist of furnishing and installing planter railings as shown on the plan and detail sheets including anchoring the railing to the structural concrete and any necessary work to properly furnish and install the planter railing. Mounting plates, anchors, spacers, corner posts, and line posts shall not be paid for separately, but included in the cost of the planter railing. Material shall be A36 Mild Steel, sandblasted. Finish shall be 2 mils. zinc powder coat primer with 4 mils. black powder coat top finish.

The Contractor shall submit shop drawings for the planter railing for approval prior to fabrication.

This work shall be measured in length and paid for at the contract unit price per foot for PLANTER RAILING and shall include all labor, tools, materials and equipment needed to complete this work.

AGGREGATE BASE COURSE, TYPE CA-7

This work shall consist of furnishing all labor, equipment, and material for the installation of Aggregate Base Course, Type CA-7, in accordance with Section 351 of the Standard Specifications, except as modified herein. Aggregate shall be constructed in lifts not more than 12" in depth and shall be compacted by mechanical means to the satisfaction of the engineer. Specific requirements shall be followed for Type B Aggregate.

Payment for all labor, equipment and materials required by this special provision will be made at the contract unit price per ton for AGGREGATE BASE COURSE, TYPE CA-7.

AGGREGATE BASE COURSE, TYPE CA-16

This work shall consist of furnishing all labor, equipment, and material for the installation of Aggregate Base Course, Type CA-16, in accordance with Section 351 of the Standard Specifications, except as modified herein. Aggregate shall be constructed in lifts not more than 12" in depth and shall be compacted by mechanical means to the satisfaction of the engineer. Specific requirements shall be followed for Type B Aggregate.

Payment for all labor, equipment and materials required by this special provision will be made at the contract unit price per ton for AGGREGATE BASE COURSE, TYPE CA-16.

AGGREGATE BASE COURSE, TYPE FA-4

This work shall consist of furnishing all labor, equipment, and material for the installation of Aggregate Base Course, Type FA-4, in accordance with Section 1003 of the Standard Specifications, except as modified herein. Aggregate shall be constructed in lifts not more than 12" in depth and shall be compacted by mechanical means to the satisfaction of the engineer. Specific requirements shall be followed for Type B Aggregate.

Payment for all labor, equipment and materials required by this special provision will be made at the contract unit price per ton for AGGREGATE BASE COURSE, TYPE FA-4.

DECORATIVE CONCRETE BLOCK RETAINING WALL

This work shall include all labor, materials and equipment necessary to remove the existing block retaining wall and furnish and install this item in accordance with the plan details, general notes and the manufacturer's recommendations. The Contractor shall submit to the City of Peoria, Developer and Engineer the manufacturer's construction guidelines, a minimum of three (3) weeks prior to construction for review and approval. Existing block and cap may be used to reconstruct the wall if deemed by Engineer to be in accordance with Section 1042.15 of the Standard Specifications. The block and cap shape, size and color shall match the existing block retaining wall to remain in place. If the existing block retaining wall system is no longer being manufactured, the Contractor shall submit an alternate system of similar block and cap shape, size and color for approval by the City of Peoria.

The work shall include removal of the existing concrete block retaining wall, disposal of concrete block retaining wall materials, the decorative block wall, clips for block, the decorative cap, excavation, clay backfill, granular backfill, filter fabric, 4 inch wrapped perforated drain pipe, geogrid if required and any incidental items required by the manufacturers. This work shall be paid for at the contract unit price bid per square foot for DECORATIVE CONCRETE BLOCK RETAINING WALL.

CONCRETE STRUCTURES (SPECIAL)

This work shall consist of furnishing all labor, equipment, and material for the installation of concrete structures, in accordance with Section 503 of the Standard Specifications, except as modified herein. Steel reinforcement shall not be paid for separately, but included in the cost of the structural concrete. The contractor shall field locate any utilities before starting construction as directed by the engineer including excavating the utilities. This also is included in the cost for CONCRETE STRUCTURES (SPECIAL).

Formed curb notches shall be placed in the structure as shown on the plan and detail sheets to provide positive drainage.

This work shall be measured in horizontal length, width, and depth and paid for at the contract unit price per cubic yard for CONCRETE STRUCTURES (SPECIAL) and shall include all labor, tools, materials and equipment needed to complete this work.

PUBLIC ART DISPLAY

Bases for future public art display areas shall be constructed as shown on the plan and detail sheets including compacted subgrade, subbase granular material, P.C. concrete base with weep holes, filter fabric, leveling sand, and brick pavers and any necessary work to properly furnish and install the future public art display areas. This work shall not be paid for separately, but shall be included in the cost of the respective sidewalk and brick paver banding pay items.

The Contractor shall provide to the Engineer one sample public art display area in the field. The accepted sample public art display area will be the standard by which remaining work will be evaluated for technical and aesthetic merit. The sample public art display shall be installed in a location of proposed installation where it may remain if approved by the Engineer.

SIDEWALK ACCESSIBLE RAMPS

Accessible ramps with Detectable Warnings consisting of truncated domes meeting the requirements of the ADAAG and details shown in the plans shall be provided at all proposed intersections of curb and sidewalk and at locations shown on the plans and listed in the schedule of quantities. This work shall be performed and paid for in accordance with Section 424 of the Standard Specifications, State Standards 424001, 424006, 424011, 424016, 424021 and 424026, and Illinois ADA Standards. The detectable warning shall be black with white border.

PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH, SPECIAL

This work shall consist of furnishing and installing P.C.C. sidewalks special including concrete, equipment, labor and work as shown on the plan and detail sheets including jointing, 4 inch P.C. concrete, concrete depth transitions, dowel bars, and tie bars as detailed in the plans and any necessary work to properly furnish and install the P.C.C. Sidewalk, 4 inch, Special.

This work shall be in accordance with Section 424 of the Standard Specifications, plan details, and as specified herein. Expansion Joints shall be placed at maximum 50-foot intervals and where proposed sidewalk abuts existing or proposed curb, sidewalk, driveway pavement, or concrete steps. Expansion joints shall be made with half inch, three-quarter-inch, and one inch thick bituminous preformed joint filler as detailed on the plans and details. Expansion joint sealing shall be in accordance with Section 452 of the Standard Specifications as detailed on the on the plans and details.

The Contractor shall place and compact 4 inches of subbase granular material, type B, compacted in place to provide the proper subgrade for proposed sidewalks in accordance with Section 311 of the Standard Specifications and the plans and as indicated by the Engineer. This Granular Backfill shall be measured and paid for as subbase granular material, type B.

The Contractor shall make the following submittals to the Engineer prior to beginning work:

- Manufacturers complete technical data sheets for curing compound.
- Manufacturers Qualifications (minimum 10 years required)
- Installers Qualifications (minimum 5 years required)

The Contractor shall provide to the Engineer one sample panel in the field a minimum of 72 hours prior to sidewalk placement which includes the following:

- Concrete surface texture.

- Expansion joint.
- Control Joint
- Brick Banding (To be paid for separately)

The joint pattern location and spacing shall be as shown on the plan sheets. All joints shall be tooled to a depth of one-fourth the thickness of the concrete and in accordance with Section 424.06 of the Standard Specifications. Sawcutting joints shall not be allowed.

The final finish shall be type B, except a light broom may be substituted for the artificial turf drag. A mechanical spreader shall not be required. Longitudinal floating shall be by hand method. Mechanical floating shall not be allowed.

This work as shall be measured in horizontal length and width and the area computed in square feet. This work shall be paid for at the contract unit price bid per square foot for PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH, SPECIAL.

SUBBASE GRANULAR MATERIAL, TYPE B

This work shall consist of furnishing all labor, equipment, and material for the installation of Subbase Granular Material, Type B, under proposed P.C. Concrete Sidewalk and Sidewalk, Special only in accordance with Section 311 of the Standard Specifications, except as modified herein. Material shall be in according to Article 1004.04a of the Standard Specifications, expected that the coarse aggregate shall be Reclaimed Asphalt Pavement (RAP) or Recycled Concrete Material (RCM). All materials shall be mechanically crushed and free of steel, glass, or other deleterious materials and otherwise meet the requirements of Article 1004.04 of the Standard Specifications.

Payment for all labor, equipment and materials required by this special provision will be made at the contract unit price per ton for SUBBASE GRANULAR MATERIAL, TYPE B.

INTERSECTION INLAY

This work shall consist of furnishing and installing a concrete base, filter fabric, leveling sand, and intersection brick pavers according to the detail shown in the plans and as noted herein.

The Contractor shall protect unit pavers and aggregate during storage and construction against soiling or contamination from earth and other materials. Clean all brick as necessary to complete the work at no additional cost.

Weep holes shall be drilled in concrete base at the diameter and locations shown on the applicable plan details. Filter fabric shall be provided in accordance with Section 1080.03 of the Standard Specifications.

Bedding sand for the Leveling Course is to be sound, sharp, washed, natural sand or crushed stone of FA-1 gradation. The Contractor shall place the sand leveling course to a thickness of 1 to 1-1/2 inches, taking care that moisture content remains constant and density is loose and constant until pavers are set and compacted. The sand leveling course shall be treated with soil sterilizer to inhibit the growth of grass and weeds.

Brick pavers for the Intersection Inlay pattern shall be Crestline Molded Clay w/Dutch Chamfered Edge, Victorian Blend (2-1/4" x 4" x 8") and (2-1/4" x 8" x 8") as manufactured by The Beldon Brick Company, Canton, Ohio or approved equal.

The Contractor shall submit brick paver samples to the City of Peoria and construction resident Landscape Architect a minimum of four (4) weeks prior to construction for review and written approval.

The Contractor shall provide to the Engineer one sample intersection inlay in the field. The accepted sample inlay will be the standard by which remaining work will be evaluated for technical and aesthetic merit. The sample inlay shall be in a location of proposed installation where it may remain if approved by the Engineer.

Any required brick cutting shall be with a motor-driven masonry wet saw equipment to provide clean, sharp, unchipped edges. Chipped bricks shall not be incorporated into the brick banding. Hammer cutting will not be allowed. Full units should be used without cutting wherever possible. The Contractor shall take care not to disturb leveling base while placing the pavers. All brick shall be laid flush to each other with the minimum amount of jointing exposed. The final surface of the brick banding shall not exceed 1/16-inch unit-to-unit offset from flush (lippage) or 1/8 inch in 24 inches and ¼ inch in 10 feet from level, or indicated slope, for finished surface of paving. The Contractor shall use string lines as needed to keep straight lines. Pavers shall be placed to allow for positive sidewalk drainage. Ponding areas shall be picked up and reinstalled at no additional cost.

Once the entire section of pavers has been placed, the Contractor shall spread sand for joint filling over the pavers and hand broom into the joints immediately after placing into leveling course. Sand for Joints is to be fine, sharp, washed, natural sand or crushed stone of FA-9 gradation. The Contractor shall continue to sweep and add sand until the joints are completely filled. Excess sand shall be removed by hand brooming. Traffic shall not be allowed on the installed pavers until sand has been vibrated into joints with vibrator/compactor that is either a plate compactor with a high frequency, low amplitude plate or a rubber-roller mechanical vibrator as approved by the Engineer. Each pass shall be alternated 90 degrees from the previous pass. This process shall be repeated until the joints are completely filled. The Contractor shall repeat the joint-filling process 30 days after the initial joint filling.

Each brick laying location shall be completed within the same day the laying of brick has begins. Brick laying shall not be started if rain is imminent within the same work day.

This work shall be measured in feet of length and width and the area computed in square feet. Payment for all materials, labor and equipment as required to complete this work, concrete base, geotextile fabric, bedding layer, weep holes, laying brick pavers and joint filling shall be included in the contract unit price per square foot for INTERSECTION INLAY.

BRICK PAVER BANDING

This work shall consist of furnishing filter fabric, leveling sand, and brick pavers according to the detail shown in the plans and as noted herein.

The Contractor shall protect unit pavers and aggregate during storage and construction against soiling or contamination from earth and other materials. Clean all brick as necessary to complete the work at no additional cost.

Weep holes shall be drilled in concrete base at the diameter and locations shown on the applicable plan details. Filter fabric shall be provided in accordance with Section 1080.03 of the Standard Specifications.

Bedding sand for the Leveling Course is to be sound, sharp, washed, natural sand or crushed stone of FA-1 gradation. The Contractor shall place the sand leveling course to a thickness of 1 to 1-1/2 inches, taking care that moisture content remains constant and density is loose and constant until pavers are set and compacted. The sand leveling course shall be treated with soil sterilizer to inhibit the growth of grass and weeds.

Brick pavers for the double row soldier course shall be Crestline Molded Clay w/Dutch Chamfered Edge, Victorian Blend (2-1/4" x 4" x 8") as manufactured by The Beldon Brick Company, Canton, Ohio or approved equal.

Brick pavers for the Brick Corner and the planter boxes below the notch shall be Crestline Molded Clay w/Dutch Chamfered Edge, Victorian Blend (2-1/4" x 8" x 8") as manufactured by The Beldon Brick Company, Canton, Ohio or approved equal.

The Contractor shall submit brick paver samples to the City of Peoria and Landscape Architect a minimum of four (4) weeks prior to construction for review and written approval.

The Contractor shall provide to the Engineer one sample length of brick paver banding beginning at an intersection ramp and surrounding a nonstandard planter box in the field. The accepted sample banding will be the standard by which remaining work will be evaluated for technical and aesthetic merit. The sample banding shall be in a location of proposed installation where it may remain if approved by the Engineer.

Any required brick cutting shall be with a motor-driven masonry wet saw equipment to provide clean, sharp, unchipped edges. Chipped bricks shall not be incorporated into the brick banding. Hammer cutting will not be allowed. Full units should be used without cutting wherever possible. The Contractor shall take care not to disturb leveling base while placing the pavers. All brick shall be laid flush to each other with the minimum amount of jointing exposed. The final surface of the brick banding shall not exceed 1/16-inch unit-to-unit offset from flush (lippage) or 1/8 inch in 24 inches and ¼ inch in 10 feet from level, or indicated slope, for finished surface of paving. The Contractor shall use string lines as needed to keep straight lines. Pavers shall be placed to allow for positive sidewalk drainage. Ponding areas shall be picked up and reinstalled at no additional cost.

Once the entire section of pavers has been placed, the Contractor shall spread sand for joint filling over the pavers and hand broom into the joints immediately after placing into leveling course. Sand for Joints is to be fine, sharp, washed, natural sand or crushed stone of FA-9 gradation. The Contractor shall continue to sweep and add sand until the joints are completely filled. Excess sand shall be removed by hand brooming. Traffic shall not be allowed on the installed pavers until sand has been vibrated into joints with vibrator/compactor that is either a plate compactor with a high frequency, low amplitude plate or a rubber-roller mechanical vibrator as approved by the Engineer. Each pass shall be alternated 90 degrees from the previous pass. This process shall be repeated until the joints are completely filled. The Contractor shall repeat the joint-filling process 30 days after the initial joint filling.

Each brick laying location shall be completed within the same day the laying of brick has begins. Brick laying shall not be started if rain is imminent within the same work day.

This work shall be measured in feet of length and width and the area computed in square feet. Payment for all materials, labor and equipment as required to complete this work, concrete base, geotextile fabric, bedding layer, weep holes, laying brick pavers and joint filling shall be included in the contract unit price per square foot for BRICK PAVER BANDING.

PLANT MATERIAL

This work shall consist of furnishing and installing all plant material in accordance with Section 253 and Section 254 of the Standard Specifications except as noted herein.

All plant material shall be reviewed and receive written approval by the construction Resident Landscape Architect at the project site. Construction Resident Landscape Architect shall be notified 72 hours prior to delivery of plant material. Refer to the planting schedules on the planting plans for specific tagging information. Submit a complete plant material list to the construction resident Landscape Architect within 60 days of award of the project.

No bare root stock will be allowed for this project. All plant material shall be balled and burlapped, or in containers. All open air delivery of plant material shall be tarped.

For requirements for planting soils in planter boxes, refer to Engineered Soil (Special) in the special provisions.

All shade tree locations shall be staked in the field and reviewed with the construction Resident Landscape Architect prior to installation. Prior to any shrub, grass, or perennial installation, all plants in the beds shall be placed above ground. The layout shall be reviewed with the construction Resident Landscape Architect before completing installation per the drawings and details.

Omit Section 253.14 of the Standard Specifications. The contractor is responsible for all maintenance of the plant material once it leaves the nursery until Project Completion Date and Final Acceptance of the project and for 60 days beyond Project Completion Date and Final Acceptance of the project. This includes planting, watering, pruning, weed control, insect control, disease control, and mulching as needed. All shrubs shall be maintained at height no greater than 30" above curb. Watering of the plant material shall consist of at least one deep watering of all trees, once a week. Shrubs shall be deep watered a minimum of 3 times per week. Once the irrigation system is complete the contractor may use that to provide supplement watering of the plant material. The contractor shall be responsible for all coordination of the irrigation controller for programming. Beyond 60 days following Project Completion Date and Final Acceptance of the project, the City of Peoria shall assume responsibility for maintenance of all plant materials. All materials, labor, water, and equipment as required to complete the maintenance shall not be paid for separately, but included in the contract unit price for the respective plant pay items.

Payment for all work consisting of furnishing, installing, and maintaining plant material will not be paid for separately, but included in the cost of each respective plant pay items. The Contractor shall be required to furnish and install the actual Type and Quantity of Plants shown on the Plans and in the Schedule of Quantities Tables. This work shall be measured and paid at the unit price per UNIT (each Unit being 100 plants) which shall be rounded (up or down as applicable for each pay item) to the nearest UNIT in accordance with IDOT policy.

PARK BENCHES

This work shall consist of furnishing and installing benches of the type, size, and location shown on the plans. Benches shall be Victor Stanley, Inc. City Sites Series CR-12, 6' length with center armrest, hot dip galvanized with black powder coat finish, or approved equivalent as shown on the plans. The Contractor shall anchor benches to concrete with galvanized bolts per the manufacturer's requirements for installation.

This item shall be paid for at the contract unit price per each for PARK BENCHES for the type of bench noted on the plans and shall be payment in full for all labor, tools, materials and equipment needed to complete this work.

TRASH RECEPTACLES

This work shall consist of furnishing and installing trash receptacles of the type, size, and location shown on the plans. Receptacles shall be Victor Stanley, Inc. Ironsites Sites Series S-42, 36-gallon litter receptacle with standard tapered formed lid, hot dip galvanized with black powder coat finish and high density inner liner or approved equivalent as shown on the plans. The Contractor shall anchor trash receptacles with galvanized bolts per the manufacturer's requirements for installation.

This item shall be paid for at the contract unit price per each for TRASH RECEPTACLES for the type of receptacle specified on the plans and shall be payment in full for all labor, tools, materials and equipment needed to complete this work.

PLANTER DRAIN, COMPLETE

This work shall consist of furnishing and installing Planter Drain, Complete including all equipment, labor and materials to complete construction of the Planter Drain, Complete. One planter drain shall be installed in all planter boxes as shown on the plans. All work shall be performed in accordance with Section 601 and 602 of the Standard Specifications and the details in the plans.

Planter Drain, Complete shall consist of all polyethylene pipe materials and appurtenances for the vertical riser as shown in the details on the plans, including the atrium grate and wye connecting to the storm drain lateral. All polyethylene materials shall be manufactured in accordance with ASTM F2648, and installed as shown on the details in the plans. Planter Drain, Complete shall be installed in each planter box at the location shown on the storm sewer plans.

This work shall be measured on an each basis and paid for at the contract unit price per each for PLANTER DRAIN, COMPLETE.

PIPE DRAINS 4" (SPECIAL)

This work shall consist of furnishing and installing Pipe Drains 4" (Special) including all equipment, labor and materials. All work shall be performed in accordance with Section 601 and 602 of the Standard Specifications and the details in the plans.

Pipe Drains 4" (Special) shall consist of all high density polyethylene pipe materials, gaskets, wyes, and any other appurtenances, in accordance with ASTM F2648, to construct Pipe Drains 4" (Special) in accordance with the details in the plans as well as any connections to proposed or existing structures. The locations are shown on the Drainage Plans.

This work shall be measured on a lineal foot basis and paid for at the contract unit price per foot for PIPE DRAINS 4" (SPECIAL).

SANITARY SEWER SPECIAL PROVISIONS (GPSD)

MANHOLES TO BE RECONSTRUCTED (SPECIAL)

Work shall consist of the complete removal and replacement of the existing benches and troughs through manholes at locations indicated in the plans and as specified in the following GPSD Standard Specification, specifically sections 1.0 General and 4.0 Manhole Bench and Trough Reconstruction. Prior to starting this work the contractor shall coordinate with the Greater Peoria Sanitary District (GPSD) to ensure compliance with their standards. GPSD may request to have on site representation during execution of this work; contractor will be responsible for coordinating this work with GPSD to ensure a representative is available.

1.0 General

The rehabilitation of manholes shall be performed where specified. Manhole rehabilitation involves the repair and modification of existing sewer system structures without structure removal and replacement. Manhole rehabilitation shall be performed in accordance with the specifications below.

The Contractor shall demonstrate to the Engineer experience in the application of the proposed manhole rehabilitation system. In lieu of experience, throughout the duration of the project, the Contractor shall secure the support and expertise of the manhole rehabilitation system manufacturer to assure proper handling and installation of the product.

2.0 Sewer System Operation and Manhole Rehabilitation

The rehabilitation of manholes shall be performed without disrupting sewer service or operation. If necessary, the Contractor shall make provisions to isolate manholes to be rehabilitated from sewer flows. Any methods proposed to isolate manholes shall be approved by GPSD.

The Contractor shall consider the possibility and possible impact of wet weather flows upon both flow isolation measures and the rehabilitation process. Prior to the commencement of the manhole rehabilitation process including manhole preparation, the Contractor shall take all measures necessary to protect the manhole from potential damage from water intrusion, infiltration and surcharging. The Contractor shall be responsible for correcting any damage that occurs during the rehabilitation process.

3.0 Manhole Cleaning

Prior to the manhole rehabilitation, manholes shall be cleaned thoroughly throughout the entire circumference and vertical length of the manholes. However, final cleaning shall not be performed until all specified demolition and removal tasks have been completed including, but not limited to, the removal of the existing bench and trough, the cutting of protruding piping, the removal of existing manhole steps, the removal of root intrusions and the removal and replacement of the existing manhole casting and lid (if specified by the Engineer).

Cleaning shall be performed in accordance with Subsection 3.2 of Section 093 of these Specifications except those portions that pertain to water supply, protruding service connections and compensation. Furthermore, the objective of manhole cleaning is not only that stated in Subsection 3.2 of Section 093 but also the preparation of manholes for rehabilitation in accordance with manufacturer recommendations made part of applicable manhole rehabilitation systems. Manhole cleaning shall remove all loose materials as well as all roots, broken mortar, dirt, waste materials, bricks, broken and shaved pieces of piping materials, etc.

The Contractor shall prevent large materials not in normal suspension from entering the connecting piping of cleaned manholes. If this occurs, the Contractor shall be responsible for removal of

materials from the sewer system to the satisfaction of GPSD. The Contractor shall be responsible for all materials removed from cleaned and rehabilitated manholes.

The Contractor shall be responsible for the supply of all water used in the cleaning of manholes and the reconstruction or rehabilitation of manhole components.

4.0 Manhole Bench and Trough Reconstruction

Reconstruction of manhole benches and troughs shall be performed where specified and in accordance with these Specifications.

4.1 Bench and Trough Removal

Prior to the commencement of bench and trough reconstruction, the existing bench and trough shall be removed to a depth sufficient to allow bench and trough reconstruction and support but not enough to compromise the support and integrity of the manhole. Materials unsuitable to serve as base material for bench and trough reconstruction shall be removed if removal does not jeopardize the integrity of the manhole structure. Afterwards, the manhole shall be thoroughly and completely cleaned; all loose materials and debris shall be taken from the manhole and disposed of by the Contractor.

4.2 Manhole Trough Reconstruction

Bench and trough reconstruction shall be performed immediately after the removal of the existing bench and trough and before commencement of manhole barrel rehabilitation. Water shall not be allowed to either collect in the bottom of the manhole or exit by seepage through the manhole bottom; at all times, the Contractor shall maintain a system to assure that water is either removed from the manhole or allowed to flow into the exit piping of the manhole.

Reconstruction of manhole troughs shall be performed by installing modified replacement piping in the manhole trough. Sizing and configuration of replacement piping shall be governed by the size of the sewers connecting to the respective manhole as well as the angles of sewer pipes connecting to the manhole at the trough. Pipe and fittings used to reconstruct troughs shall be PVC, SDR 26, and modified in accordance with these Specifications. Trough piping shall have the top of the piping from the springline up to and including the crown removed except for that minimal portion of piping necessary to construct joints between the existing sewer piping and the trough piping.

Depending upon the configuration of the sewers connecting to the manhole at the trough, tees and wyes may be used to reconstruct a trough that will convey all sewage coming into a manhole out through the exit piping. Fittings may be used where directed by GPSD.

The slope of the reconstructed trough shall be consistent and continuous throughout the entire reconstructed trough. The slope shall be governed by the differential between the lowest manhole outlet pipe invert and the invert of the lowest manhole influent pipe that introduces flow into the manhole. If the manhole has two outlets, the trough shall be reconstructed relative to the lowest outlet pipe invert. If there are multiple influent pipes, those influent pipes that are more than four (4) inches above the lowest influent pipe shall not be connected to the replacement trough.

Where specified by GPSD, the Contractor shall construct inside drop systems in accordance with Section 043 of these Specifications. If possible, internal drop systems shall be constructed such that their bottoms are allowed to rest on the manhole bench; however, reconstructed manhole benches must be completely constructed with all materials cured prior to the placement of internal drop systems.

If there are no pipes other than that effluent pipe to which the replacement trough is joined, then the Contractor shall construct a trough pipe from the manhole outlet to the interior of the manhole at a minimum slope of one (1) percent. The length of the pipe shall be sufficient to provide access to the connecting sewer for normal sewer operating, inspecting and cleaning equipment. The trough pipe shall be blocked at the end opposite of its connection to the outlet piping to prevent materials from the bench reconstruction from slipping into the trough and to provide a solid end around which a bench can be reconstructed.

Joints between the reconstructed manhole trough and the existing piping connected to the manhole under reconstruction shall be made using a flexible-type coupling in accordance with these Specifications. When modifying piping to serve as part of a replacement trough, the Contractor shall leave just enough length of the upper-half of the pipe to allow for construction of joints with the existing sewers. If necessary, the Contractor shall remove a minimal amount of manhole wall material around existing sewers to be connected to the replacement trough to allow for connection of a flexible-type coupling. Voids left by the removal of manhole wall materials for the purpose of constructing joints between replacement troughs and existing sewers shall be filled with hydraulic cement during the reconstruction of the manhole bench and to the satisfaction of GPSD.

When installing replacement troughs, the new piping shall be properly supported at all times to avoid collapsing and inconsistent piping grades through the manhole. Pipes may be supported using concrete blocks. Reconstructed troughs shall be embedded in several inches of concrete to provide a cradle for the installed piping.

4.3 Manhole Bench Reconstruction

Manhole benches shall be reconstructed only after the existing benches and troughs have been properly removed and the trough piping has been reconstructed. If the depth of the manhole walls relative to the existing bench is sufficient, the thickness of the concrete of reconstructed benches shall be no less than six (6) inches throughout the entire area of the reconstructed bench. Benches shall be reconstructed such that there is a consistent surface grade of one percent (1.0%) minimum from the inside edges of the manhole walls to the edge of the trough piping.

Benches shall be reconstructed using a high-early strength, Portland-cement concrete batched and delivered in accordance with the current IDOT Specifications for Class of Concrete PP, a fast-setting polymer modified concrete and masonry repair mortar system such as the Octocrete and Octocrete U systems as manufactured by IPA Systems, a fast-setting, high-early strength, Portland-based resurfacing material such as Underlayment No. F-120 or Underlayment No. F-120FS both manufactured by Sauereisen; a rapid-setting, high-early strength, cementitious patching material such as Strong-Seal QSR as manufactured by The Strong Co., Inc., Quadex Hyperform as manufactured by Quadex Sewer Rehabilitation Products; or an equal approved prior to the receipt of bids. Materials used in bench reconstruction shall be a low slump and quick initial set time product. When the area of bench reconstruction is wet, a water-tolerant product designed specifically for underwater installations such as Octocrete U shall be used.

Materials used during bench reconstruction shall be hand-applied into all crevices and voids within the area of the bench reconstruction. Materials shall be worked into the areas between the bricks of a brick manhole.

The Contractor shall finish the reconstructed bench by brooming its surface to create a rough finish and increase slip resistance. Brooming shall yield a pattern of grooves from

the interior of the manhole wall to the reconstructed channel to assist drainage and solids removal.

5.0 Manhole Barrel Rehabilitation

The objectives of manhole barrel rehabilitation are to structurally reinforce the structure, to improve manhole access and, where specified, to protect the manhole against corrosion. Manhole barrel rehabilitation shall be performed where specified only after preparations in accordance with both the recommendations of the rehabilitation system manufacturer and these Specifications have been completed.

If manhole bench and trough reconstruction or manhole casting and frame removal and replacement are also specified, the barrel rehabilitation shall be performed only after completion of these tasks. Manhole barrel rehabilitation including preparation shall only commence after a reconstructed bench is cured sufficiently to both convey water out of the manhole without damaging the reconstructed bench and support loads without damage including loads from ladders, personnel or other equipment used during the process of manhole barrel preparation and reconstruction.

5.1 Preparation of Manhole Barrels

5.1.1 Removal of Intruding Pipes

Where existing pipes intrude into manholes greater than six (6) inches, the pipes shall be trimmed so that their intrusion is not greater than six (6) inches but not less than two (2) inches. Pipe intrusion shall be measured from the inside edge of the manhole wall near the entrance of the intruding pipe to the greatest extent of the pipe into the manhole.

Cut edges of intruding pipes that have been trimmed shall be consistent across the circular face of the cut. Intruding pipe cuts shall be made parallel to the inside manhole surface.

The Contractor shall take care to utilize cutting or trimming methods that will not break or fracture intruding pipes. The cut edge of pipes shall not be jagged or fractured. Methods chosen by the Contractor shall not break or damage the portion of an intruding pipe that is to remain.

5.1.2 Removal of Intruding Roots

Where roots intrude into a manhole, they shall be removed in accordance with Subsection 3.2 of Section 093 of these Specifications. Additionally, if roots intrude into a manhole through a connecting pipe, they shall be removed and disposed of such that they no longer intrude into the manhole.

5.1.3 Filling Voids in Manholes

Prior to the commencement of manhole rehabilitation, all voids and areas where manhole materials are missing shall be filled with materials and methods in accordance with these Specifications and in accordance with the recommendations of the manufacturer of the manhole barrel rehabilitation system. Preparation of the manhole for planned manhole rehabilitation shall be the purpose of filling voids in the manhole.

Voids shall be filled using one of the following: a dry polymer modified concrete and masonry repair mortar system such as the Octocrete and Octocrete U systems as manufactured by IPA Systems; a fast-setting, high-early strength, Portland-based

resurfacing material such as Underlayment No. F-120 or Underlayment No. F-120FS both manufactured by Sauereisen; a rapid-setting, hydraulic water plug such as InstaPlug No. F-180 as manufactured by Sauereisen, Strong-Plug as manufactured by The Strong Co., Inc., Mainstay ML-10 as manufactured by Madewell Products Corporation, Permacast Plug as manufactured by ConShield Technologies, Inc. or Quadex Quad-Plug as manufactured by Quadex Sewer Rehabilitation Products; a rapid-setting, high-early strength. cementitious patching material such as Strong-Seal QSR as manufactured by The Strong Co., Inc., Quadex Hyperform as manufactured by Quadex Sewer Rehabilitation Products or Permacast Patch as manufactured by ConShield Technologies, Inc.; or an equal approved prior to the receipt of bids. Where bricks are missing from brick manholes, replacement bricks may be used in combination with the void-repair systems. Installation shall be in accordance with the recommendations of the manufacturer and these Specifications.

If deemed necessary by the Engineer, the Engineer shall specify materials and methods for filling voids that extend outside of manhole walls into the surrounding materials.

Great care shall be taken in the installation of materials intended to fill voids. All voids shall be completely filled with the replacement material leaving no air pockets or unfilled void areas. The Contractor shall trowel material into voids to assure elimination of air pockets.

The Contractor shall choose installation methods that do not compromise the complete filling of voids or allow the shifting of installed materials after installation.

After installation of the replacement materials, the Contractor shall smooth the surface of the applied material such that the surface is consistent with the shape of the interior manhole surface.

5.2 Manhole Barrel Rehabilitation

Where specified, manhole barrel rehabilitation shall be performed using one of the following products: Drycon as manufactured by IPA Systems; Substrate Resurfacer No. F-121 as manufactured by Sauereisen; Reliner MSP Cement as distributed by Standard Cement Materials, Inc.; MS-2A as manufactured by The Strong Co., Inc.; Quadex QM-1s Restore or Quadex Aluminaliner both manufactured by Quadex Sewer Rehabilitation Products; CEMTEC Calcium Aluminate Repair Mortar as manufactured by A.W. Cook Cement, Inc.; Mainstay ML-72 Sprayable Microsilica Cement Mortar as manufactured by Madewell Products Corporation; Permacast MS-10,000 as manufactured by ConShield Technologies, Inc., or an equal approved by the Engineer prior to the receipt of bids.

For each container of material brought to the site(s) of work, the anticipated yield of the included quantity of material shall be stamped or printed on the container or an attached label by the manufacturer. If it is not, yield information shall be provided to the Engineer by the manufacturer in a format acceptable to the Engineer prior to the commencement of manhole barrel and corbel rehabilitation.

Installation of this material shall be by either hand or sprayed on using a mobile rotary-sprayer pump and in accordance with the recommendations of the manufacturer.

The material shall be applied in at least two coats of different colors to allow determination of the thoroughness of the application. Each coat shall be not less than ½ inches thick at any given location on the rehabilitated surface. The surface of each layer of applied materials shall be consistent and without irregularities including bulges or depressions; additional materials shall be

used where necessary to compensate for existing irregularities in manhole internal surfaces to produce consistent layers that meet or exceed the desired minimum thicknesses. The contrast of the colors of the material coats with one another and with the existing manhole surface shall be significant enough to make evident by visual inspection any locations of missing or thin materials. Visual inspections of the material and determination of the thoroughness of the application shall be made during the installation of the coating in question. All areas where the installation is determined to be inadequate shall be promptly filled and made compliant with the installation recommendations of the manufacturer.

Locations where there is insufficient materials including voids, crevices and holes shall not be filled with materials taken from other locations on the rehabilitated manhole barrel. Rather, materials shall be added from a supply of materials not part of that material previously applied to the manhole barrel.

Material shall be worked via hand into all crevices, voids and parts of the interior manhole surface. Care shall be taken to work material into voids between existing bricks vacated by mortar materials, into areas around the entire circumference of connecting pipes and up to the bottom of existing or replacement castings. Care shall also be taken not to allow materials to be deposited into connecting pipes.

Manhole barrel rehabilitation materials shall be applied throughout the entire vertical length of manholes from the bench to the bottom of the casting. Materials shall not be applied to the interior surface of the manhole castings. Where the manhole has been constructed monolithically on top of a brick sewer, manhole rehabilitation materials shall be not be applied during wet-weather and shall be applied from the bottom of the casting down to the level of dry-weather flow.

A joint between the coats of the manhole barrel rehabilitation product and the manhole bench (if one exists in a given manhole) shall be constructed by overlapping both coats of the manhole rehabilitation product over the manhole bench. The overlapping materials of each coat shall be tapered to the manhole bench.

The surface of the first coat of material shall be left rough to facilitate the bonding between the two coats.

The second coat of material shall be applied promptly after the application of the first coat to facilitate bonding of the two coats; however, the application of the second coat shall not compromise the structural integrity of the first coat and henceforth shall not be applied until the first coat has sufficient time to assure structural stability. A cumulative thickness of not less than one-inch (1") of coating shall be consistently applied over the entire circumference and vertical distance defined in these specifications. The surface of the applied, final coat shall be made consistently smooth via troweling.

If multiple products are to be utilized and distributed by the same equipment, said equipment shall be thoroughly washed and made free of materials preceding mixing and application of another product.

5.3 Manhole Barrel Rehabilitation using a Cured-In-Place Fiberglass Reinforced Plastic Liner

Where specified by the Engineer, manhole barrel rehabilitation shall be performed by application of a fiberglass cloth and epoxy liner such as PerpetuWall as provided by Protective Liner Systems or an equal approved prior to the receipt of bids. Such liners shall be applied in accordance with these Specifications and the specifications and directions of the manufacturer and shall not be less than 180 mils thick through the entire circumference and vertical height of a given manhole. Application shall include the entire interior manhole wall from, but not including, the manhole bench and trough to the manhole casting. Neither the manhole bench and trough nor the casting and lid shall receive coating with a fiberglass cloth and epoxy liner.

Application of fiberglass cloth and epoxy liners shall only be performed after completion of the reconstruction of manhole benches and troughs (if specified), replacement of manhole casting and lids (if specified) and manhole barrel rehabilitation. Fiberglass cloth and epoxy liners shall only be applied to rehabilitated manhole barrels after the cementitious manhole rehabilitation material is fully cured.

Preparation of manholes for the installation of a fiberglass cloth and epoxy liners shall be per the recommendations of the fiberglass cloth and epoxy liner manufacturer.

6.0 Manhole Frame and Cover Removal and Replacement

Manhole frames and covers shall be removed and replaced where specified by GPSD. Removal and replacement of manhole frames and covers shall be in accordance with Section 043 of these Specifications.

Basis of Payment: This work shall be paid for at the contract unit price per each location for MANHOLES TO BE RECONSTRUCTED (SPECIAL).

MANHOLES TO BE ADJUSTED WITH FRAME AND GRATE (SPECIAL)

Work shall consist of removing and replacing the existing manhole frame and lid, with a waterproof frame and lid, where specified in the plans. The Neenah No. R-1915-H2 frame with a Neenah No. R1916C closed lid, or approved equal, shall be installed in accordance with Article 602 of the Standard Special Provisions and as per the manufacturer's recommendations. All castings shall be of uniform quality, free from blowholes, porosity, hard spots, shrinkage, distortion or other defects. They shall be smooth and well-cleaned by shot blasting or by some other approved method, and shall be coated with asphalt paint that shall result in a smooth coating, tough and tenacious when cold, yet neither tacky nor brittle. Casting shall be sealed to the top of the manhole with butyl rubber sealant.

Closed lid shall be cast with the letters "PSD" on the surface as detailed in the plans. The contractor is responsible for providing all materials, equipment, and labor required to ensure a waterproof seal of the new casting and lid.

The maximum height of adjusting rings to be allowed for use under the manhole frame shall be eight (8) inches. Rubber adjusting rings shall be used for adjustments where the raise is less than or equal to three (3) inches; for all adjustments, at least two (2) inches of rubber adjusting rings shall be used immediately below the manhole frame. Manhole casting adjusting rings may be used for minor height adjustments not exceeding eight (8) inches; however, concrete adjusting rings of thickness two (2) inches or less shall not be allowed. If the surface surrounding the manhole is uneven, tapered rubber adjusting rings as provided by the manufacturer may be used.

Rubber adjusting rings shall be either Infra-Riser Multi-Purpose Rubber Composite Adjustment Risers as manufactured by East Jordan Iron Works, Inc. or rubber adjusting rings as manufactured by American Highway Products, Ltd., or an equal approved prior to the opening of bids.

Where approved by the Engineer, Manhole Safety Ramps as manufactured by American Highway Products, Ltd., may be used as directed.

Prior to starting this work the contractor shall coordinate with the Greater Peoria Sanitary District (GPSD) to ensure compliance with their standards. GPSD may request to have on site representation during execution of this work, contractor will be responsible for coordinating this work with GPSD to ensure a representative is available.

Basis of Payment: This work shall be paid for at the contract unit price per each installed for MANHOLES TO BE ADJUSTED WITH FRAME AND GRATE (SPECIAL).

SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID

Work shall consist of removing and replacing the existing manhole frame and lid, with a frame and lid, where specified in the plans. The Neenah Foundry No. R-1530, Type B or East Jordan Works, Inc. 1920 Frame and Lid with modifications as shown on the Sanitary District's Detail Drawing for castings shall be installed in accordance with Article 602 of the Standard Special Provisions and as per the manufacturer's recommendations. All castings shall be of uniform quality, free from blowholes, porosity, hard spots, shrinkage, distortion or other defects. They shall be smooth and well-cleaned by shot blasting or by some other approved method, and shall be coated with asphalt paint that shall result in a smooth coating, tough and tenacious when cold, yet neither tacky nor brittle. Casting shall be sealed to the top of the manhole with butyl rubber sealant.

Closed lid shall be cast with the letters "PSD" on the surface as detailed in the plans. The contractor is responsible for providing all materials, equipment, and labor required to ensure a waterproof seal of the new casting and lid.

The maximum height of adjusting rings to be allowed for use under the manhole frame shall be eight (8) inches. Rubber adjusting rings shall be used for adjustments where the raise is less than or equal to three (3) inches; for all adjustments, at least two (2) inches of rubber adjusting rings shall be used immediately below the manhole frame. Manhole casting adjusting rings may be used for minor height adjustments not exceeding eight (8) inches; however, concrete adjusting rings of thickness two (2) inches or less shall not be allowed. If the surface surrounding the manhole is uneven, tapered rubber adjusting rings as provided by the manufacturer may be used.

Rubber adjusting rings shall be either Infra-Riser Multi-Purpose Rubber Composite Adjustment Risers as manufactured by East Jordan Iron Works, Inc. or rubber adjusting rings as manufactured by American Highway Products, Ltd., or an equal approved prior to the opening of bids.

Where approved by the Engineer, Manhole Safety Ramps as manufactured by American Highway Products, Ltd., may be used as directed.

Prior to starting this work the contractor shall coordinate with the Greater Peoria Sanitary District (GPSD) to ensure compliance with their standards. GPSD may request to have on site representation during execution of this work, contractor will be responsible for coordinating this work with GPSD to ensure a representative is available.

Basis of Payment: This work shall be paid for at the contract unit price per each installed for SANITARY MANHOLES TO BE ADJUSTED WITH NEW TYPE I FRAME, CLOSED LID.

MANHOLES, TYPE A, SANITARY, 4' - DIAMETER, TYPE 1 FRAME, CLOSED LID

This work shall consist of furnishing and installing Sanitary Manhole and Frame and Lid, including all equipment, labor, and materials for the construction of MANHOLES, TYPE A, SANITARY, 4' - DIAMETER, TYPE 1 FRAME, CLOSED LID.

Manholes shall be constructed as shown on the plans or as directed by the Engineer.

Manholes shall carry a cast iron frame and cover, equal to either Neenah Foundry Number R-1530, Type "B", or East Jordan Iron Works, Inc., 1920 Frame and Lid with modifications as shown on the Sanitary District's Detail Drawing for castings, included in Section 095 of the specifications. A waterproof frame and cover equal to Neenah Number R-1915-H2, Neenah Number R-1916-C or East Jordan Iron Works,

Inc., 1058 Frame and Lid shall be used where shown on the plans. All castings shall be of uniform quality, free from blowholes, porosity, hard spots, shrinkage, distortion or other defects. They shall be smooth and well-cleaned by shot blasting or by some other approved method, and shall be coated with asphalt paint that shall result in a smooth coating, tough and tenacious when cold, yet neither tacky nor brittle. Casting shall be sealed to the top of the manhole with butyl rubber sealant.

Steps in the manhole shall be equal to M.A. Industries, Inc. molded step PS-1-PF and shall be placed as specified on the applicable Detail Drawing as provided on the drawings and/or in Section 095 of the specifications. Manhole steps shall be installed centered over the outlet pipe on eight (8) inch to twelve (12) inch diameter sewers. Steps shall be installed at ninety (90) to the outlet pipe on sewers larger than twelve (12) inches.

Manhole bottoms shall be pre-cast and equal to the "Moorbase Bottom" as manufactured by Darnall Concrete Products Company of Normal, Illinois, except where "saddle-type" manholes are specified by the Engineer. Such other pre-cast bottoms as may be approved in writing by the Engineer shall have preformed inverts.

Pre-cast manhole sections (Tops, Barrels and Bases) shall meet the requirements of ASTM designation C478, as amended, except where otherwise directed by this Section. Manhole section joints shall be constructed using the CS-202 Butyl Rubber Sealant as manufactured by ConSeal Concrete Sealants, Inc., or an equivalent approved prior to the opening of project proposals. Where specified by the Engineer, the exterior side of the manhole joints shall be sealed with CS-212 Polyolefin Backed Exterior Joint Wrap as manufactured by ConSeal Concrete Sealants, Inc., or an equivalent approved prior to the opening of project proposals. All interior joints of the manhole shall be filled neatly with cement mortar. Any wall sections or joints of questionable quality shall be replaced as directed by the Engineer. Joints to seal the connection between pipe and the manhole shall be either the A-Lock-type, or a press seal boot. A twelve-inch (12") or sixteen-inch (16") inch barrel section shall be required immediately beneath a flat-top lid.

The height of the barrel shall be suitable to fit the various depths of the manholes as shown on the plans and as directed in the field by the Engineer. The top of manhole castings and lids shall be flush and consistent with the existing surface surrounding the manhole or with a proposed elevation as directed by the Engineer.

The maximum height of adjusting rings to be allowed for use under the manhole frame shall be eight (8) inches. Rubber adjusting rings shall be used for adjustments where the raise is less than or equal to three (3) inches; for all adjustments, at least two (2) inches of rubber adjusting rings shall be used immediately below the manhole frame. Manhole casting adjusting rings may be used for minor height adjustments not exceeding eight (8) inches; however, concrete adjusting rings of thickness two (2) inches or less shall not be allowed. If the surface surrounding the manhole is uneven, tapered rubber adjusting rings as provided by the manufacturer may be used.

Rubber adjusting rings shall be either Infra-Riser Multi-Purpose Rubber Composite Adjustment Risers as manufactured by East Jordan Iron Works, Inc. or rubber adjusting rings as manufactured by American Highway Products, Ltd., or an equal approved prior to the opening of bids.

Where approved by the Engineer, Manhole Safety Ramps as manufactured by American Highway Products, Ltd., may be used as directed.

Construction of manhole barrel reducing sections shall not be allowed.

Basis of Payment: This work shall be paid for at the contract unit price per each installed for MANHOLES, TYPE A, SANITARY, 4' - DIAMETER, TYPE 1 FRAME, CLOSED LID.

SANITARY SEWER 8"

This work shall consist of furnishing and installing Sanitary Sewer, including all equipment, labor, and materials for the construction of SANITARY SEWER 8".

Unless provided within either these Specifications or on the project plan sheets, information about underground conditions within and near the area of work has not been obtained by the Engineer. The Contractor shall either determine the underground conditions near the proposed sewer construction or repair locations and determine the effect of such conditions upon the proposed work. The Contractor shall assume all risks and accept all costs attributable to unknown and unforeseen underground conditions. Underground conditions such as the presence of underground obstructions or poor soil conditions that unfavorable to the means of sewer construction or reconstruction shall not be a basis for claims for additional compensation.

1.0 General

This Section shall govern all aspects of pipe installation performed using excavation methods. However, all aspects of pipe installation using excavation methods, including, but not limited to, joint construction, bedding, pipe material, concrete thrust block design and construction, backfilling, trench construction, maximum loading imposed on pipe in the trench, and field testing, shall also conform to the Manufacturer's Specification for the particular type of pipe specified. When in conflict, these Specifications shall govern. It shall be the responsibility of the Contractor to notify the Manufacturer at the start of the work and to request the Manufacturer to have a field representative on the job to instruct the Contractor, the Contractor's personnel, Engineers and Inspectors of the latest construction and installation methods.

2.0 Requirements for Specific Pipe Materials

PVC pipe with a standard dimension ratio (SDR) of twenty-six (26) may be laid in depths from four (4) feet to twenty (20) feet with specified bedding and ditch widths. PVC sewer pipe shall not be laid in depths greater than twenty (20) feet.

3.0 PVC Pipe - General

Pipe shall be homogenous throughout and free from cracks, holes, foreign inclusions or other injurious defects. Pipe shall be uniform as practicable in: color, opacity, density and any other physical property. Impact resistance testing shall be in accordance with ASTM Test Method D-2444.

Routine inspection, sampling and testing shall be performed during pipe and fitting production to assure a product quality which exceeds the minimum requirements stated herein. Certificates of Conformance to verify conformance with the standard specifications for pipe and accessories shall be submitted by the manufacturer for approval prior to installation.

4.0 PVC Pipe for Gravity Sanitary Sewers

Polyvinyl chloride (PVC) sewer pipe for gravity sanitary sewers is approved for 6-inch through 36-inch diameter. Large diameter (greater than 12-inch) pipe may be used only with the approval of the Engineer. PVC sewer pipe shall not be laid in depths greater than twenty (20) feet.

Pipe and fittings sized from 6-inches to 15-inches shall conform to ASTM designation D-3034, Type PSM and shall be standard dimension ratio (SDR) 26. Pipe shall be provided in the maximum laying lengths available.

Pipe and fittings sized 18-inch up to 36-inches shall conform to ASTM designation F679, thickness T-1.

4.1 Joints for PVC Gravity Sanitary Sewers

All joints for PVC gravity sanitary sewers shall conform to ASTM standard D-3212 and have flexible elastomeric seals.

5.0 Staking

Refer to Lines and Grades in Section 021 of these Specifications for staking requirements. Staking requirements shall apply to both gravity sanitary sewers and force main sewers

6.0 Excavation

The Contractor shall make to the width and depth necessary for proper construction, all excavations in earth and rock required for constructing the sewers and other structures included in his Contract and according to the Plans and Specifications. Excavation shall include the following: the clearing of the site of the work; the excavating, loosening, classifying, loading, removing, transporting and disposing of all materials, wet or dry, necessary to be removed for purposes of construction; trenching and all trench shoring including sheeting and bracing; all draining and pumping of water; disposal of all excavated materials; and all incidental work. The bottom of the trench shall be smooth and cleared of stones or protruding hard objects. All materials such as trees, brush, debris, etc. removed in site clearing shall be disposed of by the Contractor.

6.1 Trench Width

Trench widths shall be sufficiently wide to permit tamping around the pipe.

Trench widths measured at the top elevation of the pipe shall not exceed the limits for pipe sizes as shown in the table below:

Pipe Inside Diameter

Trench Width at Top of Pipe

Eight (8) inches to Twelve (12) inches, inclusive Pipe O.D. plus Twenty (20) inches;

Fifteen (15) inches to Thirty-Six (36) inches, inclusive Pipe O.D. plus Sixteen (16) inches;

Greater than Thirty-Six (36) inches, inclusive Pipe O.D. plus 24 inches.

Whenever the trench widths measured at the top of the pipe shall exceed the above specified width, the Contractor shall at his own expense remove any disturbed earth and shall refill all the excavated trench from wall to wall with approved granular bedding, concrete cradle or concrete encasement or a combination thereof as directed by the Engineer.

7.0 Bedding

All sewer trenches shall be excavated to a depth of not less than six (6) inches lower than the lowest elevation of the sewer pipe. A minimum of six (6) inches of approved granular bedding shall be placed in the bottom of the trench, with an additional amount of approved granular bedding tamped and cradled around and over the pipe to a level of one (1) foot above the top of the pipe. Pipe shall be supported over its entire length. One (1) foot of approved bedding material above the top of the pipe shall apply to all types of pipe material, with the exception of ductile iron, where the bedding shall be to the top of the pipe when installed at depths less than sixteen (16) feet.

If the ground conditions are not suitable for bedding as outlined, the Contractor must excavate and dispose of the unsuitable material and add approved granular bedding material to support the pipe, as determined by the Engineer. The bedding shall be built up in six (6) inch to twelve (12) inch layers of approved granular backfill to the bottom of the sewer pipe with an additional amount of approved granular

backfill allowed for tamping and cradle beneath, around and over the pipe to a level of one (1) foot above the top of the pipe. The above work shall be made part of the contract amount.

7.1 Approved Bedding Material

Granular pipe cradle and envelope shall be constructed with granular materials from approved local deposits graded to Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition, the Section for Coarse Aggregate Standards. Acceptable graduations for the granular pipe cradle and envelope are CA-7 and CA-11. The material shall be crushed gravel or crushed stone as per IDOT's Coarse Aggregate Standards with a minimum of 75% fractured material, from approved sources as determined by the Engineer.

PVC pipe with excavation depths of sixteen (16) feet to twenty (20) feet shall use CA-7 or CA-11 white rock crushed stone. DIP with excavation depths greater than twenty (20) feet shall also use CA-7 or CA-11 white rock crushed stone for bedding material.

7.2 Concrete Cradle

Structural concrete shall be used for all concrete cradle. Vitrified clay pipe will be laid in concrete cradle when the invert of the sewer is greater than sixteen (16) feet in depth or if the proper trench width is not maintained as specified in paragraph 4.1 above. No extra payment will be allowed for the concrete cradle when the proper trench width was not maintained by the Contractor.

7.3 Concrete Encasement

Where sewers are laid at shallow depth or where shown on the plans and where ordered by the Engineer, the pipe shall be encased in concrete in accordance with the drawing for concrete encasement in Section 095 of these specifications.

8.0 Laying Pipe - General

All pipe shall be carefully inspected before being laid, and no cracked, broken or defective pipe shall be used in the work. Reasonable care in storing the pipe shall be used, with the spigot end being protected from contact with the ground. In stacking, alternate horizontal layers shall be reversed and staggered so that the bell of the upper layer rests on the barrel of the pipe and not the spigot joint. Each pipe shall be laid in conformity with the line and levels given by the Engineers and in the presence of the inspector. The line of each pipe as it is placed shall be located accurately with a laser. Generally, all pipe shall be laid with the bell end upstream. The bottom of the trench shall be so shaped that uniform bearing is obtained throughout the length of each pipe section. Before the pipes are put together the interior of the sewer already in place, including the bell thereof, shall be thoroughly cleared of all dirt and superfluous matters of every description. On small sewers where cleaning after laying may be difficult, a swag or drag shall be kept in the line and pulled forward past each joint after its completion. A watertight clay disc stopper or other approved stopper shall be set in place in the last pipe laid and not be removed except to lay another pipe which in turn must be stoppered. No pipes shall be laid where the water has not first been removed from the ditch.

Upon completion any lines that have rock, silt, mud, or other material inside the pipe shall be cleaned, at the Contractor's expense, to the satisfaction of the Engineer.

8.1 Laying Pipe with a Laser

There are a number of lasers used in construction; hence, the method used to set up the laser prior to laying the sewer shall be approved. However, an above-ground spinning laser is unacceptable as the only laser used to check the grade of the sewer. Beginning at the first manhole, the laser will be leveled and set on line and grade. As the sewer construction reaches the next manhole, the laser will be moved to that new manhole, leveled, and line and grade reset for the next reach of sewer with the percent of grade given on the plans.

The laser will be checked for level, line and grade each morning and noon or at such other times as the construction is resumed after any delay in the work or at such times as in the opinion of the Engineer the line and grade is in question as to its accuracy and conformance with the plans.

The sewer pipe leaving each manhole will be checked at the following intervals; at the end of the first pipe laid, twenty-five (25) foot point and at every hundred foot point thereafter by an external method independent of the laser. The method used for this check shall be determined by the Engineer.

The Contractor shall have a District approved ventilation system on site. The system shall be ready and available for use by the construction crew. The system shall be of adequate size to ventilate the manhole and pipes in order to remove condensation.

8.2 Laying Pipe with Other Methods

The methods described of aligning the center and of placing the invert of the pipe at proper elevation, shall be used unless some other method is approved by the Engineer in writing.

9.0 Water Removal

The Contractor shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly disposal of all water entering the excavations, or other parts of the work and shall keep said excavations dry until the structures to be built therein are completed. No water or unauthorized sewage shall be drained into the work built or under construction.

The entire system of sewers shall be dry and the removal and handling of water required to maintain dry trenches or other excavations for the construction of sewers or other structures in the dry trench, shall be at the expense of the Contractor, including the cost of underdrains where needed.

10.0 Connection to Existing Sewer

When a Contractor is directed to connect an outlet sewer to an existing sewer, he shall immediately provide a temporary bulkhead at the closest manhole. Connections to existing sewers shall be performed using methods detailed in these Specifications. All connections to existing manholes that do not have an existing hole or stub shall be cored and a rubber boot then installed. Other methods shall be approved by the Engineer.

Basis of Payment:

This work shall be paid for at the contract unit price per foot for SANITARY SEWER, 8".

SANITARY SEWER REMOVAL 8"

This work shall include all equipment, labor, and materials necessary for the removal of the existing Sanitary Sewer.

Basis of Payment:

This work shall be paid for at the contract unit price per foot for SANITARY SEWER REMOVAL 8".

SANITARY SEWER SERVICE (OPEN CUT), 6" PVC

This work shall consist of furnishing and installing Sanitary Sewer Service, including all equipment, labor, and materials for the construction of SANITARY SEWER SERVICE (OPEN CUT), 6" PVC.

1.0 Sewer Service

Services shall be constructed using pipe tees placed in the constructed sewer. The branch-inlets of tees shall be six (6) inches in diameter and sloped with an axis at approximately forty-five (45) degrees with the horizontal, or as the Engineer directs, toward the property to be served.

The bell of the branched-tee or the end bell of the riser or stub sewer shall be fitted with a permanent type stopper sized equal to that of the pipe joint. The permanent stopper shall be of the type that will withstand the Standard Air Test for sewers as detailed in Section 039 of these Specifications. Stoppers shall be Cherne Gripper Mechanical Plugs, polyvinyl chloride (PVC) glue on caps, or an approved equal.

Unless otherwise directed by the Engineer, when the branch tees are located in the sewer line, with both tees pointing the same direction there shall be a minimum of one (1) pipe length between tees. Two sewer stubs shall not be installed in a common trench for the purpose of servicing adjoining lots.

2.0 PVC Tees

All PVC tees shall be fabricated and have gasketed joints and wall thickness in conformance with either standard dimension ratio SDR 26 or SDR 21. The SDR of tees shall match that of the adjoining mainline sewer.

3.0 Stub Sewers

Where shown on the plans or directed by the Engineer, a six (6)-inch diameter stub sewer shall be constructed to serve the lots and parcels. The stub sewer shall be constructed of the same material as the main line sewer pipe and be connected to the mainline inlet and riser, if necessary, in accordance with these Specifications. Stub sewers shall extend toward the lots or parcels to be served as shown on the plans. In general, the stub to the lot shall have a slope of not less than 0.75% grade or more than 1.0% grade. The end of the stub shall be provided with a permanent type stopper sized equal to that of the pipe joint. Stopper shall be a Cherne Gripper mechanical plug, PVC glue on cap, or approved equal. If ductile iron pipe is used, a properly-sized ductile iron mechanical cap shall be used.

In the construction of the stub sewers not more than one-half the width of the street shall be opened at one time in order that traffic be maintained at all times. All stub sewers shall be measured from the bell of the tee or the bell of the forty-five (45) degree bend on the riser pipe.

4.0 Plugs

Plugs shall be constructed such that the existing pipe to be plugged is cut and cleaned so that a Fernco-brand flexible type coupling can be installed over the plain end. A section of equal diameter pipe, including the same SDR for PVC pipe and the same class thickness, or an equivalent pressure class thickness, for DI pipe shall then be installed at the other end of the coupling. The pipe shall be plugged by installing a cap over the open end of the pipe.

Basis of Payment: All labor, equipment and materials necessary for Sanitary Services shall be included in the contract unit price per foot for SANITARY SEWER SERVICE (OPEN CUT), 6".

IRRIGATION SPECIAL PROVISIONS

IRRIGATION SYSTEM - POINT OF CONNECTION

This work shall consist of furnishing, installing, and coordinating the following work at the locations specified in the plans:

- 2" water tap of the existing 12" water main, including all excavation, tapping sleeves, saddles, miscellaneous plumbing equipment, and backfilling of all excavated areas.
- 2" PVC Class 200 pipe from the tap to the RPZ Assembly.
- All coordination, and permits, with Illinois American Water Company and the City of Peoria.

This work shall be paid for at the contract unit price per each for IRRIGATION SYSTEM - POINT OF CONNECTION for the type of equipment specified on the plans and shall be payment in full for all labor, tools, materials and equipment needed to complete this work.

RPZ ASSEMBLY, 1.5"

This work shall consist of furnishing, and installing a RPZ Assembly, 1.5" including the following:

- Watts RPZ backflow prevention device, model no. 909qt or approved equal.
- 2" water meter per the Illinois American Water Company Standards.
- One fiberglass Lok Box Enclosure Designer Series, Low Profile, Flip Top Enclosure, as manufactured by Hotbox, Jacksonville, Florida or approved equal. The RPZ and water meter shall both be enclosed within the same Hotbox. The contractor shall submit shop drawings indicating the final layout of the Hotbox plumbing and sizing. The Hotbox shall be installed with a concrete base per the manufacturer's recommendations.
- 2" dia. PVC Class 200 pipe extended 2' outside the Hotbox for connection to the irrigation mainline.

This work shall be paid for at the contract unit price per each for RPZ ASSEMBLY, 1.5" for the type of equipment noted on the plans and shall be payment in full for all labor, tools, materials and equipment needed to complete this work.

IRRIGATION SYSTEM – CONTROLLER

This work shall consist of furnishing and installing Irrigation System – Controllers including the following as shown on the plans:

- One Rainbird ESP-LXD, 50 station, two-wire decoder outdoor controller, with the LSMM Metal Wall-Mount Cabinet or approved equal.
- Electrical connection from the traffic control box to the controller. See plans for location.

See irrigation plans and details for locations and installation information.

Program the controller to apply 1" of water per week. Document the program and provide a copy to the owner for his files.

Provide one instruction session with the owner on the programming and features of the controller. The instruction shall be provided by a Certified Manufacturer's Representative.

This item shall be paid for at the contract unit price per each for IRRIGATION SYSTEM - CONTROLLER for the type of equipment specified on the plans and shall be payment in full for all labor, tools, materials and equipment needed to complete this work.

PVC CLASS 200 PIPE, 1.5", OR 2"

This work shall consist of of trench excavation, along with furnishing and installing irrigation trench granular backfill, type CA-7, and furnishing and installing Polyvinyl Chloride (PVC) Plastic Pipe of the diameter noted and filter fabric as shown in the plans and as indicated by the Engineer. All plastic piping within this system shall be PVC Type I-SDR21 (Class 200) conforming to ASTM D2241, "Specifications for PVC Plastic Pipe", with diameters as shown on the drawings. Pipe shall have solvent weld sockets. All pipe shall be from the same manufacturer. Approved manufacturers are:

- Crestline
- Cantex
- Eagle

Work includes all necessary fittings, excavation, granular backfill, filter fabric, pipe material and installation per the irrigation plans and details. Contractor shall submit samples to the Engineer four (4) weeks prior to start of installation.

This work shall be measured in feet along the top of the pipe which includes all work and materials referenced above. No separate payment will be made for fittings, excavation, granular backfill, or filter fabric and they shall be included in the cost of PVC CLASS 200 PIPE of the diameter noted. This work shall be paid for at the contract unit price per foot for PVC CLASS 200 PIPE of the diameter noted including all labor, tools, materials and equipment needed to complete this work.

VALVE BOX ASSEMBLY, DRIP ZONE

This work shall consist of furnishing, and installing a valve box assembly, drip zone including:

- Rainbird XCZ-PRB-100-COM Control Zone Kit / 1" ball valve with 1" PESB valve or approved equivalent, 1" pressure regulating (40 psi), basket filter.
- Rainbird Standard Rectangular Series Valve Box (VB-STD) or approved equivalent.
- Rainbird field decoder (FD-101TURF) or approved equivalent per box.
- Rainbird DB Series Wire Connectors (DBTWC25) or approved equivalent.
- Gravel sump per details.
- Concrete brick supports for valve box per details.
- One Rainbird FD-101TURF Decoder.
- ID tag identifying the valve number corresponding to the controller.

Work includes all necessary fitting, excavation, and backfilling as shown on the irrigation plans and details.

This item shall be measured on an Each basis and paid for at the contract unit price per each for VALVE BOX ASSEMBLY, DRIP ZONE including all labor, tools, materials and equipment needed to complete this work.

VALVE BOX ASSEMBLY, QUICK COUPLER

This work shall consist of furnishing, and installing a valve box assembly, quick coupler including the following:

- Rainbird Quick Coupling Valve, Model No. 33-DLRC or approved equivalent.
- Rainbird 6" Round Series Valve Box, Model No. VB-6RND or approved equivalent.
- Rainbird Valve Box Locking System, Model No. VB-LOCK-H or approved equivalent.
- Gravel sump per details.

Work includes all necessary fitting, excavation, and backfilling as shown on the irrigation plans and details.

This item shall be measured as an each paid for at the contract unit price per each for VALVE BOX ASSEMBLY, QUICK COUPLER including all labor, tools, materials and equipment needed to complete this work.

VALVE BOX ASSEMBLY, AIR/VACUUM RELIEF & MANUAL LINE FLUSH

This work shall consist of furnishing, and installing Valve Box Assembly, Air/Vacuum Relief & Manual Line Flush including:

- Rainbird Air/Vacuum Relief Valve Kit, Model No. AR Valve Kit or approved equivalent.
- Rainbird 6" Round Series Valve Box, Model No. VB-6RND or approved equivalent.
- Rainbird Removable Flush Cap, Model No. MDCFCAP or approved equivalent.
- Gravel sump per details.

Work includes all necessary fitting, excavation, and backfilling as shown on the irrigation plans and details.

This item shall be measured on an each basis and paid for at the contract unit price per each for VALVE BOX ASSEMBLY, AIR/VACUUM RELIEF and VALVE BOX ASSEMBLY, MANUAL LINE FLUSH for the type noted on the plans including all labor, tools, materials and equipment needed to complete this work.

IRRIGATION BED .9 GPH

This work shall consist of furnishing and installing Irrigation Beds .9 GPH including the following equipment in the interior of each planter bed:

- PVC Class 200 Pipe, 1.5" diameter connection from lateral to drip zone piping
- Rainbird XFD-MA-075 drip irrigation point of connection
- Rainbird XFS Dripline with Copper Shield or approved equivalent, .9 gph, with 12" emitter spacing.
- Rainbird 17mm Insert Fittings or approved equivalent.
- Rainbird Tie-Down Stakes, Model No. TDS-050 or approved equivalent.

Work includes all necessary fittings, excavation, and backfilling as shown on the irrigation plans to install an irrigation bed in each planter box.

This work shall be measured on a square foot of area inside the respective planter box and paid for at the contract unit price per square foot for IRRIGATION BED .9 GPH including all labor, tools, materials and equipment needed to complete this work.

OPERATION INDICATOR

This work shall consist of furnishing, and installing a Rainbird Drip Irrigation Operation Indicator (Model NO. OPERIND), or approved equal, in locations specified on the plans. Adjust the VAN Nozzle to allow for wetting pattern to be emitted. Work includes all necessary fitting, excavation, and backfilling to complete the installation.

This work shall be measured on an each basis and paid for at the contract unit price per each for OPERATION INDICATOR for the type noted on the plans including all labor, tools, materials, and equipment needed to complete this work.

IRRIGATION CONTROL WIRE IN 2" CONDUIT

This work shall be in accordance with Section 873 of the Standard Specifications and consists of furnishing, and installing irrigation control wire in 2" conduit. Work includes all necessary fitting, excavation, and backfilling to complete the installation.

The work includes furnishing and installing 14 gauge wires and surge protection as recommended by Rainbird or approved equal. Submit complete shop drawings, and equipment cut sheets, indicating final runs for the Irrigation Control Wire that have been coordinated with lighting and traffic signal wiring layouts.

This work shall be paid for at the contract unit price per foot for IRRIGATION CONTROL WIRE IN 2" CONDUIT including all labor, tools, materials, and equipment needed to complete this work.

IRRIGATION SLEEVE

This work shall consist of furnishing all labor, equipment, and material for the installation of irrigation sleeve as shown on the plan sheets and details. The irrigation sleeves shall be schedule 80 PVC.

This work shall be measured in length and paid for at the contract unit price per foot for IRRIGATION SLEEVE and shall include all labor, tools, materials and equipment needed to complete this work.

ELECTRICAL SPECIAL PROVISIONS

STREET LIGHTING – RESPONSIBILITY OF BIDDER

The installation shall comply with all applicable codes. The devices to be furnished and installed shall be compatible with the electrical requirements of the system and shall equal or exceed the capacity required. If the bidder finds instances in which governing codes will be violated or the items which are specified are not compatible or have inadequate capacity, he shall immediately advise the Engineer to enable the Engineer to take the proper action before awarding the contract.

The bidder shall be responsible for determining the conflicting structures where the Contractor shall cut trench or excavate for foundations. All expenses incurred because of conflicting structures shall be borne by the Contractor. Such expenses shall be considered as included in the cost of the conduits and foundations and no additional compensation will be allowed.

STREET LIGHTING - RESPONSIBILITY OF CONTRACTOR

The Contractor shall furnish and install complete lighting systems, thoroughly tested and in operating condition. He is cautioned to use the procedures outlined. For example, it is necessary that the wiring be meggered in the presence of the Engineer. All defective or damaged parts must be replaced at no extra cost before payment will be made, even though approval has been given to use the parts on the basis of manufacturer's specifications and descriptions.

Special attention is called to Section 105 of the "Standard Specifications for Road and Bridge Construction."

The drawings indicate the locations of service installation, lights, conduits and wiring. Any minor change in the locations of these items from those shown on the plans will be made without additional charge, if so requested by the Engineer.

The Contractor, at his own expense, shall furnish all materials, equipment, and labor necessary in performing the final inspection. This shall include, but not be limited to, conduit caps, pull wire, etc.

Any inconveniences, delays or additional expense caused by the Contractor in complying with these Special Provisions, shall not be considered cause for additional compensation, and no additional compensation will be allowed

DELIVERY OF MATERIALS

The Contractor shall designate on his progress schedule the quoted shipment on the poles, luminaries, ballasts, and wiring materials that he will use to construct the project.

APPROVAL OF STREET LIGHTING MATERIALS

Electrical materials shall be new and of the types and kinds approved by the Underwriter's Laboratories, Inc.

Before any work is started, the Contractor shall obtain written approval from the Engineer to install the materials he proposes to furnish. Within thirty (30) days after the award of the contract, he shall submit the following to the City Engineer for approval:

A letter affirming that copies of the Special Provisions applying to fixtures and poles have been sent to the manufacturer certifying that the poles to be furnished will meet the requirements of the Special Provisions and three (3) copies of drawings showing each pole and fixture and including for both, the types of material, dimensions, thickness of material, method of fabrication and description of details and color surface, a sample of all cables and conductors, three (3) copies of photometric data including isofootcandle diagram, utilization curve and isocandela diagram for each pattern of each size of each type of fixture specified, description of pattern indicator, ballast, contactor, circuit breakers, selector switch, cabinet, insulating panel board, photocell, and fused safety switch.

GUARANTEES

If a guarantee is included in the standard sales prices of any items at no extra cost, the Contractor shall supply the engineer with a copy. Lamps, fixtures, ballasts, photocells, contactors and circuit breakers may have such a guarantee.

ELECTRIC SERVICE INSTALLATION, SPECIAL

This work shall consist of furnishing and installing the Electrical Service. This work shall be performed in accordance with Section 804 of the Standard Specifications, the plan details, and as noted herein. The electric service installation shall extend beyond utility owned facilities to the point of cable termination of the incoming power to the lighting controller. Termination of the cable in the self-contained meter socket, provided as part of the lighting controller, shall be included in this work.

All costs shall be included and shall be paid for at the contract unit price per each for ELECTRIC SERVICE INSTALLATION, SPECIAL.

LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 200AMP

This work shall consist of furnishing and installing the Lighting Controller. This work shall be performed in accordance with Section 825 of the Standard Specifications, the plan details, and as noted herein.

The enclosure shall be stainless steel, powder coated painted black to match poles.

The work will be measured and paid for at the contract unit price per each for LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 200AMP.

LIGHT POLE FOUNDATION, 24" DIAMETER

This work shall consist of furnishing and installing the 24" diameter pole bases. This pole base shall be used for STREET LIGHTING ASSEMBLY COMPLETE TYPE F1.

This work shall be performed in accordance with Section 836 of the Standard Specifications, the IDOT Detail 836001.01, and as noted herein.

The shaft diameter shall be 2'-0" with a depth of 5'-0", the anchor rod length shall be 4'-9",

The work will be measured and paid for at the contract unit price per foot for LIGHT POLE FOUNDATION, 24" DIAMETER.

LIGHT POLE FOUNDATION, 30" DIAMETER

This work shall consist of furnishing and installing the 30" diameter pole bases. This pole base shall be used for STREET LIGHTING ASSEMBLY COMPLETE TYPE F4.

This work shall be performed in accordance with Section 836 of the Standard Specifications, the IDOT Detail 836001.01, and as noted herein.

The shaft diameter shall be 30" with a depth of 7'-0", the anchor rod length shall be 6'-9".

The work will be measured and paid for at the contract unit price per foot for LIGHT POLE FOUNDATION, 30" DIAMETER.

STREET LIGHTING ASSEMBLY COMPLETE TYPE F1

This work shall consist of furnishing and installing a complete street light assembly including luminaire, light pole, and all appurtenances to complete the installation as shown on the plans and as noted herein.

The Luminaire shall be furnished and installed in accordance with Section 821 of the Standard Specifications, the plan details, and as noted herein. Luminaires shall have a black baked acrylic enamel finish.

The light pole shall be furnished and installed in accordance with Section 830 of the Standard Specifications, the plan details, and as noted herein. Poles shall have a black powder coated finish. Pole/unit identification shall be located on behind the pole near the base so that it is clearly legible.

The assembly shall be provided as described via the fixture schedule and details on the plans. Equals will be considered if submitted for approval a minimum of 6 business days prior to bid acceptance. All equal submittals must be accompanied with photometric calculations as described in Article 1067.01 of the Standard Specifications. No substitutions will be allowed except for equals approved in writing prior to bid.

The luminaire, arm, and light pole assembly with the exception of the lamp shall be warranted with standard manufacturer's warranty for a minimum period of 1 year from project completion. The manufacturer's finish for the davit arm, light pole and base assembly shall be warranted with standard manufacturer's warranty for a minimum period of 5 years from project completion. All certified warranty documents shall be provided with the shop drawings for review and approval by the City of Peoria.

This work will be paid at the contract unit price per each for STREET LIGHTING ASSEMBLY COMPLETE TYPE F1.

STREET LIGHTING ASSEMBLY COMPLETE TYPE F2

This work shall consist of removal of existing luminaire and furnishing and installing a complete street light assembly on existing light pole and cross arm, and shall include all appurtenances to complete the installation as shown on the plans and as noted herein.

The Luminaire shall be furnished and installed in accordance with Section 821 of the Standard Specifications, and as noted herein. Luminaires shall have a black baked acrylic enamel finish.

The existing light pole and cross arm shall remain.

The assembly shall be provided as described via the fixture schedule on the plans. Equals will be considered if submitted for approval a minimum of 6 business days prior to bid acceptance. All equal

submittals must be accompanied with photometric calculations as described in Article 1067.01 of the Standard Specifications. No substitutions will be allowed except for equals approved in writing prior to bid.

The luminaire, with the exception of the lamp shall be warranted with standard manufacturer's warranty for a minimum period of 1 year from project completion. All certified warranty documents shall be provided with the shop drawings for review and approval by the City of Peoria.

This work will be paid at the contract unit price per each for STREET LIGHTING ASSEMBLY COMPLETE TYPE F2.

STREET LIGHTING ASSEMBLY COMPLETE TYPE F3

This work shall consist of removal of existing luminaire and furnishing and installing a complete street light assembly on existing davit pole, and shall include all appurtenances to complete the installation as shown on the plans and as noted herein.

The Luminaire shall be furnished and installed in accordance with Section 821 of the Standard Specifications, and as noted herein.

The assembly shall be provided as described via the fixture schedule and details on the plans. Equals will be considered if submitted for approval a minimum of 6 business days prior to bid acceptance. All equal submittals must be accompanied with photometric calculations as described in Article 1067.01 of the Standard Specifications. No substitutions will be allowed except for equals approved in writing prior to bid.

The luminaire, with the exception of the lamp shall be warranted with standard manufacturer's warranty for a minimum period of 1 year from project completion. All certified warranty documents shall be provided with the shop drawings for review and approval by the City of Peoria.

This work will be paid at the contract unit price per each for STREET LIGHTING ASSEMBLY COMPLETE TYPE F3.

STREET LIGHTING ASSEMBLY COMPLETE TYPE F4

This work shall consist of furnishing and installing a complete street light assembly including luminaire, light pole, breakaway device and all appurtenances to complete the installation as shown on the plans and as noted herein.

The Luminaire shall be furnished and installed in accordance with Section 821 of the Standard Specifications, the plan details, and as noted herein. Luminaires shall have a galvanized finish.

The light pole shall be furnished and installed in accordance with Section 830 of the Standard Specifications, the plan details, and as noted herein. Poles shall have a galvanized finish. Pole/unit identification shall be located on the pole behind the base so that it is clearly legible with split base access door removed.

Breakaway device shall be furnished and installed in accordance with Section 838 of the Standard Specifications, the plan details, and as noted herein.

The assembly shall be provided as described via the fixture schedule and details on the plans. Equals will be considered if submitted for approval a minimum of 6 business days prior to bid acceptance. All equal submittals must be accompanied with photometric calculations as described in Article 1067.01 of the Standard Specifications. No substitutions will be allowed except for equals approved in writing prior to bid.

The luminaire, davit arm, and light pole assembly with the exception of the lamp shall be warranted with standard manufacturer's warranty for a minimum period of 1 year from project completion. The manufacturer's finish for the davit arm, light pole and split base assembly shall be warranted with standard manufacturer's warranty for a minimum period of 5 years from project completion. All certified warranty documents shall be provided with the shop drawings for review and approval by the City of Peoria.

This work will be paid at the contract unit price per each for STREET LIGHTING ASSEMBLY COMPLETE TYPE F4.

ELECTRICAL CONDUCTORS - SLACK REQUIREMENTS

Sufficient length of electrical conductors shall be installed in handholes and in light standards to provide adequate slack so that electrical conductors may be pulled a minimum of 36" out of pole handhole. Said slack shall be neatly coiled and placed in the handholes.

STREET LIGHTING ACCEPTANCE

Final acceptance of the Street Lighting items shall be concluded after test data is approved and a final review of the system by the Engineer and City results in a finding that the system is complete and according to specifications.

STREET LIGHTING WIRING TESTS

The tests outlined in this section are witness tests to be performed during construction in the presence of the Engineer at times approved by the Engineer. They shall be performed by the Contractor's personnel and with his equipment. This work is included in the cost of Street Lighting Assembly Complete of the type specified and no extra compensation will be allowed.

Testing will be performed at opportune times before final inspection. Defects shall be corrected and testing repeated until all sections of the installation are sound. Splicing or repairing of insulation below grade is not permissible except in a handhole.

All data required herein shall be read and recorded at the time of the test by the Engineer in the log which will be retained by him for examination and approval at the time of final inspection. It is the responsibility of the Contractor to make certain that the log is complete and the data proves that the system performance exceeds the minimum requirements. Approval for payment will be given only if the Engineer submits a complete log at time of final inspection and that the final, corrected system meets the minimum requirements.

It is the purpose of the test to confirm the quality of insulation in the ballasts and wiring.

All construction shall be finished when tests are made. The pole shall be erected with ballasts and lamps in-place. Trenches shall be backfilled and all connections shall be made up in handholes, poles and control cabinets.

Insulation resistance shall be measured with a megger generating not less than 500 or more than 1,000 volts. A multimeter is not acceptable because it applies only a few volts which will permit some insulation defects to go undetected. Erratic behavior of the megger during the test indicates an intermittent weakness which must be corrected. Only the lowest value indicated shall be considered or recorded.

The Engineer shall log the serial number and voltage rating of the megger used by the Contractor. He shall then confirm the calibration of the megger by connecting the two leads of the megger together so that the resistance to be measured by the megger when it is turned to full speed is zero. Unless this is true, the megger will give false readings under all other circumstances as well.

Each circuit shall be permanently tagged for identification and then tested at the control centers. The full voltage of the megger shall be applied between ground and each insulated wire in each circuit. The ground shall consist of a driven, copper clad rod 8' x 5/8" or larger, connected by #6 wire to the power company neutral in the control cabinet. Circuits shall be isolated from each other by opening the circuit breakers.

The minimum acceptable resistance to ground shown by the megger shall be as detailed in Article 801.13 (a) (2).

The megger shall be operating at full crank speed when it is read. If needle fluctuates, the lowest resistance value shall be recorded.

If any conductor has less resistance than that shown above, it shall be rejected regardless of atmosphere, groundwater or other conditions which may be alleged to be the reason. Defective cables shall be replaced and retested until satisfactory.

This work shall not be paid for separately but shall be included in the contract unit price bid for STREET LIGHTING ASSEMBLIES COMPLETE of the types specified on the plans.

STREET LIGHTING VOLTAGE REGULATION AND CURRENT BALANCE TESTS

It is the purpose of these tests to confirm the design values of voltage drop and the accuracy of the installed wiring layout. The test shall be performed in the sequence given as rapidly as possible, except for the five-minute warm-up. Only one voltmeter and one ammeter shall be used to eliminate discrepancies between instruments. The instruments shall not be adjusted after testing begins.

- 1) Turn lights on and record "starting" current in supply phase wires A and B.
- 2) After lights are on five minutes:
 - a) Record "operating" current in phase wires A and B;
 - b) Record phase voltage;
 - c) Record voltage across ballast in handhole in end light of circuit designated by Engineer;
 - d) Record voltage of same circuit at control center to determine voltage drop between end lamp and control center; and
 - e) Record current in each lighting circuit.

This work shall not be paid for separately but shall be included in the contract unit price bid for STREET LIGHTING ASSEMBLIES COMPLETE of the types specified on the plans.

WIRING TEST LOG SHEET
(One REQUIRED for each control of service center)

Control Center Number: _____

MEGGER DATA:

Volts generated _____ volts. (Must be 500 to 1,000)
Scale used: 0 to _____ megohms.

Manufactured by: _____
Serial Number: _____

CONSTRUCTION STATUS:

Wiring complete _____ Incomplete

Trenches open _____ Backfilled

MEGOHMS TO GROUND:

Wire A to power supply	_____	megohms
Wire B to power supply	_____	megohms
Wire A to lighting circuit 1	_____	megohms
Wire B to lighting circuit 1	_____	megohms
Wire A to lighting circuit 2	_____	megohms
Wire B to lighting circuit 2	_____	megohms
Wire A to lighting circuit 3	_____	megohms
Wire B to lighting circuit 3	_____	megohms

AMPERES:

Wire A to power supply, initial	_____	amperes
Wire B to power supply, initial	_____	amperes
Wire A to power supply, after 5 minutes on	_____	amperes
Wire B to power supply, after 5 minutes on	_____	amperes
Wire A, Circuit 1 - after 5 minutes on	_____	amperes
Wire A, Circuit 2 - after 5 minutes on	_____	amperes
Wire A, Circuit 3 - after 5 minutes on	_____	amperes
Wire A, Circuit 4 - after 5 minutes on	_____	amperes

REGULATION: (Make following tests in order shown with lights burning after they have been on for five (5) minutes or more).

- 1) Voltage in control cabinet between Wire A and Wire B to Power supply: _____ Volts.
- 2) Voltage between Wire A and Wire B at most distance light (designated by Engineer):
_____ Volts.
- 3) Voltage in control cabinet between Wire A and Wire B to Power supply (same as 1):
_____ Volts.

Engineer

TRAFFIC SIGNAL SPECIAL PROVISIONS

LOCATION OF UNDERGROUND STATE AND CITY OF PEORIA MAINTAINED ELECTRICAL FACILITIES

The Contractor shall be responsible for locating existing IDOT and City of Peoria electrical facilities prior to performing any work at his/her own expense if required. The Contractor shall also be liable for any damage to IDOT and City of Peoria facilities resulting from inaccurate locating.

The Contractor may obtain, on request, plans for the existing electrical facilities from the Department and City of Peoria.

The Contractor shall also be responsible for locating and providing protection for IDOT, City of Peoria, and utility company facilities during all phases of construction. If at any time, the facilities are damaged, the Contractor shall immediately notify the City of Peoria and make all necessary arrangements for repair to the satisfaction of the Engineer. This work shall be included in the contract bid price.

OPERATION OF EXISTING TRAFFIC SIGNALS

The existing traffic signals at

- Adams Street and Oak Street,
- Adams Street and State Street, and
- Jefferson Avenue and Oak Street

shall remain in operation during the construction of the proposed traffic signals. The Contractor shall furnish all labor, materials, and equipment required to keep the existing traffic signals operational during construction staging, including, but not limited to, temporary traffic signal posts, temporary signal heads, and temporary wiring. The integration of the existing video detection system into the proposed traffic signals may require that the intersection run in pre-timed operation. The Contractor shall notify the City of Peoria prior to placing any phases into recall. This work will not be paid for separately, but shall be included in the bid price for the project.

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.

INDUCTIVE LOOP DETECTOR

This work shall be in accordance with Sections 885 and 1079 of the Standard Specifications except as modified herein.

The detector amplifier shall be equipped with an LCD display that is capable of displaying the loop frequency and inductance and shall conform to the following specifications:

- Custom LCD displays complete status and function settings of the detector.
- All functions are programmable from the front panel LCD "Menu" - no removing of detector to change function settings.
- LCD displays loop frequency, loop inductance, & -L/L% values
- LCD displays the accumulated number of loop failure incidents since the detector was last reset to help diagnose intermittent systems.
- LCD bar graph displays loop inductance change to verify ideal sensitivity level setting.
- Selectable "Continuous-Call and "Channel-Off" to aid system troubleshooting.
- 8 loop frequencies and 9 levels of sensitivity.
- 2 Selectable modes of operation: Presence or Pulse.
- 255 second CALL Delay and 25.5 second Extension timers.
- 999 second Max. Presence Timer.
- NEMA TS 2 Status Output.
- EOG (end of green) reset synchronization for Max. Presence timer.
- Super bright LEDS indicate vehicle detection or loop failure.
- Environmentally sealed push button switches to insure trouble-free service.
- Phase Green (Delay Override) input.

The detector amplifier shall be equipped with relay or solid state outputs to ensure that the detectors fail in a constant call mode.

The RENO A&E Model C-1200 Series and EDI Oracle Series are currently approved for use within the District.

Basis of Payment: This work shall be paid for at the contract unit price each for INDUCTIVE LOOP DETECTOR which price shall be payment in full for all labor, equipment, and materials required to supply and install the inductive loop detector described above, complete.

SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED

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 300mm (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 black finish with black doors and tunnel visors.

All traffic signal brackets shall be aluminum construction, Schedule 80, with a natural finish.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED assemblies for the red, yellow, and green solid and arrow indications shall meet or exceed the following minimum specifications:

RED LED ASSEMBLY

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications listed below:

<u>GELcore</u>	<u>Model DR6-RTFB-17A</u>
<u>Dialight</u>	<u>Model DURALED 433-1210-003XL</u>

The LED assembly must conform to the following minimum specifications:

Lens : 300mm (12") Diameter, Red, Hard Coated for Abrasion Resistance, UV Stabilized Dome, Designed to Evenly Distribute Light Across the Entire Face of the Lens to Provide a Uniform Illuminance Across the Face of The LED, Provide a Wide Angle For Viewing, And Eliminate any "Dotty" or Grainy Appearance.

LEDS: Interconnected to minimize the effect of single LED failures, Nominal Wattage: 6-10 W or less, Nominal Wavelength: 625-626nm

Minimum Luminous Intensity (cd): 365

Product Warranty: 5 Year Replacement (Materials, Workmanship, and Intensity)

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.

The assembly shall conform to the latest applicable (Part II) ITE color requirements and meet ITE VTCSH LED Circular Signal Supplement June 2005 specifications for LED traffic signals, including intensity requirements at -40° to 74°C.

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 and ITE VTCSH - STD PART 2.

YELLOW LED ASSEMBLY

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications listed below:

<u>GELcore</u>	<u>Model DR6-YTFB-17A</u>
<u>Dialight</u>	<u>Model DURALED 433-3230-001XL</u>

The LED assembly must conform to the following minimum specifications:

Lens : 300mm (12") Diameter, Clear or Yellow, Hard Coated for Abrasion Resistance, UV Stabilized Dome, Designed to Evenly Distribute Light Across the Entire Face of the Lens to Provide a Uniform Illuminance Across the Face of The LED, Provide a Wide Angle For Viewing, And Eliminate any "Dotty" or Grainy Appearance

LEDS: Interconnected to minimize the effect of single LED failures, Nominal Wattage: 19 W or less, Nominal Wavelength: 589-590nm

Minimum Luminous Intensity (cd): 910

Product Warranty: 5 Year Replacement (Materials, Workmanship, and Intensity)

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.

The assembly shall conform to the latest applicable (Part II) ITE color requirements and meet ITE VTCSH LED Circular Signal Supplement June 2005 specifications for LED traffic signals, including intensity requirements at -40° to 74°C, except for when its terms are in conflict with the terms contained in this special provision. In such cases, this special provision shall supersede the contrary ITE specification.

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 and ITE VTCSH - STD PART 2.

GREEN LED ASSEMBLY

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications listed below:

GELcore Model DR6-GCFB-17A (Clear)
Dialight Model 433-2220-001XL (Tinted Lens)

The LED assembly must conform to the following minimum specifications:

Lens: 300mm (12") Diameter, Hard Coated for Abrasion Resistance, UV Stabilized Dome, Designed to Evenly Distribute Light Across the Entire Face of the Lens to Provide a Uniform Illuminance Across the Face of The LED, Provide a Wide Angle For Viewing, And Eliminate any "Dotty" or Grainy Appearance

LEDS: Interconnected to minimize the effect of single LED failures, Nominal Wattage: 9-13 W or less, Nominal Wavelength: 500nm

Minimum Luminous Intensity (cd): 475

Product Warranty: 5 Year Replacement (Materials, Workmanship, and Intensity)

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.

The assembly shall conform to the latest applicable (Part II) ITE color requirements and meet ITE VTCSH LED Circular Signal Supplement June 2005 specifications for LED traffic signals, including intensity requirements at -40° to 74°C.

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 and ITE VTCSH -STD Part 2

GREEN ARROW LED ASSEMBLY

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications listed below:

<u>GELcore</u>	<u>Model DR6-GCAAN-17A</u>
<u>Dialight</u>	<u>Model 432-2374-001XOD</u>

The LED assembly must conform to the following minimum specifications:

Lens: 300mm (12") Diameter, Hard Coated for Abrasion Resistance, UV Stabilized Dome, Designed to Evenly Distribute Light Across the Entire Face of the Lens to Provide a Uniform Illuminance Across the Face of The LED, Provide a Wide Angle For Viewing, And Eliminate any "Dotty" or Grainy Appearance.

LEDS: Interconnected to minimize the effect of single LED failures, Nominal Wattage: 5-6 W or less, Nominal Wavelength: 500nm, Shall Have a Full Profile Arrow Indication (No Outlined or 2 Row Indications)

Minimum Luminous Intensity (cd): 176

Product Warranty: 5 Year Replacement (Materials, Workmanship, and Intensity)

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.

The assembly shall conform to the latest applicable (Part II) ITE color requirements and meet ITE VTCSH LED Vehicle Arrow Traffic Signal Supplement July 1, 2007 specifications for LED traffic signals, including intensity requirements at -40° to 74°C.

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 3.

YELLOW ARROW LED ASSEMBLY

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications listed below:

<u>GELcore</u>	<u>Model DR6-YTAAN-17A</u>
<u>Dialight</u>	<u>Model 431-3334-001XOD</u>

The LED assembly must conform to the following minimum specifications:

Lens : 300mm (12") Diameter, Clear or Yellow, Hard Coated for Abrasion Resistance, UV Stabilized Dome, Designed to Evenly Distribute Light Across the Entire Face of the Lens to Provide a Uniform Illuminance Across the Face of The LED, Provide a Wide Angle For Viewing, And Eliminate any "Dotty" or Grainy Appearance

LEDS: Interconnected to minimize the effect of single LED failures, Nominal Wattage: 12 W or less, Nominal Wavelength: 590-592nm, Shall Have a Full Profile Arrow Indication (No Outlined or 2 Row Indications)

Minimum Luminous Intensity (cd): 141.6-146

Product Warranty: 5 Year Replacement (Materials, Workmanship, and Intensity)

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.

The assembly shall conform to the latest applicable (Part II) ITE color requirements and meet ITE VTCSH LED Vehicle Arrow Traffic Signal Supplement July 1, 2007 specifications for LED traffic signals, including intensity requirements at -40° to 74°C, except for when its terms are in conflict with the terms contained in this special provision. In such cases, this special provision shall supersede the contrary ITE specification.

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 - STS Part 3.

YELLOW/GREEN BI-MODAL ARROW

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications listed below:

GELcore Model DR6-ECA6-01A (Outline Profile)
Dialight Model 430-6370-001

The LED assembly must conform to the following minimum specifications:

Lens : 12" Diameter, Hard Coated for Abrasion Resistance, UV Stabilized Dome

LEDs: Interconnected to minimize the effect of single LED failures, Nominal Wattage: 10 W Green, 10 W Yellow or less, Nominal Wavelength: 505 -508 nm Green, 590-592 nm Yellow

Product Warranty: 5 Year Replacement (Materials, Workmanship, and Intensity)

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.

The assembly shall conform to the latest applicable (Part II) ITE color requirements and meet ITE specifications for LED traffic signals, including intensity requirements at -40° to 74°C.

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 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.

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 Peoria will furnish all padlocks.

The service for each proposed traffic signal will be pulled from the existing service location. It is the contractors 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.

DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE HANDHOLE, PORTLAND CEMENT CONCRETE

This work shall consist of furnishing the materials and constructing a double handhole and handhole in accordance with the applicable Articles of Section 814 and 1088 of the Standard Specifications with the following modifications:

The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 3/8 inch in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 3/8 inch in diameter. The lift ring and loop shall be recessed in the cover and shall not cause a 1/4" tripping hazard if placed in the sidewalk.

The Contractor shall install heavy-duty, fully-galvanized hooks, with a minimum diameter of 1/2" in the proposed double handhole and handhole. The Contractor shall submit this material to the Engineer prior to construction of the double handholes and handholes.

The lid shall be marked with the legend "Traffic Signals" and shall be painted or cast black by the manufacturer.

Pre-cast double handholes and handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

Basis of Payment: This work will be paid for at the contract unit price each for DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE or HANDHOLE, PORTLAND CEMENT CONCRETE, which price shall be payment in full for all labor, materials, and equipment required to provide the handholes

described above as well as any necessary excavating, backfilling, sidewalk removal, disposal of unsuitable materials, and furnishing all materials within the limits of the handholes.

ELECTRIC CABLE IN CONDUIT, NO. 6 1/C

This work shall be in accordance with the applicable Articles of Sections 807, 817, 873 and 1066 of the Standard Specifications with the following modifications:

This work shall consist of furnishing and installing wire for traffic signal controller service and combination mast arm luminaire service.

When used as a grounding wire, it shall connect all existing traffic signal posts, existing and proposed mast arm assemblies, existing and proposed light poles, handholes (lids, rings, frames – except advanced loop handholes), traffic signal cabinets, lighting controllers, and exposed metallic conduits.

The proposed ground wire shall be an insulated #6 XLP green copper conductor.

This wire shall be bonded to all items and their associated ground rods utilizing mechanical lugs and bolts. This wire may be made continuous by splicing in the adjacent handholes with compression lugs. Split bolts shall not be allowed.

The grounding wire shall be bonded to the grounded conductor at the service disconnect per the NEC.

The Contractor shall provide a sufficient length of cable to ground each existing handhole lid and frame. The length of wire required to ground each handhole will not be measured for payment, but shall be included in the unit bid price for this pay item.

The Contractor shall provide grounding bushings on all metallic service conduits in the controller bases.

All clamps, hardware, and other materials required shall be included in the bid price.

Basis of Payment: This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, 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.

TRAFFIC SIGNAL POST, GALVANIZED, 17 FEET

This work shall be in accordance with Sections 878 and 1077 of the Standard Specifications except as modified herein.

The traffic signal post shall be attached to the foundation with four 3/4" x 18" galvanized anchor bolts. The post base shall be secured to the foundation using galvanized nuts and galvanized steel flat washers that have a minimum thickness of 1/4" and are trapezoidal in shape. The washers shall be sized so as to completely capture the mounting flanges of the traffic signal base. Round washers will not be acceptable.

The traffic signal post shall be galvanized with a high gloss black finish.

Basis of Payment: This work will be paid for at the contract unit price each for TRAFFIC SIGNAL POST, GALVANIZED, 17 FEET of the length specified which price shall be payment in full for all labor, material, and equipment required to furnish and install the traffic signal post and base described above.

PEDESTRIAN PUSH BUTTON

This work shall be in accordance with Sections 888 and 1074 of the Standard Specifications except as modified herein.

All pedestrian push buttons shall have a round case and be equipped with a 2" diameter mushroom head for easy access.

The pedestrian push buttons shall be of polycarbonate construction and shall have a yellow housing. The push button shall utilize a piezo driven solid state switch.

The following models are approved for use within District 4:

- ◆ Polara, Bulldog with momentary LED Indicator with audible buzzer, Round, Black Housing, Model (BDLL2-B)
- ◆ Campbell 4EVR, with momentary LED Indicator with audible buzzer, Round, Black Housing

The pedestrian push button installation shall include all crossing signs and hardware required to mount the pedestrian push button. 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.

The following pedestrian push button signs currently meet Department Specifications: Pelco, Models SF-1013-08, SF-1014-08 or approved equivalent

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, 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:

Currently, only the following models are approved by the Department for use provided that they meet the minimum specifications list below:

GELcore	Model PS7-CFF1-26A (Filled Walking Person/Upraised Hand Overlay, with Countdown Timer)
---------	--

Dialight Model 430-6479-001X (Filled Walking Person/Upraised Hand Overlay, with Countdown Timer)

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/m², Hand = 1,400 cd/m², Person = 2,200 cd/m²

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 prices each for PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER and will be payment 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.

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 each 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 hand holes with traffic signal wires, 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, existing controller and cabinets, and existing controller foundations at the intersections of Adams Street and Persimmon Street, Adams Street and Oak Street, Adams Street and State Street, Adams Street and Walnut Street, Jefferson Avenue and Persimmon Street, Jefferson Avenue and Elm Street, and Jefferson Avenue and Oak Street. On quadrants where existing foundations and hand holes 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.

The Contractor shall deliver all removal items to the City of Peoria: poles shall be delivered to the storage facility located on Darst St., Peoria IL, and all components and equipment shall be delivered to the Public Works Department at 3505 Dries Lane, Peoria, IL. The point of contact is Tom O'Neill at (309) 645-2157.

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.

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 878001-09 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 D

This work shall consist installing a Concrete Foundation, Type D in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction and State Standard 878001-09 with no exceptions.

The proposed location of the Concrete Foundation, Type D 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 D, which price shall be payment in full for all labor, material, and equipment necessary to perform the work described above.

CONCRETE FOUNDATION, TYPE E, 30" DIAMETER
CONCRETE FOUNDATION, TYPE E, 36" DIAMETER

This work shall consist installing a Concrete Foundation, Type E, 36" Diameter in accordance with Section 878 of the Standard Specifications for Road and Bridge Construction and State Standard 878001-09 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, 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.

INTERNALLY ILLUMINATED STREET NAME SIGN

This work shall consist of furnishing and installing an internally illuminated street name sign in accordance with the details in the plans and as specified herein.

The Contractor's attention is directed to the Mast Arm Loading Diagrams for details of the sign face. All messages shall be clearly legible, attracting attention under any lighting conditions.

The signs shall be single-face, internally illuminated, and suspended below a traffic signal mast arm. Internal illumination will be controlled by a photocell located inside the traffic signal controller cabinet. The signs shall not have individual photocells.

The signs shall be 72"± long, 21"± high, and 8"± deep.

Products

Internally illuminated street name signs shall be manufactured by Fluoresco Lighting and Signs (602-276-0600), National Sign and Signal (269-963-2817), or Traffic Signs, Inc. (269-964-7511).

Materials

1. Housing

The housing shall be extruded from 6063-T5 aluminum alloy. Seams shall be welded continuous to provide a weatherproof seal. The housing shall meet the manufacturer's requirements for drainage and weatherproofing. All exterior surfaces of the housing shall be cleaned, prepared, primed, and finished with a standard black finish. All interior surfaces shall be cleaned and left as mill finished aluminum.

2. Face

The sign face shall be white polycarbonate. A continuous piece of 3M #3630-26 green vinyl, or approved equivalent, shall be applied over the sign face to create a white legend and border on a green background. The sign legend shall be as shown in the plans.

3. Illumination

The internally illuminated sign shall be edge lit by no less than two LEDs per square foot of illuminated sign. LEDs shall be rated for no less than 50,000 hours with a minimum. The LEDs shall be evenly spaced and located to provide even illumination of the sign face.

The ballast shall be a high output, rapid start, outdoor rated, cold weather, electronic sign ballast that is compatible with the system voltage and lamp type. The ballast shall be encased and potted and shall be provided by a major manufacturer with proven dependability. Fluorescent sockets shall prevent water intrusion.

4. Wiring

All wiring from the traffic signal controller cabinet to the sign shall be No. 14 AWG three conductor signal cable in accordance with Section 873 of the Standard Specifications. Wire connections shall be made with insulated compression wire nuts. The cost of all wiring shall be included in the cost of the internally illuminated street name sign.

5. Mounting Hardware

The mounting hardware shall allow swinging of the sign to reduce mast arm wind loads. Brackets shall be adjustable for leveling the sign for use on any size mast arm. Brackets shall be cleaned, prepared, primed, and finished with a standard black finish.

Basis of Payment: This work will be paid for at the contract unit price each for INTERNALLY ILLUMINATED STREET NAME SIGN, which price shall be considered payment in full for all labor, equipment, and material necessary to complete the work as specified. All cable required for the installation of the sign shall be included in the cost of the internally illuminated street name sign.

STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 22 FT.
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT.
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 28 FT.
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT.
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.

This work shall consist of providing and installing a Steel Combination Mast Arm Assembly and Pole in accordance with Section 877 of the Standard Specifications for Road and Bridge Construction and State Standard 877011-05 with the following exceptions.

1. The steel combination mast arm assembly shall be galvanized with a high gloss black finish.
2. A decorative base "Sternberg Oxford 9301SS" less the rosettes or approved equal with a high gloss black finish shall be included.
3. The steel combination mast arm assembly shall have a ball type end cap on the mast arm and the pole itself.
4. The steel combination mast arms assemblies shall be a total height of 35 feet but pole diameter and thickness shall be designed for a total height of 45 feet.

Any scratches to the finish shall be fixed in the field by the contractor prior to final payment.

Basis of Payment: This work will be paid for at the contract unit price each for STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, of the length specified, which price shall be payment in full for all labor, material, and equipment necessary to complete the work described above.

LUMINAIRE, LED HORIZONTAL MOUNT 175 WATT

This work shall be in accordance with Section 821 of the Standard Specifications except as modified herein.

Luminaire shall be a down light fixture "Sternberg Glenview 1945 with glass lens" or approved equal with a high gloss black finish. The LED fixture shall be a maximum 175 Watts and deliver a minimum of 9,000 lumens downward.

Basis of Payment: This work shall be paid for at the contract unit price each for LUMINAIRE, LED HORIZONTAL MOUNT 175 WATT and shall be payment in full for all labor, equipment, and materials required to supply and install the luminaire described above, complete.

FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 2-MM12F & SM12F

This work shall be in accordance with Sections 801, 864, 871, and 1076 of the Standard Specifications except as modified herein.

The fiber optic cable shall be a 24 fiber hybrid cable with 12 multi-mode and 12 single mode fibers.

Six multi-mode fibers from each cable entering the cabinet shall be terminated utilizing mechanical or fusion spliced ST connectors in each traffic signal cabinet. All terminated fibers shall be clearly labeled. All required equipment, including but not limited to fiber optic cables, connectors, and hardware shall be included in this pay item.

Fibers not being used shall be labeled "spare", and fibers not attached to a distribution enclosure shall be capped and sealed.

The Contractor shall furnish and install a 24 fiber wall mountable interconnect center in each existing traffic signal cabinet. The Contractor is responsible for rearranging existing components to facilitate installation. The wall mountable interconnect center shall be equipped with two six-fiber bulkheads, complete with all required fiber termination accessories.

All ancillary components, required to complete the fiber optic cable plant, including but not limited to, moisture and water sealants, cable caps, fan-out kits, weather-proof splice kits, boots, etc., shall be supplied under this pay item and will not be paid for separately.

The fiber optic cable shall be clearly marked in each handhole and cabinet with a brightly colored (orange or yellow) weather resistant label securely attached to the cable.

Materials. The single-mode, fiber optic cable shall incorporate a loose, buffer-tube design. The cable shall conform to the requirements of RUS 7 CFR1755.900 (PE-90) for a single sheathed, non-armored cable, and shall be new, unused and of current design and manufacture. The number of fibers in each cable shall be as specified on the plans.

Construction Requirements:

Experience Requirements.

Personnel involved in the installation, splicing and testing of the fiber optic cables shall meet the following requirements:

A minimum of three (3) years experience in the installation of fiber optic cables, including splicing, terminating and testing single mode fibers.

Install two systems where fiber optic cables are outdoors in conduit and where the systems have been in continuous satisfactory operation for at least two years. The Contractor shall submit as proof, photographs or other supporting documents, and the names, addresses and telephone numbers of the operating personnel who can be contacted regarding the installed fiber optic systems.

One fiber optic cable system (which may be one of the two in the preceding paragraph), which the Contractor can arrange for demonstration to the Department representatives and the Engineer.

Installers shall be familiar with the cable manufacturer's recommended procedures for installing the cable. This shall include knowledge of splicing procedures for and equipment being used on this project and knowledge of all hardware such as breakout (furcation) kits and splice closures. The Contractor shall submit documented procedures to the Engineer for approval and to be used by Construction inspectors.

Personnel involved in testing shall have been trained by the manufacturer of the fiber optic cable test equipment to be used, in fiber optic cable testing procedures. Proof of this training shall be submitted to the Engineer for approval. In addition, the Contractor shall submit documentation of the testing procedures for approval by the Engineer.

Installation in Conduit.

During cable pulling operations, the Contractor shall ensure that the minimum bending of the cable is maintained during the unreeling and pulling operations. Entry guide chutes shall be used to guide the cable into the handhole conduit ports. Lubricating compound shall be used to minimize friction. Corner rollers (wheels), if used, shall not have radii less than the minimum installation-bending radius of the cable. A series array of smaller wheels can be used for accomplishing the bend if the cable manufacturers specifically approve the array.

The pulling tension shall be continuously measured and shall not be allowed to exceed the maximum tension specified by the manufacturer of the cable. Fuse links and breaks can be used to ensure that the cable tensile strength is not exceeded. The pulling system shall have an audible alarm that sounds whenever a pre-selected tension level is reached. Tension levels shall be recorded continuously and shall be given to the Engineer upon request.

The cable shall be pulled into the conduit as a single component, absorbing the pulling force in all tension elements. The central strength member and Aramid yarn shall be attached directly to the pulling eye during cable pulling. "Basket grip" or "Chinese-finger type" attachments, which only attach to the cable's outer jacket, shall not be permitted. A breakaway swivel, rated at 95% of the cable manufacturer's approved maximum tensile loading, shall be used on all pulls. When simultaneously pulling fiber optic cable with other cables, separate grooved rollers shall be used for each cable.

Splicing Requirements:

Splices shall be made at locations shown on the Plans. Any other splices shall be permitted only with the approval of the Engineer.

Operation and Maintenance Documentation:

After the fiber optic cable plant has been installed, two (2) complete sets of Operation and Maintenance Documentation shall be provided. The documentation shall, as a minimum, include the following:

- Complete and accurate as-built diagrams showing the entire fiber optic cable plant including locations of all splices.
- Final copies of all approved test procedures.

- Complete performance data of the cable plant showing the losses at each terminal connector.
- Complete parts list including names of vendors.

Testing Requirements:

Testing shall be in accordance with Article 801.13

The Contractor shall submit detailed test procedures for approval by the Engineer. All continuous fiber runs shall be tested bi-directionally at both 1310 nm and 1550 nm with a power meter and optical source. For testing, intermediate breakout fibers may be concatenated and tested end-to-end. Any discrepancies between the measured results and these specifications will be resolved to the satisfaction of the Engineer.

The Contractor shall provide the date, time and location of any tests required by this specification to the Engineer at least 5 days before performing the test. Upon completion of the cable installation, splicing, and termination, the Contractor shall test all fibers in each link for continuity and attenuation. The test procedure shall be as follows:

A Certified Technician utilizing an Optical Source/Power Meter shall conduct the testing. The Technician is directed to conduct the test using the standard operating procedures defined by the manufacturer of the test equipment. All fibers installed shall be tested in both directions.

At the completion of the test, the Contractor shall provide two copies of documentation of the test results to the Engineer. The test documentation shall be bound and shall include the following:

Cable & Fiber Identification:

Cable ID
Cable Location - beginning and end point
Fiber ID, including tube and fiber color
Operator Name
Date & Time
Setup Parameters
Wavelength
Pulse width (OTDR)
Refractory index (OTDR)
Range (OTDR)
Scale (OTDR)
Setup Option chosen to pass OTDR "dead zone"

Test Results:

Optical Source/Power Meter

Total Attenuation
Attenuation (dB/km)

These results shall be provided in tabular form. The following shall be the criteria for the acceptance of the cable:

The test results shall show that the dB/km loss does not exceed +3% of the factory test or 1% of the cable's published production loss. However, no event shall exceed 0.10 dB. If any event is detected above 0.10 dB, the Contractor shall replace or repair the proposed fiber and/or fusion splice and connector including that event point.

The total dB loss of the cable, less events, shall not exceed the manufacturer's production specifications as follows: 0.5 dB/km at both 1310 and 1550 nm.

If the total loss exceeds these specifications, the Contractor shall replace or repair that cable run at the Contractor's expense, both labor and materials. Elevated attenuation due to exceeding the pulling tension during installation shall require the replacement of the cable run at the Contractor's expense, including labor and materials.

The Contractor shall label the destination of each trunk cable onto the cable in each handhole and termination panel.

Slack Storage of Fiber Optic Cables.

A part of this pay item, slack fiber shall be supplied as necessary to allow splicing the fiber optic cables in a controlled environment, such as a splicing van or tent. After splicing has been completed, the slack fiber shall be stored underground in handholes and in the traffic controller cabinets.

The amount of slack cable listed in Article 873.03 shall be revised as follows:

<u>Location</u>	<u>Length of Slack Cable (Ft.)</u>
Handhole	6.5
Double Handhole	26.0
Controller Cabinet	10.0

Basis of Payment: This work will be paid for at the contract unit price per foot for FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 2-MM12F & SM12F and shall be payment in full for all labor, equipment, and materials required to provide, install, and test the fiber optic cable described above, complete.

TRAFFIC SIGNAL BATTERY BACKUP SYSTEM

The following models of Battery Backup Systems are approved for use:

Alpha Novus XFM 1100
Techpower Development M-E XL 1000

The Contractor shall be responsible for providing Battery Backup Systems that are sized appropriately for the intersection load. The total system load shall not exceed the manufacturer's specifications.

The battery backup system for the proposed traffic signal cabinet shall be installed as follows:

- The BBS shall be fully integrated into the proposed traffic signal cabinet by the cabinet supplier at their facility prior to shipping the system to the Contractor
- The cabinet light, ventilation fans, heater strips, and service receptacle shall be wired to a separate circuit that will not be powered by the battery backup system
- A hole of sufficient size for the cables will be drilled into the side of the cabinet to accommodate the battery backup system cables and harnesses from the BBS cabinet. The hole shall be free of sharp edges and equipped with a plastic or rubber grommet.
- The manual by-pass switch shall be installed in the controller cabinet.

GENERAL REQUIREMENTS: The Battery Back-up System (BBS) shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate manually operated non-electronic bypass switch and all necessary hardware and interconnect wiring. The BBS shall provide reliable emergency power to a traffic signal in the event of a power failure or interruption. The transfer from utility power to battery power and vice versa shall not interfere with the normal operation of traffic controller, conflict monitor/malfunction management unit or any other peripheral devices within the traffic controller assembly.

The BBS shall provide power for full run-time operation for an "LED-only" intersection (all colors red, yellow, and green) or flashing mode operation for an intersection using Red LED's. As the battery reserve capacity reaches 50%, the intersection shall automatically be placed in all-red flash. The BBS shall allow the controller to automatically resume normal operation after the power has been restored. The BBS shall log an alarm in the controller for each time it is activated.

All Battery Backup Systems shall include four batteries.

The BBS shall be designed for outdoor applications, and shall meet the environmental requirements of, "NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies," or applicable successor NEMA specifications, except as modified herein.

The BBS shall conform to the following specifications:

1.1 OPERATION

- 1.1 The BBS shall be on line and provide voltage regulation and power conditioning when utilizing utility power.
 - 1.1.1 The BBS shall provide a minimum two (2) hours of full run-time operation and four (4) hours all-red flash operation for an "LED-only" intersection (minimum 700W/1000VA active output capacity, with 80% minimum inverter efficiency).
- 1.19 The BBS shall be equipped with an integrated safety switch that will interrupt inverter output power in the event of a cabinet knockdown. The safety switch may be either internal to the inverter/charger or externally mounted inside of the BBS cabinet. The safety switch shall be designed to interrupt output power in the event that the charger/inverter is tilted more than twenty degrees on any axis. The switch shall be mechanically latching to ensure that power is not automatically restored to the BBS until the charger/inverter has been "reset". The switch shall also be resettable and reusable unless it has been physically damaged.
- 1.2 The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 150 milliseconds.
- 1.3 The BBS shall provide the user with 4-sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel-mounted terminal block, rated at a minimum 120V/1A, and labeled so as to identify each contact. For typical configuration, see the plan detail sheet.
 - 1.3.1 A first set of NO and NC contact closures shall be energized whenever the unit switches to battery power. Contact shall be labeled or marked "On Batt."
 - 1.3.2 The second set of NO and NC contact closures shall be energized whenever the battery approaches approximately 40% of remaining useful capacity. Contact shall be labeled or marked "Low Batt."

- 1.3.3 The third set of NO and NC contact closures shall be energized two hours after the unit switches to battery power. Contact shall be labeled or marked "Timer."
- 1.3.4 The fourth set of NO and NC contact closures shall be energized in the event of inverter/charger failure, battery failure or complete battery discharge. Contact shall be labeled or marked "BBS Fail or Status."
- 1.3.5 A surge suppression unit shall be provided for the output power if available as an option by the BBS manufacturer.
- 1.4 Operating temperature for both the inverter/power transfer relay and manual bypass switch shall be -37°C to $+74^{\circ}\text{C}$.
- 1.5 The Power Transfer Relay shall be rated at 240VAC/30AMPS minimum and Manual Bypass Switch shall be rated at 240VAC/20 amps, minimum.
- 1.55 The manual bypass switch shall be wired to provide power to the BBS when the switch is set to manual bypass.
- 1.6 The BBS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of $2.5 - 4.0 \text{ mV}^{\circ}\text{C}$ per cell.
- 1.6.1 The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 2 meters (6'6") of wire.
- 1.7 Batteries shall not be recharged when battery temperature exceeds $50^{\circ}\text{C} \pm 3^{\circ}\text{C}$.
- 1.8 BBS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 100VAC to 130VAC ($\pm 2\text{VAC}$).
- 1.9 When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, pure sine wave output, $\pm 3\%$ THD, $60\text{Hz} \pm 3\text{Hz}$.
- 1.10 BBS shall be compatible with Illinois DOT's traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.
- 1.11 When the utility line power has been restored at above $105 \text{ VAC} \pm 2 \text{ VAC}$ for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.
- 1.12 When the utility line power has been restored at below $125\text{VAC} \pm 2 \text{ VAC}$ for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.
- 1.13 BBS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.
- 1.14 In the event of inverter/charger failure, battery failure or complete battery discharge, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. The BBS shall always revert back to utility line power and shall be designed to revert back to utility line power in the event of a BBS fault condition.
- 1.15 Recharge time for the battery, from "protective low-cutoff" to 80% or more of full battery charge capacity, shall not exceed twenty (20) hours.
- 1.16 When the intersection is in battery operation, the BBS shall bypass all internal cabinet lights, ventilation fans, heater strips, and service receptacles.

- 1.17 The manual bypass switch shall be wired to provide power to the BBS when the switch is set to manual bypass.
- 1.18 A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the BBS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the BBS is in operation. The light shall be a minimum 1" diameter, be viewable from the driving lanes, and shall be large enough and visible enough to be seen from 200 ft. away.
- 1.19 All 36 volt and 48 volt systems shall include an external component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries. All cables, harnesses, cards, and other components that are required to provide the functionality described above shall be included in the unit bid price for the battery backup system. The following products are currently approved for use within District 4: Alpha Technologies: AlphaGuard with Charge Management Technology Module and Approved Equivalent
- 1.20 The BBS shall be equipped with an integrated safety switch that will interrupt inverter output power in the event of a cabinet knockdown. The safety switch may be either internal to the inverter/charger or externally mounted inside of the BBS cabinet. The safety switch shall be designed to interrupt output power in the event that the charger/inverter is tilted more than twenty degrees on any axis. The switch shall be mechanically latching to ensure that power is not automatically restored to the BBS until the charger/inverter has been "reset". The switch shall also be resettable and reusable unless it has been physically damaged.

2.0 MOUNTING AND CONFIGURATION

2.1 GENERAL

- 2.1.1 Inverter/Charger Unit shall be rack or shelf-mounted.
- 2.1.2 (Reserved).
- 2.1.3 All interconnect wiring provided between Power Transfer Relay, Bypass Switch and Cabinet Terminal Service Block shall be no greater than two (2) meters (6'6") of #10 AWG wire.
- 2.1.4 Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be #18 AWG wire.
- 2.1.5 All necessary hardware for mounting (shelf angles, rack, etc) shall be included in the bid price of the BBS. The swing-trays shall be screwed to the Type IV or Type V NEMA cabinets using continuous stainless steel or aluminum piano hinge. All bolts/fasteners and washers shall meet the following requirements:

2.3 EXTERNAL BATTERY CABINET

- 2.3.1 The external cabinet shall be a rated NEMA Type 3R Cabinet.
- 2.3.2 Inverter/Charger and Power Transfer Relay shall be installed inside the external battery cabinet and the manually operated Bypass Switch shall be installed inside the existing Traffic Signal Cabinet.
- 2.3.3 Batteries shall be housed in the external cabinet which shall be NEMA Standard rated cabinet mounted to the side of the Type IV or Type V Cabinet (see plan sheets for details). This external

- battery cabinet shall conform to the IDOT Standard Specifications for traffic signal cabinets for the construction and finish of the cabinet.
- 2.3.4 The external battery cabinet shall mount to the Type IV or Type V NEMA Cabinet with a minimum of four (4) bolts to the satisfaction of the Engineer.
- 2.3.5 The dimensions of the external battery cabinet shall be 25" (L) x 16" (W) x 41" (H) and installed in accordance with the plan sheet cabinet detail and this specification. Additionally, the external battery cabinet shall be black and matched in color to the traffic signal cabinet.
- 2.3.6 The cabinet shall include heater mats for each battery shelf and/or battery. If the BBS charger/inverter does not have facilities to accommodate heater mat connections, thermostatically controlled heater mats shall be provided with the system. The heater mat thermostat shall be a separate thermostat (from the ventilation fan thermostat) and be adjustable from 0°F to 32°F for heater mat turn-on.
- 2.3.7 A warning sticker shall be placed on the outside of the cabinet indicating that there is an Uninterruptible Power Supply inside the cabinet.
- 2.3.8 The external battery cabinet shall be ventilated through the use of louvered vents (2), filters, and one thermostatically controlled fan as per NEMA TS 2 Specifications. The cabinet shall include a cleanable or replaceable cabinet filter.
- 2.3.9 External battery cabinet fan shall be AC operated from the same line output of the Manual Bypass Switch that supplies power to the Type IV or Type V Cabinet.
- 2.3.10 The BBS with external battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. The external battery cabinet shall have a hinged door opening to the entire cabinet. The cabinet shall include a bottom constructed from the same material as the cabinet.
- 2.3.11 The external cabinet shall be equipped with a power receptacle to accommodate the inverter/charger. The receptacle shall be wired to the line output of the manual bypass switch.
- 3.1 MAINTENANCE, DISPLAYS, CONTROLS AND DIAGNOSTICS
- 3.2 The BBS shall include a display and /or meter to indicate current battery charge status and conditions.
- 3.3 The BBS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.
- 3.4 The BBS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.
- 3.5 The BBS and batteries shall be easily replaced with all needed hardware and shall not require any special tools for installation.
- 3.6 The BBS shall be equipped with an RS-232 port.
- 3.7 The BBS shall include a resettable front-panel event counter display to indicate the number of times the BBS was activated and a front-panel hour meter to display the total number of hours the unit has operated on battery power.
- 3.8 Manufacturer shall include two (2) sets of equipment lists, operation and maintenance manuals, and board-level schematic and wiring diagrams of the BBS, and the battery data sheets.

Manufacturer shall include any software needed to monitor, diagnose, and operate the BBS. The manufacturer shall include any required cables to connect to a laptop computer.

3.8 The BBS shall include a data cable for the serial connection to the RS232 port and diagnostic software if it is available as an option with the unit.

3.9 Two copies of the owner/maintenance manuals shall be provided with the BBS.

4.1 BATTERY SYSTEM

4.2 Individual batteries shall be 12V type and shall be easily replaced and commercially available off the shelf.

4.3 The batteries shall be premium gel type with a 5 year full replacement warranty.

4.4 Batteries used for BBS shall consist of a minimum of four (4) to eight (8) batteries with a cumulative minimum rated capacity of 240 amp-hours.

4.5 Batteries shall be deep cycle, completely sealed, silver alloy VRLA (Valve Regulated Lead Acid) requiring no maintenance with maximum run time.

4.6 Batteries shall be certified by the manufacturer to operate over a temperature range of – 40°C to +71°C.

4.7 The batteries shall be provided with appropriate interconnect wiring and corrosion-resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.

4.8 Batteries shall indicate maximum recharge data and recharging cycles.

4.9 Battery interconnect wiring shall be via modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. Harness shall be equipped with mating power-pole style connectors for batteries and a single, insulated plug-in style connection to inverter/charger unit. Harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.

4.9 Battery terminals shall be covered and insulated so as to prevent accidental shorting.

5.0 QUALITY ASSURANCE

5.1 BBS shall be manufactured in accordance with a manufacturer quality assurance (QA) program. The QA program shall include two types of quality assurance: (1) Design quality assurance and (2) Production quality assurance. The production quality assurance shall include statistically controlled routine tests to ensure minimum performance levels of BBS units built to meet this specification and a documented process of how problems are to be resolved.

5.2 QA process and test results documentation shall be kept on file for a minimum period of seven years.

5.3.1 Battery Backup System designs not satisfying design qualification testing and the production quality assurance testing performance requirements described below shall not be labeled, advertised, or sold as conforming to this specification.

5.4 DESIGN QUALIFICATION TESTING

The manufacturer, or an independent testing lab hired by the manufacturer, shall perform design Qualification Testing on new BBS designs, and when a major design change has been implemented on an existing design. A major design change is defined as a design change (electrical or physical) which changes any of the performance characteristics of the system, or results in a different circuit configuration.

- 5.4.1 Burn In. The sample systems shall be energized for a minimum of 5 hours, with full load of 700 watts, at temperatures of +74°C and -37°C., excluding batteries, before performing any design qualification testing.
- 5.4.2 Any failure of the BBS, which renders the unit non-compliant with the specification after burn-in, shall be cause for rejection.
- 5.4.3 For Operational Testing, all specifications may be measured including, but not limited to:
 - 5.4.3.1 Run time while in battery backup mode, at full load.
 - 5.4.3.2 Proper operation of all relay contact closures (“On-Batt”, “Low-Batt”, “Timer” and “BBS-Fail”).
 - 5.4.3.3 Inverter output voltage, frequency, harmonic distortion, and efficiency, when in battery backup mode.
 - 5.4.3.4 All utility mode – battery backup mode transfer voltage levels. See BBS Spec 1.8, 1.11 and 1.12.
 - 5.4.3.5 Power transfer time from loss of utility power to switchover to battery backed inverter power.
 - 5.4.3.6 Backfeed voltage to utility when in battery backup mode.
 - 5.4.3.7 IEEE/ANSI C.62.41 compliance.
 - 5.4.3.8 Battery charging time.
 - 5.4.5.9 Event counter and runtime meter accuracy.

5.5 PRODUCTION QUALITY CONTROL TESTING

- 5.5.1 Production Quality Control tests shall consist of all of the above listed tests and shall be performed on each new system prior to shipment. Failure to meet requirements of any of these tests shall be cause for rejection. The manufacturer shall retain test results for seven years.
- 5.5.2 Each BBS shall be given a minimum 100-hour burn-in period to catch any premature failures.
- 5.5.3 Each system shall be visually inspected for any exterior physical damage or assembly anomalies. Any defects shall be cause for rejection.

6.0 WARRANTY

Manufacturers shall provide a minimum two (2) year factory-repair warranty for parts and labor on the BBS from date of acceptance by the State. Batteries shall be warranted for full replacement for five (5) years from date of purchase. The warranty shall be included in the total bid price of the BBS.

The Contractor shall furnish a warranty certificate for each Battery Backup System that includes the equipment description and details, serial numbers, effective dates, and the details of the

warranty regarding materials and labor. The warranty period shall begin on the date of installation and the warranty certificate shall reflect this date.

Basis of Payment: The above work will be paid for at the contract unit price each for TRAFFIC SIGNAL BATTERY BACKUP SYSTEM shall be payment in full for all labor, materials, and equipment required to provide, install, and test the battery backup system described above, complete.

NPDES PERMIT

The Engineer will apply for and obtain a National Pollutant Discharge Elimination System Construction General Permit (NPDES CGP) prior to beginning construction.

The CGP has four main elements:

Notice of Intent (NOI)

Storm Water Pollution Prevention Plan (SWPPP)

Incident of Non-Compliance (ION)

Notice of Termination (NOT)

The Notice of Intent (NOI) serves as the application for the CGP. A Notice of Intent must be post-marked at least thirty days prior to the commencement of any construction activity on site. The Erosion Control Plan sheets will convey the information required for a Storm Water Pollution Prevention Plan (i.e. drainage patterns, area of soil disturbance, location of storm water discharges, etc.). The Contractor shall be responsible for having these plan sheets available for viewing during business hours at the project site. An Incident of Non-Compliance must be completed and submitted to the IEPA if, at any time, an erosion or sediment control device fails.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)



Route FAU 6673, FAU 6674, and FAU 6639
Section 12-00356-01-PV
County Peoria

Marked Rte. Jefferson Ave., Adams St., and Oak St.
Project No. TIG-5093(161)
Contract No. 89262

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.

Jeffrey M. Smith

Print Name

City Engineer

Title

City of Peoria

Agency

JM Smith

Signature

7-20-2012

Date

I. Site Description:

A. Provide a description of the project location (include latitude and longitude):

Jefferson Ave. from Persimmon St. (1463820.4610, 2452843.3580) to William Kumpf Blvd. (1465600.4991, 2454947.6952)
Adams St. from Persimmon St. (1463463.0747, 2453124.3232) to William Kumpf Blvd. (1465184.1613, 2455156.1855)
Persimmon St. from Jefferson Ave. (1463979.4569, 2452871.6743) to Washington St. (1463379.0301, 243381.5105)
Maple St. from Jefferson Ave. (1464183.5285, 2453264.9145) to Washington St. (1463518.1372, 2453837.0062)
Elm St. from Jefferson Ave. (1464498.9876, 243560.2738) to Adams St. (1464110.6645, 2453891.3645)
Oak St. from Jefferson Ave. (1464792.8136, 2453872.1134) to Washington St. (1464197.8190, 2454379.2694)
State St. from Adams St. (1464693.2040, 2454526.2941) to Commercial St. (1463982.1575, 2455115.8219)
Walnut St. from Jefferson Ave. (1465304.4074, 2454590.8965) to Adams St. (1464892.5718, 2454928.6893)
Commercial St. from proposed construction limits southwest of Oak St. (1463539.2084, 2454292.4574) to State St. (1464127.2509, 2454987.8937)

B. Provide a description of the construction activity which is the subject of this plan:

This work consists of furnishing all labor, materials, and equipment necessary improve the 22 block area bounded by Persimmon Street, Jefferson Avenue, Walnut Street, and Water Street, including the following streets: Jefferson Avenue, Adams Street, Commercial Street, Persimmon Street, Maple Street, Elm Street, Oak Street, State Street, and Walnut Street. Improvements include hot mix asphalt overlay, full depth hot mix asphalt pavement, portland cement concrete pavement, curb & gutter, concrete sidewalks with brick bandings, porous concrete sidewalks, brick parking areas, storm sewer systems, street lighting systems, landscape planters, traffic signals, and all miscellaneous appurtenant and incidental items shown in the plans and as described in these Special Provisions.

C. Provide the estimated duration of this project: 880 Calendar Days

- D. The total area of the construction site is estimated to be 13.93 acres.
The total area of the site estimated to be disturbed by excavation, grading or other activities is 12.51 acres.
- E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:
0.95
- F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:
Map Unit Name - Urban Land, slopes are generally 1-10%, erosivity is N/A for urban land
- G. Provide an aerial extent of wetland acreage at the site:
No wet lands have been identified within the project limits.
The Illinois River is approximately 0.1 miles southeast of the construction area (see location map).
- H. Provide a description of potentially erosive areas associated with this project:
Areas of open excavation and grading, especially on the steeper east-west side streets, could experience limited erosion.
- 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):
Existing pavement, curb & gutter, and sidewalk will be removed and storm/sanitary improvements will be constructed. Grading will occur to allow for roadway, curb & gutter, sidewalk, and entrance construction. Planter box locations will be excavated to allow for construction of the planter box walls before being filled with engineered soil and plants.
Green spaces will be graded and sodded at various locations with slopes being generally in the 1-10% range with a maximum grade of 1:4.
- 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 Peoria
- L. 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 receiving water will be the Illinois River located east/southeast of the project area. Some of the runoff from the project will be directed to the Greater Peoria Sanitary District (GPSD) plant before being discharged into the Illinois River.
- M. 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.
N/A
- N. 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

106

- 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:

O. The following pollutants of concern will be associated with this construction project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input checked="" type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solid Waste Debris | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) |
| <input checked="" 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

- 1. **Stabilized 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(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or

107

permanently ceased, but in no case more than seven (7) days 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.

Where the initiation of stabilization measures by the seventh day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following stabilization practices will be used for this project:

- | | |
|--|---|
| <input type="checkbox"/> Preservation of Mature Vegetation | <input type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input checked="" 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 type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) |

Describe how the stabilization practices listed above will be utilized during construction:

The disturbed areas that will become green space will be sodded. Other areas will receive pavement, sidewalks, entrance pavement, and planters.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

After construction has finished, the land owner will take ownership and maintain accordingly.

2. **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 type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Rock Outlet Protection |
| <input type="checkbox"/> Temporary Ditch Check | <input type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input 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 checked="" type="checkbox"/> Other (specify) Drywells |
| <input type="checkbox"/> Permanent Check Dams | <input checked="" type="checkbox"/> Other (specify) Planter Boxes |
| <input type="checkbox"/> Permanent Sediment Basin | <input checked="" type="checkbox"/> Other (specify) Porous Concrete Sidewalks |
| <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:

1. During construction, areas outside the construction limits shall not be used for staging (except as described in the plans and directed by the Engineer), parking vehicles or construction equipment, storage of materials, or other related construction activities.

a. As construction proceeds, the Contractor shall place temporary erosion control facilities at locations shown on the plans prior to beginning work in that area.

b. Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or other pollutant in accordance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.

c. Sediment collected during construction of the various temporary erosion control systems shall be

disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance shall be included in the unit bid price for earth excavation.

d. The temporary erosion control systems shall be removed as directed by the Engineer once it is no longer needed or no longer functioning. The cost of this removal shall be included in the unit bid price for various temporary erosion control pay items.

2. Drywells, planter boxes, and porous concrete sidewalk will help to limit runoff as they are completed.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Temporary items will be cleaned and removed from the project limits.

Water will collect in the planter boxes and infiltrate into the ground below. Water that does not fully infiltrate in the planter boxes will be drained into drywells, which will also collect some of the roadway storm water flows, which will allow infiltration back into the ground.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

a. 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.

b. 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 storm water management controls:

Proposed storm sewers will drain into proposed planter boxes and dry wells that will use infiltration to decrease runoff from within the project limits. Upon completion of construction, the City of Peoria will be responsible for the upkeep and sediment removal from these structures.

4. **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:

There are no additional procedures or requirements approved by local officials.

5. **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.

- a. 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
- b. 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 – 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.
 - 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.

Inlet Filters will be maintained when the sediment has reached one-third the installed height.

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 that is 0.5 inch or greater or equivalent snowfall.

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, 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.5 of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	<u>FAU 6673, FAU 6674, and FAU 6639</u>	Marked Rte.	<u>Jefferson Ave., Adams St., and Oak St.</u>
Section	<u>12-00356-01-PV</u>	Project No.	<u>TIG-5093(161)</u>
County	<u>Peoria</u>	Contract No.	<u>89626</u>

This certification statement is a part of the 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 the 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

<hr/> Print Name	<hr/> Signature
<hr/> Title	<hr/> Date
<hr/> Name of Firm	<hr/> Telephone
<hr/> Street Address	<hr/> City/State/ZIP

Items which this Contractor/subcontractor will be responsible for as required in Section II.5. of the SWPPP:

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 Peoria, its officers, directors, employees, agents, representatives, subsidiaries, successors,

and assigns

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

AGREEMENT TO PLAN QUANTITY (BDE)

Effective: January 1, 2012

Revise the second paragraph of Article 202.07(a) of the Standard Specifications to read:

“When the plans or work have been altered, or when disagreement exists between the Contractor and the Engineer as to the accuracy of the plan quantities, either party shall, before any work is started which would affect the measurement, have the right to request in writing and thereby cause the quantities involved to be measured. When plan quantities are revised by the issuance of revised plan sheets that are made part of the contract, and the Contractor and the Engineer have agreed in writing that the revised quantities are accurate, no further measurement will be required and payment will be made for the revised quantities shown.”

80275

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: November 2, 2006

Revised: January 1, 2012

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

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 fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.

BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting, \$/ton (\$/metric ton).

%AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 24.99) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$

For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).

D = Depth of the HMA mixture, in. (mm).

G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.

V = Volume of the bituminous material, gal (L).

SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. 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?

Yes No

Signature: _____ Date: _____

80173

CONCRETE MIX DESIGN – DEPARTMENT PROVIDED (BDE)

Effective: January 1, 2012

For the "Portland Cement Concrete (BDE)" special provision included in this project, specifically Article 1020.05(a), the Contractor has the option to request the Engineer determine mix design material proportions for Class PV, PP, RR, BS, DS, SC, and SI concrete. A single mix design for each class of concrete will be provided. Acceptance by the Contractor to use the mix design developed by the Engineer shall not relieve the Contractor from meeting specification requirements.

80277

CONSTRUCTION AIR QUALITY - DIESEL VEHICLE EMISSIONS CONTROL (BDE)

Effective: April 1, 2009

Revised: January 2, 2012

Diesel Vehicle Emissions Control. The reduction of construction air emissions shall be accomplished by using cleaner burning diesel fuel. The term "equipment" refers to any and all diesel fuel powered devices rated at 50 hp and above, to be used on the project site in excess of seven calendar days over the course of the construction period on the project site (including any "rental" equipment).

All equipment on the jobsite, with engine ratings of 50 hp and above, shall be required to: use Ultra Low Sulfur Diesel fuel (ULSD) exclusively (15 ppm sulfur content or less).

Diesel powered equipment in non-compliance will not be allowed to be used on the project site, and is also subject to a notice of non-compliance as outlined below.

The Contractor shall certify that only ULSD will be used in all jobsite equipment. The certification shall be presented to the Department prior to the commencement of the work.

If any diesel powered equipment is found to be in non-compliance with any portion of this specification, the Engineer will issue the Contractor a notice of non-compliance and identify an appropriate period of time, as outlined below under environmental deficiency deduction, in which to bring the equipment into compliance or remove it from the project site.

Any costs associated with bringing any diesel powered equipment into compliance with these diesel vehicle emissions controls shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall also not be grounds for a claim.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists, he/she will notify the Contractor in writing, and direct the Contractor to correct the deficiency within a specified time period. The specified time-period, which begins upon Contractor notification, will be from 1/2 hour to 24 hours long, based on the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge regarding the time period.

The deficiency will be based on lack of repair, maintenance and diesel vehicle emissions control.

If the Contractor fails to correct the deficiency within the specified time frame, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

If a Contractor or subcontractor accumulates three environmental deficiency deductions in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of contract time, waiver of penalties, or be grounds for any claim.

80237

CONSTRUCTION AIR QUALITY - IDLING RESTRICTIONS (BDE)

Effective: April 1, 2009

Idling Restrictions. The Contractor shall establish truck-staging areas for all diesel powered vehicles that are waiting to load or unload material at the jobsite. Staging areas shall be located where the diesel emissions from the equipment will have a minimum impact on adjacent sensitive receptors. The Department will review the selection of staging areas, whether within or outside the existing highway right-of-way, to avoid locations near sensitive areas or populations to the extent possible. Sensitive receptors include, but are not limited to, hospitals, schools, residences, motels, hotels, daycare facilities, elderly housing and convalescent facilities. Diesel powered engines shall also be located as far away as possible from fresh air intakes, air conditioners, and windows. The Engineer will approve staging areas before implementation.

Diesel powered vehicle operators may not cause or allow the motor vehicle, when it is not in motion, to idle for more than a total of 10 minutes within any 60 minute period, except under any of the following circumstances:

- 1) The motor vehicle has a gross vehicle weight rating of less than 8000 lb (3630 kg).
- 2) The motor vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
- 3) The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.
- 4) A police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator.
- 5) The primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.
- 6) A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
- 7) When idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations, lumbering operations; oil or gas well servicing; or farming operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions.
- 8) When the motor vehicle idles due to mechanical difficulties over which the operator has no control.
- 9) The outdoor temperature is less than 32 °F (0 °C) or greater than 80 °F (26 °C).

When the outdoor temperature is greater than or equal to 32 °F (0 °C) or less than or equal to 80 °F (26 °C), a person who operates a motor vehicle operating on diesel fuel shall not cause or allow the motor vehicle to idle for a period greater than 30 minutes in any 60 minute period while waiting to weigh, load, or unload cargo or freight, unless the vehicle is in a line of vehicles that regularly and periodically moves forward.

The above requirements do not prohibit the operation of an auxiliary power unit or generator set as an alternative to idling the main engine of a motor vehicle operating on diesel fuel.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists based on non-compliance with the idling restrictions, he/she will notify the Contractor, and direct the Contractor to correct the deficiency.

If the Contractor fails to correct the deficiency a monetary deduction will be imposed. The monetary deduction will be \$1,000.00 for each deficiency identified.

80239

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)

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 13.00 % 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.

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

DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (BDE)

Effective: April 1, 2011
 Revised: January 1, 2012

Add the following to Article 603.02 of the Standard Specifications:

- “(j) Temporary Hot-Mix Asphalt (HMA) Ramp (Note 1) 1030
- “(k) Temporary Rubber Ramps (Note 2)

Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)°

Revise Article 603.07 of the Standard Specifications to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and Class SI concrete has been placed, the work shall be protected by a barricade and two lights for at least 72 hours.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)

Thickness at inside edge	Height of casting \pm 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

80272

ERRATA FOR THE 2012 STANDARD SPECIFICATIONS (BDE)

Effective: April 1, 2012
Revised: August 1, 2012

- Page 182 Article 354.12. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 183 Article 355.10. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 185 Article 356.10. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 337 Article 505.04. Revise the subparagraph "(i) Match Making." to "(i) Match Marking."
- Page 360 Article 506.07. In the first line of the second paragraph change "AASHTO/AWS D1.5/D1.5:" to "AASHTO/AWS D1.5M/D1.5:".
- Page 361 Article 506.08. In the third line of the sixth paragraph change "506.08(a)" to "506.08(b)".
- Page 531 Article 609.07. In the first paragraph delete "TYPE B, C, or D INLET BOX STANDARD 609001 or".
- Page 601 Article 701.18(h). In the first line of the first paragraph change "Standard 701426." "Standard 701426 and 701427."
- Page 609 Article 703.05. In the first line of the second paragraph delete "or Type II".
- Page 989 Article 1083.02(a). In the seventh line of the first paragraph change "Table 14.7.5.2-2" to "Table 14.7.5.2-1".
- Page 1019 Article 1095.01(b)(1)e. In the table for daylight reflectance for the color yellow, change "75 % min." to "45 % min."

80296

FLAGGER AT SIDE ROADS AND ENTRANCES (BDE)

Effective: April 1, 2009

Revise the second paragraph of Article 701.13(a) of the Standard Specifications to read:

“The Engineer will determine when a side road or entrance shall be closed to traffic. A flagger will be required at each side road or entrance remaining open to traffic within the operation where two-way traffic is maintained on one lane of pavement. The flagger shall be positioned as shown on the plans or as directed by the Engineer.”

Revise the first and second paragraph of Article 701.20(i) of the Standard Specifications to read:

“Signs, barricades, or other traffic control devices required by the Engineer over and above those specified will be paid for according to Article 109.04. All flaggers required at side roads and entrances remaining open to traffic including those that are shown on the Highway Standards and/or additional barricades required by the Engineer to close side roads and entrances will be paid for according to Article 109.04.”

80228

FRICITION 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 ^{1/} 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 ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/}	
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 ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}	
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) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{5/} Crushed Steel Slag ^{4/ 5/} Crushed Concrete ^{3/}	
		<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) ^{5/} 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) ^{5/} Crushed Steel Slag ^{5/} Crushed Concrete ^{3/} No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Dolomite ^{2/}	Any Mixture E aggregate
		75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF) ^{5/} , Crushed Steel Slag ^{5/} , or Crystalline Crushed Stone
75% Crushed Gravel or Crushed Concrete ^{3/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF) ^{5/} , or Crushed Steel Slag ^{5/}		
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) ^{5/} Crushed Steel Slag ^{5/} No Limestone.	
		<u>Other Combinations Allowed:</u> <i>Up to...</i> <i>With...</i>	

Use	Mixture	Aggregates Allowed	
		50% Crushed Gravel, Crushed Concrete ^{3/} , or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF) ^{5/} , Crushed Steel Slag ^{5/} , 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

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	N _{design} = 50	93.0 – 97.4%	91.0%
IL-9.5, IL-12.5	N _{design} ≥ 90	92.0 – 96.0%	90.0%
IL-9.5, IL-9.5L, IL-12.5	N _{design} < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	N _{design} ≥ 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	N _{design} < 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

MATERIAL TRANSFER DEVICE (BDE)

Effective Date: June 15, 1999

Revised Date: January 1, 2009

Description. This work shall consist of placing _____ (1) _____, except that these materials shall be placed using a material transfer device.

Materials and Equipment. The material transfer device shall have a minimum surge capacity of 15 tons (13.5 metric tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following:

- (a) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage. Material Transfer devices having paver style hoppers shall have a horizontal bar restraint placed across the foldable wings which prevents the wings from being folded.
- (b) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 14 tons (12.7 metric tons).
- (c) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger or two full-length longitudinal paddle mixers designed for the purpose of re-mixing the hot-mix asphalt (HMA). The longitudinal paddle mixers shall be located in the paver hopper insert.

CONSTRUCTION REQUIREMENTS

General. The material transfer device shall be used for the placement of _____ (2) _____. The material transfer device speed shall be adjusted to the speed of the paver to maintain a continuous, non-stop paving operation.

Use of a material transfer device with a roadway contact pressure exceeding 20 psi (138 kPa) will be limited to partially completed segments of full-depth HMA pavement where the thickness of binder in place is 10 in. (250 mm) or greater.

Structures. The material transfer device may be allowed to travel over structures under the following conditions:

- (a) Approval will be given by the Engineer.
- (b) The vehicle shall be emptied of HMA material prior to crossing the structure and shall travel at crawl speed across the structure.
- (c) The tires of the vehicle shall travel on or in close proximity and parallel to the beam and/or girder lines of the structure.

Method of Measurement. This work will be measured for payment in tons (metric tons) for _____
(3) _____ materials placed with a material transfer device.

Basis of Payment. This work will be paid for at the contract unit price per ton (metric ton) for MATERIAL TRANSFER DEVICE.

The various HMA mixtures placed with the material transfer device will be paid for as specified in their respective specifications. The Contractor may choose to use the material transfer device for other applications on this project; however, no additional compensation will be allowed.

80045

1. This work shall consist of placing HMA surface course mixtures according to Section 406 of the Standard Specifications, except that these materials shall be placed using a material transfer device.
2. The material transfer device shall be used for the placement of all HMA surface course mixtures placed with a paver including ramps.
3. This work will be measured for payment in tons (metric tons) for all HMA surface course materials placed with a material transfer device.

METAL HARDWARE CAST INTO CONCRETE (BDE)

Effective: April 1, 2008

Revised: January 1, 2012

Add the following to Article 503.02 of the Standard Specifications:

“(h) Metal Hardware Cast into Concrete 1006.13”

Add the following to Article 504.02 of the Standard Specifications:

“(j) Metal Hardware Cast into Concrete 1006.13”

Revise Article 1006.13 of the Standard Specifications to read:

“**1006.13 Metal Hardware Cast into Concrete.** Unless otherwise noted, all steel hardware cast into concrete, such as inserts, brackets, cable clamps, metal casings for formed holes, and other miscellaneous items, shall be galvanized according to AASHTO M 232 or AASHTO M 111. Aluminum inserts will not be allowed. Zinc alloy inserts shall be according to ASTM B 86, Alloys 3, 5, or 7.

When stainless steel junction boxes or other stainless steel appurtenances are specified, Type 304 stainless steel hardware shall be used when cast into concrete.

The inserts shall be UNC threaded type anchorages having the following minimum certified proof load.

Insert Diameter	Proof Load
5/8 in. (16 mm)	6600 lb (29.4 kN)
3/4 in. (19 mm)	6600 lb (29.4 kN)
1 in. (25 mm)	9240 lb (41.1 kN)”

80203

PAVEMENT MARKING REMOVAL (BDE)

Effective: April 1, 2009

Add the following to the end of the first paragraph of Article 783.03(a) of the Standard Specifications:

“The use of grinders will not be allowed on new surface courses.”

80231

PAVEMENT PATCHING (BDE)

Effective: January 1, 2010

Revise the first sentence of the second paragraph of Article 701.17(e)(1) of the Standard Specifications to read:

“In addition to the traffic control and protection shown elsewhere in the contract for pavement, two devices shall be placed immediately in front of each open patch, open hole, and broken pavement where temporary concrete barriers are not used to separate traffic from the work area.”

80254

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

| 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

PLANTING WOODY PLANTS (BDE)

Effective: January 1, 2012

Revised: August 1, 2012

Revise the second sentence of Article 253.01 of the Standard Specifications to read:

“This work shall consist of furnishing, transporting, and planting woody plants such as trees, shrubs, evergreens, vines, and seedlings.”

Revise Article 253.02(a) of the Standard Specifications to read:

“(a) Trees, Shrubs, Evergreens, Vines and Seedlings 1081.01”

Revise the first sentence of Article 253.08(a) of the Standard Specifications to read:

“(a) Excavation for Deciduous Trees and Evergreen Trees.”

Revise the first sentence of Article 253.08(b) of the Standard Specifications to read:

“(b) Excavation for Deciduous Shrubs, Evergreen Shrubs, Vines, and Seedlings.”

Revise the first sentence of Article 253.13 of the Standard Specifications to read:

“All deciduous and evergreen trees, with the exception of multi-stem or clump form specimens, over 8 ft (2.5 m) in height shall require three 6 ft (2 m) long steel posts so placed that they are equidistant from each other and adjacent to the outside of the ball.”

Revise the first sentence of the second paragraph of Article 253.14 of the Standard Specifications to read:

“This period of establishment for the plants shall not delay acceptance of the entire project and final payment due if the contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities subject to this period of establishment, multiplied by their contract unit prices.”

Revise the third sentence of Article 253.16 of the Standard Specifications to read:

“Trees, shrubs, evergreens, and vines will be measured as each individual plant.”

Revise Article 253.17 of the Standard Specifications to read:

“**253.17 Basis of Payment.** This work will be paid for at the contract unit price per each for TREES, SHRUBS, EVERGREENS, or VINES, of the species, root type, and plant size specified; and per unit for SEEDLINGS. Payment will be made according to the following schedule.

(a) Initial Payment. Upon completion of planting, mulch covering, wrapping, and bracing, 90 percent of the pay item(s) will be paid.

(b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining ten percent of the pay item(s) will be paid.”

Revise the first paragraph of Article 1081.01 of the Standard Specifications to read:

“**1081.01 Trees, Shrubs, Evergreens, Vines, and Seedlings.** Trees, shrubs, evergreens, vines, and seedlings shall be according to the current standards adopted by the ANLA.”

80278

PORTLAND CEMENT CONCRETE (BDE)

Effective: January 1, 2012

Revise Notes 1 and 2 of Article 312.24 of the Standard Specifications to read:

"Note 1. Coarse aggregate shall be gradation CA 6, CA 7, CA 9, CA 10, or CA 11, Class D quality or better. Article 1020.05(d) shall apply.

Note 2. Fine aggregate shall be FA 1 or FA 2. Article 1020.05(d) shall apply."

Revise the first paragraph of Article 312.26 of the Standard Specifications to read:

"312.26 Proportioning and Mix Design. At least 60 days prior to start of placing CAM II, the Contractor shall submit samples of materials for proportioning and testing. The mixture shall contain a minimum of 200 lb (90 kg) of cement per cubic yard (cubic meter). Portland cement may be replaced with fly ash according to Article 1020.05(c)(1). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design."

Revise the second paragraph of Article 503.22 of the Standard Specifications to read:

Other cast-in-place concrete for structures will be paid for at the contract unit price per cubic yard (cubic meter) for CONCRETE HANDRAIL, CONCRETE ENCASEMENT, and SEAL COAT CONCRETE."

Add the following to Article 1003.02 of the Standard Specifications:

(e) Alkali Reaction.

(1) ASTM C 1260. Each fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.03 percent will be assigned to limestone or dolomite fine aggregates (manufactured stone sand). However, the Department reserves the right to perform the ASTM C 1260 test.

- (2) ASTM C 1293 by Department. In some instances, such as chert natural sand or other fine aggregates, testing according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The laboratory performing the ASTM C 1293 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing".

The ASTM C 1293 test shall be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container, wick of absorbent material, or amount of coverage inside the container with blotting paper, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly. If the aggregate is manufactured into multiple gradation numbers, and the other gradation numbers have the same or lower ASTM C 1260 value, the ASTM C 1293 test result may apply to multiple gradation numbers.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 test result. When the Contractor performs the test, a split sample shall be provided to the Engineer. The Engineer may also independently obtain a sample at any time. The aggregate will be considered reactive if the Contractor or Engineer obtains an expansion value of 0.040 percent or greater.

Revise Article 1004.02(d) of the Standard Specifications to read:

"(d) Combining Sizes. Each size shall be stored separately and care shall be taken to prevent them from being mixed until they are ready to be proportioned. Separate compartments shall be provided to proportion each size.

- (1) When Class BS concrete is to be pumped, the coarse aggregate gradation shall have a minimum of 45 percent passing the 1/2 in. (12.5 mm) sieve. The Contractor

may combine two or more coarse aggregate sizes, consisting of CA 7, CA 11, CA 13, CA 14, and CA 16, provided a CA 7 or CA 11 is included in the blend.

- (2) If the coarse aggregate is furnished in separate sizes, they shall be combined in proportions to provide a uniformly graded coarse aggregate grading within the following limits.

Class of Concrete ^{1/}	Combined Sizes	Sieve Size and Percent Passing						
		2 1/2 in.	2 in.	1 3/4 in.	1 1/2 in.	1 in.	1/2 in.	No. 4
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

Class of Concrete ^{1/}	Combined Sizes	Sieve Size (metric) and Percent Passing						
		63 mm	50 mm	45 mm	37.5 mm	25 mm	12.5 mm	4.75 mm
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

1/ See Table 1 of Article 1020.04.

2/ Any of the listed combination of sizes may be used."

Add the following to Article 1004.02 of the Standard Specifications:

(g) Alkali Reaction.

- (1) Each coarse aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content (Na₂O + 0.658K₂O) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will

be assigned to limestone or dolomite coarse aggregates. However, the Department reserves the right to perform the ASTM C 1260 test.

- (2) ASTM C 1293 by Department. In some instances testing a coarse aggregate according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor according to Article 1003.02(e)(3).

Revise the first paragraph of Article 1019.06 of the Standard Specifications to read:

“1019.06 Contractor Mix Design. A Contractor may submit their own mix design and may propose alternate fine aggregate materials, fine aggregate gradations, or material proportions. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design.”

Revise Section 1020 of the Standard Specifications to read:

“SECTION 1020. PORTLAND CEMENT CONCRETE

1020.01 Description. This item shall consist of the materials, mix design, production, testing, curing, low air temperature protection, and temperature control of concrete.

1020.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Cement	1001
(b) Water	1002
(c) Fine Aggregate	1003
(d) Coarse Aggregate	1004
(e) Concrete Admixtures	1021
(f) Finely Divided Minerals	1010
(g) Concrete Curing Materials	1022
(h) Straw	1081.06(a)(1)
(i) Calcium Chloride	1013.01

1020.03 Equipment. Equipment shall be according to the following.

Item	Article/Section
------	-----------------

(a) Concrete Mixers and Trucks	1103.01
(b) Batching and Weighing Equipment	1103.02
(c) Automatic and Semi-Automatic Batching Equipment	1103.03
(d) Water Supply Equipment	1103.11
(e) Membrane Curing Equipment	1101.09
(f) Mobile Portland Cement Concrete Plants	1103.04

1020.04 Concrete Classes and General Mix Design Criteria. The classes of concrete shown in Table 1 identify the various mixtures by the general uses and mix design criteria. If the class of concrete for a specific item of construction is not specified, Class SI concrete shall be used.

For the minimum cement factor in Table 1, it shall apply to portland cement, portland-pozzolan cement, and portland blast-furnace slag except when a particular cement is specified in the Table.

The Contractor shall not assume that the minimum cement factor indicated in Table 1 will produce a mixture that will meet the specified strength. In addition, the Contractor shall not assume that the maximum finely divided mineral allowed in a mix design according to Article 1020.05(c) will produce a mixture that will meet the specified strength. The Contractor shall select a cement factor within the allowable range that will obtain the specified strength. The Contractor shall take into consideration materials selected, seasonal temperatures, and other factors which may require the Contractor to submit multiple mix designs.

For a portland-pozzolan cement, portland blast-furnace slag cement, or when replacing portland cement with finely divided minerals per Articles 1020.05(c) and 1020.05(d), the portland cement content in the mixture shall be a minimum of 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). When calculating the portland cement portion in the portland-pozzolan or portland blast-furnace slag cement, the AASHTO M 240 tolerance may be ignored.

Special classifications may be made for the purpose of including the concrete for a particular use or location as a separate pay item in the contract. The concrete used in such cases shall conform to this section.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA

Class of Conc.	Use	Specification Section Reference	Cement Factor cwt/cu yd (3)		Water / Cement Ratio lb/lb	Sump in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)	
			Min.	Max			Days	3	14			28
PV	Pavement	420 or 421										
	Base Course	353										
	Base Course Widening	354	5.65 (1)	7.05	0.32 - 0.42	2 - 4	Ty III	3500	5.0 - 8.0	CA 5 & CA 7,		
	Driveway Pavement	423	6.05 (2)			(5)	3500	(650)		CA 5 & CA 11,		
	Shoulders	483								CA 7, CA 11,		
	Shoulder Curb	662								or CA 14		
PP	Pavement Patching	442										
	Bridge Deck Patching (10)											
	PP-1		6.50	7.50	0.32 - 0.44	2 - 4		3200			CA 7, CA 11,	
	PP-2		6.20 (Ty III)	7.20 (Ty III)	0.32 - 0.38	2 - 6		Article 701.17(e)(3)b.			CA 13, CA 14,	
	PP-3		7.35	7.35	0.32 - 0.35	2 - 4		at 48 hours			or CA 16	
	PP-4		7.35 (Ty III) (8)	7.35 (Ty III) (8)	0.32 - 0.35	2 - 4		at 24 hours				
RR	PP-5	6.00 (9)	6.25 (9)	0.32 - 0.50	2 - 6		at 16 hours					
		6.75 (9)	6.75 (9)	0.32 - 0.40	2 - 8		at 8 hours			CA 13, CA 14, or		
							at 4 hours			CA 16		
	Railroad Crossing	422	6.50	7.50	0.32 - 0.44	2 - 4		3500 (650)	4.0 - 7.0	CA 7, CA 11,		
	Bridge Superstructure		6.20 (Ty III)	7.20 (Ty III)	0.32 - 0.44	2 - 4		at 48 hours		or CA 14		
BS	Bridge Approach Slab	503	6.05	7.05	0.32 - 0.44	2 - 4		4000	5.0 - 8.0	CA 7, CA 11,		
	Various Precast Concrete Items					(5)		(675)		or CA 14 (7)		
PC	Wet Cast	1042	5.65	7.05	0.32 - 0.44	1 - 4		See Section 1042	5.0 - 8.0	CA 7, CA 11, CA 13,		
	Dry Cast		5.65 (TY III)	7.05 (TY III)	0.25 - 0.40	0 - 1			N/A	CA 14, CA 16, or		
PS	Precast Prestressed Members	504	5.65	7.05	0.32 - 0.44	1 - 4		Plans	5.0 - 8.0	CA 11 (11),		
	Precast Prestressed Piles and Extensions	512	5.65 (TY III)	7.05 (TY III)	0.32 - 0.44	1 - 4		5000		CA 13, CA 14 (11),		
	Precast Prestressed Sight Screen	639						3500		or CA 16		

100

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA

Class of Conc.	Use	Specification Section Reference	Cement Factor cwt/cu yd (3)		Water / Cement Ratio lb/lb	Sump in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)
			Min.	Max			3	14	28		
DS	Drilled Shaft (12)	516	6.65	7.05	0.32 - 0.44	6 - 8 (6)		4000 (675)		5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.
	Metal Shaft Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	512 734 837									
SC	Seal Coat	503	5.65 (1) 6.05 (2)	7.05	0.32 - 0.44	3 - 5		3500 (650)		Optional 6.0 max.	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 7 & CA 11, CA 7, or CA 11
SI	Structures (except Superstructure)	503									
	Sidewalk Slope Wall Encasement Box Culverts End Section and Collar Curb, Gutter, Curb & Gutter, Median, and Paved Ditch Concrete Barrier Sign Structures Spread Footing Concrete Foundation Pole Foundation (12) Traffic Signal Foundation Drilled Shaft (12) Square or Rectangular	424 511 512 540 542 606 637 734 836 878		7.05	0.32 - 0.44	2 - 4 (5)		3500 (650)		5.0 - 8.0	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 7, CA 11, CA 13, CA 14, or CA 16 (13)

Notes:

- (1) Central-mixed.
- (2) Truck-mixed or shrink-mixed. Shrink-mixed concrete will not be permitted for Class PV concrete.
- (3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.
- (4) The maximum slump may be increased to 7 in. when a high range water-reducing admixture is used for all classes of concrete, except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 8 in. For Class PP-1, the maximum slump may be increased to 6 in. For Class PS, the 7 in. maximum slump may be increased to 8 1/2 in. if the high range water-reducing admixture is the polycarboxylate type.
- (5) The slump range for slipform construction shall be 1/2 to 1 1/2 in.
- (6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 8 - 10 in. at the point of placement. If a water-reducing admixture is used in lieu of a high range water-reducing admixture according to Article 1020.05(b)(7), the slump shall be 2 - 4 in.
- (7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.
- (8) In addition to the Type III portland cement, 100 lb/cu yd of ground granulated blast-furnace slag and 50 lb/cu yd of microsilica (silica fume) shall be used. For an air temperature greater than 85 °F, the Type III portland cement may be replaced with Type I or II portland cement.
- (9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.
- (10) For Class PP concrete used in bridge deck patching, the aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design shall have 72 hours to obtain a 4,000 psi compressive or 675 psi flexural strength for all PP mix designs.
- (11) The nominal maximum size permitted is 3/4 in. Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.
- (12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 2 cu yd trial batch to verify the mix design.
- (13) CA 3 or CA 5 may be used when the nominal maximum size does not exceed two-thirds the clear distance between parallel reinforcement bars, or between the reinforcement bar and the form. Nominal maximum size is defined in Note 11.
- (14) Alternate combinations of gradations sizes may be used with the approval of the Engineer. Refer also to Article 1004.02(d) for additional information on combining sizes.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)

Class of Conc.	Use	Specification Section Reference	Cement Factor kg/cu m (3)		Water / Cement Ratio kg/kg	Sump (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)	
			Min.	Max			Days	3	14			28
PV	Pavement	420 or 421										
	Base Course	353										
	Base Course Widening	354										
	Driveway Pavement	423	335 (1)	418	0.32 - 0.42	50 - 100 (5)	Ty III 24,000 (4500)	24,000 (4500)		5.0 - 8.0	CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14	
	Shoulders	483	360 (2)									
	Shoulder Curb	662										
PP	Pavement Patching											
	Bridge Deck Patching (10)	442										
	PP-1		385 (Ty III)	445 (Ty III)	0.32 - 0.44	50 - 100	at 48 hours	Article 701.17(e)(3)b.		4.0 - 7.0	CA 7, CA 11, CA 13, CA 14, or CA 16	
	PP-2		435	435	0.32 - 0.38	50 - 150	at 24 hours			4.0 - 6.0		
	PP-3		435 (Ty III) (8)	435 (Ty III) (8)	0.32 - 0.35	50 - 100	at 16 hours			4.0 - 6.0		
	PP-4		355 (9)	370 (9)	0.32 - 0.50	50 - 150	at 8 hours			4.0 - 6.0		
PP-5		400 (9)	400 (9)	0.32 - 0.40	50 - 200	at 4 hours			4.0 - 6.0	CA 13, CA 14, or CA 16		
RR	Railroad Crossing	422	385 (Ty III)	445 (Ty III)	0.32 - 0.44	50 - 100	24,000 (4500) at 48 hours			4.0 - 7.0	CA 7, CA 11, or CA 14	
	Bridge Superstructure		365 (Ty III)	425 (Ty III)								
BS	Bridge Approach Slab	503	360	418	0.32 - 0.44	50 - 100 (5)	27,500 (4650)			5.0 - 8.0	CA 7, CA 11, or CA 14 (7)	
	Various Precast Concrete Items											
PC	Wet Cast Dry Cast	1042	335 (Ty III)	418 (Ty III)	0.32 - 0.44	25 - 100	See Section 1042			5.0 - 8.0	CAT, CAT1, CA13, CA 14, CA 16, or CA 7 & CA 16	
	Precast Prestressed Members	504	335	418	0.25 - 0.40	0 - 25				N/A	CA 11 (11), CA 13, CA 14 (11), or CA 16	
PS	Precast Prestressed Piles and Extensions	512	335 (Ty III)	418 (Ty III)	0.32 - 0.44	25 - 100		Plans 34,500		5.0 - 8.0		
	Precast Prestressed Sight Screen	639										

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)

Class of Conc.	Use	Specification Section Reference	Cement Factor kg/cu m (3)		Water / Cement Ratio kg/kg	Sump mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum Days			Air Content %	Coarse Aggregate Gradations (14)									
			Min.	Max			3	14	28											
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734	395	418	0.32 - 0.44	150 - 200 (6)	27,500 (4650)			5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.									
												503	335 (1) 360 (2)	418	0.32 - 0.44	75 - 125	24,000 (4500)		Optional 6.0 max.	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 7 & CA 11, CA 7, or CA 11

162

- Notes:
- (1) Central-mixed.
 - (2) Truck-mixed or shrink-mixed. Shrink-mixed concrete will not be permitted for Class PV concrete.
 - (3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.
 - (4) The maximum slump may be increased to 175 mm when a high range water-reducing admixture is used for all classes of concrete except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 200 mm. For Class PP-1, the maximum slump may be increased to 150 mm. For Class PS, the 175 mm maximum slump may be increased to 215 mm if the high range water-reducing admixture is the polycarboxylate type.
 - (5) The slump range for slipform construction shall be 13 to 40 mm.
 - (6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 200 - 250 mm at the point of placement. If a water-reducing admixture is used in lieu of a high range water-reducing admixture according to Article 1020.05(b)(7), the slump shall be 50 - 100 mm.
 - (7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.
 - (8) In addition to the Type III portland cement, 60 kg/cu m of ground granulated blast-furnace slag and 30 kg/cu m of microsilica (silica fume) shall be used. For an air temperature greater than 30 °C, the Type III portland cement may be replaced with Type I or II portland cement.
 - (9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.
 - (10) For Class PP concrete used in bridge deck patching, the aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design shall have 72 hours to obtain a 27,500 kPa compressive or 4,650 kPa flexural.
 - (11) The nominal maximum size permitted is 19 mm. Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.
 - (12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 1.5 cu m trial batch to verify the mix design.
 - (13) CA 3 or CA 5 may be used when the nominal maximum size does not exceed two-thirds the clear distance between parallel reinforcement bars, or between the reinforcement bar and the form. Nominal maximum size is defined in Note 11.
 - (14) Alternate combinations of gradation sizes may be used with the approval of the Engineer. Refer also to Article 1004.02(d) for additional information on combining sizes.

1020.05 Other Concrete Criteria. The concrete shall be according to the following.

- (a) Proportioning and Mix Design. For all Classes of concrete, it shall be the Contractors responsibility to determine mix design material proportions and to proportion each batch of concrete. A Level III PCC Technician shall develop the mix design for all Classes of concrete, except Classes PC and PS. The mix design, submittal information, trial batch, and Engineer verification shall be according to the "Portland Cement Concrete Level III Technician" course material.

The Contractor shall provide the mix designs a minimum of 45 calendar days prior to production. More than one mix design may be submitted for each class of concrete.

The Engineer will verify the mix design submitted by the Contractor. Verification of a mix design shall in no manner be construed as acceptance of any mixture produced. Once a mix design has been verified, the Engineer shall be notified of any proposed changes.

Tests performed at the jobsite will determine if a mix design can meet specifications. If the tests indicate it cannot, the Contractor shall make adjustments to a mix design, or submit a new mix design if necessary, to comply with the specifications.

- (b) Admixtures. The Contractor shall be responsible for using admixtures and determining dosages for all Classes of concrete, cement aggregate mixture II, and controlled low-strength material that will produce a mixture with suitable workability, consistency, and plasticity. In addition, admixture dosages shall result in the mixture meeting the specified plastic and hardened properties. The Contractor shall obtain approval from the Engineer to use an accelerator when the concrete temperature is greater than 60 °F (16 °C). However, this accelerator approval will not be required for Class PP, RR, PC, and PS concrete. The accelerator shall be the non-chloride type unless otherwise specified in the contract plans.

The Department will maintain an Approved List of Corrosion Inhibitors. Corrosion inhibitor dosage rates shall be according to Article 1020.05(b)(10). For information on approved controlled low-strength material air-entraining admixtures, refer to Article 1019.02. The Department will also maintain an Approved List of Concrete Admixtures, and an admixture technical representative shall be consulted by the Contractor prior to the pour when determining an admixture dosage from this list or when making minor admixture dosage adjustments at the jobsite. The dosage shall be within the range indicated on the approved list unless the influence by other admixtures, jobsite conditions (such as a very short haul time), or other circumstances warrant a dosage outside the range. The Engineer shall be notified when a dosage is proposed outside the range. To determine an admixture dosage, air temperature, concrete temperature, cement source and quantity, finely divided mineral sources and quantity, influence of other admixtures, haul time, placement conditions, and other factors as appropriate shall be considered. The Engineer may request the Contractor to have a batch of concrete mixed in the lab or field to verify the admixture dosage is correct. An admixture dosage or combination of admixture dosages shall not delay the initial set of concrete by more

than one hour. When a retarding admixture is required or appropriate for a bridge deck or bridge deck overlay pour, the initial set time shall be delayed until the deflections due to the concrete dead load are no longer a concern for inducing cracks in the completed work. However, a retarding admixture shall not be used to further extend the pour time and justify the alteration of a bridge deck pour sequence.

When determining water in admixtures for water/cement ratio, the Contractor shall calculate 70 percent of the admixture dosage as water, except a value of 50 percent shall be used for a latex admixture used in bridge deck latex concrete overlays.

The sequence, method, and equipment for adding the admixtures shall be approved by the Engineer. Admixtures shall be added to the concrete separately. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

Admixture use shall be according to the following.

- (1) When the atmosphere or concrete temperature is 65 °F (18 °C) or higher, a retarding admixture shall be used in the Class BS concrete and concrete bridge deck overlays. The proportions of the ingredients of the concrete shall be the same as without the retarding admixture, except that the amount of mixing water shall be reduced, as may be necessary, in order to maintain the consistency of the concrete as required. In addition, a high range water-reducing admixture shall be used in bridge deck concrete. At the option of the Contractor, a water-reducing admixture may be used with the high range water-reducing admixture in Class BS concrete.
- (2) At the Contractor's option, admixtures in addition to an air-entraining admixture may be used for Class PP-1 or RR concrete. When the air temperature is less than 55 °F (13 °C) and an accelerator is used, the non-chloride accelerator shall be calcium nitrite.
- (3) When Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 or RR concrete, a water-reducing or high range water-reducing admixture shall be used.
- (4) For Class PP-2 or PP-3 concrete, a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture with the high range water-reducing admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite. For Class PP-2 concrete, the non-chloride accelerator shall be calcium nitrite when the air temperature is less than 55 °F (13 °C).
- (5) For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture with the high range water-reducing admixture. An accelerator shall not be used. For stationary or truck-mixed concrete, a retarding

admixture shall be used to allow for haul time. The Contractor has the option to use a mobile portland cement concrete plant, but a retarding admixture shall not be used unless approved by the Engineer.

For PP-5 concrete, a non-chloride accelerator, high range water-reducing admixture, and air-entraining admixture shall be used. The accelerator, high range water-reducing admixture, and air-entraining admixture shall be per the Contractor's recommendation and dosage. The approved list of concrete admixtures shall not apply. A mobile portland cement concrete plant shall be used to produce the patching mixture.

- (6) When a calcium chloride accelerator is specified in the contract, the maximum chloride dosage shall be 1.0 quart (1.0 L) of solution per 100 lb (45 kg) of cement. The dosage may be increased to a maximum 2.0 quarts (2.0 L) per 100 lb (45 kg) of cement if approved by the Engineer. When a calcium chloride accelerator for Class PP-2 concrete is specified in the contract, the maximum chloride dosage shall be 1.3 quarts (1.3 L) of solution per 100 lb (45 kg) of cement. The dosage may be increased to a maximum 2.6 quarts (2.6 L) per 100 lb (45 kg) of cement if approved by the Engineer.
- (7) For Class DS concrete a retarding admixture and a high range water-reducing admixture shall be used. For dry excavations that are 10 ft (3 m) or less, the high range water-reducing admixture may be replaced with a water-reducing admixture if the concrete is vibrated. The use of admixtures shall take into consideration the slump loss limits specified in Article 516.12 and the fluidity requirement in Article 1020.04 (Note 12).
- (8) At the Contractor's option, when a water-reducing admixture or a high range water-reducing admixture is used for Class PV, PP-1, RR, SC, and SI concrete, the cement factor may be reduced a maximum 0.30 hundredweight/cu yd (18 kg/cu m). However, a cement factor reduction will not be allowed for concrete placed underwater.
- (9) When Type F or Type G high range water-reducing admixtures are used, the initial slump shall be a minimum of 1 1/2 in. (40 mm) prior to addition of the Type F or Type G admixture, except as approved by the Engineer.
- (10) When specified, a corrosion inhibitor shall be added to the concrete mixture utilized in the manufacture of precast, prestressed concrete members and/or other applications. It shall be added, at the same rate, to all grout around post-tensioning steel when specified.

When calcium nitrite is used, it shall be added at the rate of 4 gal/cu yd (20 L/cu m), and shall be added to the mix immediately after all compatible admixtures have been introduced to the batch.

When Rheocrete 222+ is used, it shall be added at the rate of 1.0 gal/cu yd (5.0 L/cu m), and the batching sequence shall be according to the manufacturer's instructions.

(c) Finely Divided Minerals. Use of finely divided minerals shall be according to the following.

(1) Fly Ash. At the Contractor's option, fly ash from approved sources may partially replace portland cement in cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete.

The use of fly ash shall be according to the following.

- a. Measurements of fly ash and portland cement shall be rounded up to the nearest 5 lb (2.5 kg).
 - b. When Class F fly ash is used in cement aggregate mixture II, Class PV, BS, PC, PS, DS, SC, and SI concrete, the amount of portland cement replaced shall not exceed 25 percent by weight (mass).
 - c. When Class C fly ash is used in cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, the amount of portland cement replaced shall not exceed 30 percent by weight (mass).
 - d. Fly ash may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.
- (2) Ground Granulated Blast-Furnace (GGBF) Slag. At the Contractor's option, GGBF slag may partially replace portland cement in concrete mixtures, for Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete. For Class PP-3 concrete, GGBF slag shall be used according to Article 1020.04.

The use of GGBF slag shall be according to the following.

- a. Measurements of GGBF slag and portland cement shall be rounded up to the nearest 5 lb (2.5 kg).
- b. When GGBF slag is used in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC and SI concrete, the amount of portland cement replaced shall not exceed 35 percent by weight (mass).
- c. GGBF slag may be used in concrete mixtures when the air temperature is below 40 °F (4 °C), but the Engineer may request a trial batch of the concrete mixture to show the mix design strength requirement will be met.

- (3) Microsilica. At the Contractor's option, microsilica may be added at a maximum of 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

Microsilica shall be used in Class PP-3 concrete according to Article 1020.04.

- (4) High Reactivity Metakaolin (HRM). At the Contractor's option, HRM may be added at a maximum of 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.
- (5) Mixtures with Multiple Finely Divided Minerals. Except as specified for Class PP-3 concrete, the Contractor has the option to use more than one finely divided mineral in Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete as follows.
- a. The mixture shall contain a maximum of two finely divided minerals. The finely divided mineral in portland-pozzolan cement or portland blast-furnace slag cement shall count toward the total number of finely divided minerals allowed. The finely divided minerals shall constitute a maximum of 35.0 percent of the total cement plus finely divided minerals. The fly ash portion shall not exceed 30.0 percent for Class C fly ash or 25.0 percent for Class F fly ash. The Class C and F fly ash combination shall not exceed 30.0 percent. The ground granulated blast-furnace slag portion shall not exceed 35.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed ten percent. The finely divided mineral in the portland-pozzolan cement or portland blast-furnace slag blended cement shall apply to the maximum 35.0 percent.
 - b. Central Mixed. For Class PV, SC, and SI concrete, the mixture shall contain a minimum of 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used, the Contractor has the option to use a minimum of 535 lbs/cu yd (320 kg/cu m).
 - c. Truck-Mixed or Shrink-Mixed. For Class PV (only truck-mixed permitted), SC, and SI concrete, the mixture shall contain a minimum of 605 lbs/cu yd (360 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used, the Contractor has the option to use a minimum of 575 lbs/cu yd (345 kg/cu m).
 - d. Central-Mixed, Truck-Mixed or Shrink-Mixed. For Class PP-1 and RR concrete, the mixture shall contain a minimum of 650 lbs/cu yd (385 kg/cu m) of cement and finely divided minerals summed together. For Class PP-1 and RR concrete using Type III portland cement, the mixture shall contain a minimum of 620 lbs/cu yd (365 kg/cu m).

For Class PP-2 concrete, the mixture shall contain a minimum of 735 lbs/cu yd (435 kg/cu m) of cement and finely divided minerals summed together. For Class BS concrete, the mixture shall contain a minimum of 605 lbs/cu yd (360 kg/cu m). For Class DS concrete, the mixture shall contain a minimum of 665 lbs/cu yd (395 kg/cu m).

If a water-reducing or high range water-reducing admixture is used in Class PP-1 and RR concrete, the Contractor has the option to use a minimum of 620 lbs/cu yd (365 kg/cu m) of cement and finely divided minerals summed together. If a water-reducing or high-range water-reducing admixture is used with Type III portland cement in Class PP-1 and RR concrete, the Contractor has the option to use a minimum of 590 lbs/cu yd (350 kg/cu m).

- e. Central-Mixed or Truck-Mixed. For Class PC and PS concrete, the mixture shall contain a minimum of 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together.
 - f. The mixture shall contain a maximum of 705 lbs/cu yd (418 kg/cu m) of cement and finely divided mineral(s) summed together for Class PV, BS, PC, PS, DS, SC, and SI concrete. For Class PP-1 and RR concrete, the mixture shall contain a maximum of 750 lbs/cu yd (445 kg/cu m). For Class PP-1 and RR concrete using Type III portland cement, the mixture shall contain a maximum of 720 lbs/cu yd (425 kg/cu m). For Class PP-2 concrete, the mixture shall contain a maximum of 735 lbs/cu yd (435 kg/cu m).
 - g. For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the allowable cement and finely divided minerals summed together shall be increased by ten percent.
 - h. The combination of cement and finely divided minerals shall comply with Article 1020.05(d).
- (d) Alkali-Silica Reaction. For cast-in-place (includes cement aggregate mixture II), precast, and precast prestressed concrete, one of the mixture options provided in Article 1020.05(d)(2) shall be used to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The mixture options are not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate, or sodium formate. The mixture options will not be required for the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy.

The mixture options shall not apply to concrete revetment mats, insertion lining of pipe culverts, portland cement mortar fairing course, controlled low-strength material, miscellaneous grouts that are not prepackaged, Class PP-3 concrete, Class PP-4 concrete, and Class PP-5 concrete.

- (1) Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

Aggregate Groups			
Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion	Fine Aggregate Or Fine Aggregate Blend ASTM C 1260 Expansion		
	≤0.16%	>0.16% - 0.27%	>0.27%
≤0.16%	Group I	Group II	Group III
>0.16% - 0.27%	Group II	Group II	Group III
>0.27%	Group III	Group III	Group IV

- (2) Mixture Options. Based upon the aggregate group, the following mixture options shall be used. However, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silika reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

Group I – Mixture options are not applicable. Use any cement or finely divided mineral.

Group II – Mixture options 1, 2, 3, 4, or 5 shall be used.

Group III – Mixture options 1, combine 2 with 3, 4 or 5 shall be used.

Group IV – Mixture options 1, combine 2 with 4, or 5 shall be used.

- a. Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used. Coarse aggregate may only be blended with another coarse aggregate. Fine aggregate may only be blended with another fine aggregate. Blending of coarse with fine aggregate to place the material in another group will not be permitted.

When a coarse for fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

$$\text{Weighted Expansion Value} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots$$

Where: a, b, c... = percentage of aggregate in the blend;
A, B, C... = expansion value for that aggregate.

- b. Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow.

1. Class F Fly Ash. For cement aggregate mixture II, Class PV, BS, PC, PS, MS, DS, SC and SI concrete, the Class F fly ash shall be a minimum 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the Class F fly ash, it may be used only if it complies with Mixture Option 5.

2. Class C Fly Ash. For cement aggregate mixture II, Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, Class C fly ash shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent or the calcium oxide exceeds 26.50 percent for the Class C fly ash, it may be used only per Mixture Option 5.

3. Ground Granulated Blast-Furnace Slag. For Class PV, PP-1, PP-2, RR, BS, PC, PS, DS, SC, and SI concrete, ground granulated blast-furnace slag shall be a minimum of 25.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 1.00 percent for the ground granulated blast-furnace slag, it may be used only per Mixture Option 5.

4. Microsilica or High Reactivity Metakaolin, Microsilica solids or high reactivity metakaolin shall be a minimum 5.0 percent by weight (mass) of the cement and finely divided minerals summed together.

If the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 1.00 percent for the Microsilica or High Reactivity Metakaolin, it may be used only if it complies with Mixture Option 5.

- c. Mixture Option 3. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.60 percent. When aggregate in Group II is involved and the Contractor desires to use a finely divided mineral, any finely divided mineral may be used with the cement unless the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the fly ash; or 1.00 percent for the ground granulated blast-furnace slag, microsilica or high reactivity metakaolin. If the alkali content is exceeded, the finely divided mineral may be used only per Mixture Option 5.
- d. Mixture option 4. The cement used shall have a maximum total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.45 percent. When aggregate in Group II or III is

involved and the Contractor desires to use a finely divided mineral, any finely divided mineral may be used with the cement unless the maximum total equivalent available alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) exceeds 4.50 percent for the fly ash; or 1.00 percent for the ground granulated blast-furnace slag, microsilica, or high reactivity metakaolin. If the alkali content is exceeded, the finely divided mineral may be used only per Mixture Option 5.

- e. Mixture Option 5. The proposed cement or finely divided mineral may be used if the ASTM C 1567 expansion value is ≤ 0.16 percent when performed on the aggregate in the concrete mixture with the highest ASTM C 1260 test result. The laboratory performing the ASTM C 1567 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing". The ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. For latex concrete, the ASTM C 1567 test shall be performed without the latex. The 0.20 percent autoclave expansion limit in ASTM C 1567 shall not apply.

If during the two year time period the Contractor needs to replace the cement, and the replacement cement has an equal or lower total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$), a new ASTM C 1567 test will not be required.

The Engineer reserved the right to verify a Contractor's ASTM C 1567 test result. When the Contractor performs the test, a split sample may be requested by the Engineer. The Engineer may also independently obtain a sample at any time. The proposed cement or finely divided mineral will not be allowed for use if the Contractor or Engineer obtains an expansion value greater than 0.16 percent.

1020.06 Water/Cement Ratio. The water/cement ratio shall be determined on a weight (mass) basis. When a maximum water/cement ratio is specified, the water shall include mixing water, water in admixtures, free moisture on the aggregates, and water added at the jobsite. The quantity of water may be adjusted within the limit specified to meet slump requirements.

When fly ash, ground granulated blast-furnace slag, high-reactivity metakaolin, or microsilica (silica fume) are used in a concrete mix, the water/cement ratio will be based on the total cement and finely divided minerals contained in the mixture.

1020.07 Slump. The slump shall be determined according to Illinois Modified AASHTO T 119.

If the measured slump falls outside the limits specified, a check test will be made. In the event of a second failure, the Engineer may refuse to permit the use of the batch of concrete represented.

If the Contractor is unable to add water to prepare concrete of the specified slump without exceeding the maximum design water/cement ratio, additional cement or water-reducing admixture shall be added.

1020.08 Air Content. The air content shall be determined according to Illinois Modified AASHTO T 152 or Illinois Modified AASHTO T 196. The air-entrainment shall be obtained by the use of cement with an approved air-entraining admixture added during the mixing of the concrete or the use of air-entraining cement.

If the air-entraining cement furnished is found to produce concrete having an air content outside the limits specified, its use shall be discontinued immediately and the Contractor shall provide other air-entraining cement which will produce air contents within the specified limits.

If the air content obtained is above the specified maximum limit at the jobsite, the Contractor, with the Engineer's approval, may add to the truck mixer non air-entraining cement in the proportion necessary to bring the air content within the specified limits, or the concrete may be further mixed, within the limits of time and revolutions specified, to reduce the air content. If the air content obtained is below the specified minimum limit, the Contractor may add to the concrete a sufficient quantity of an approved air-entraining admixture at the jobsite to bring the air content within the specified limits.

1020.09 Strength Tests. The specimens shall be molded and cured according to Illinois Modified AASHTO T 23. Specimens shall be field cured with the construction item as specified in Illinois Modified AASHTO T 23. The compressive strength shall be determined according to Illinois Modified AASHTO T 22. The flexural strength shall be determined according to Illinois Modified AASHTO T 177.

Except for Class PC and PS concrete, the Contractor shall transport the strength specimens from the site of the work to the field laboratory or other location as instructed by the Engineer. During transportation in a suitable light truck, the specimens shall be embedded in straw, burlap, or other acceptable material in a manner meeting with the approval of the Engineer to protect them from damage; care shall be taken to avoid impacts during hauling and handling. For strength specimens, the Contractor shall provide a water storage tank for curing.

1020.10 Handling, Measuring, and Batching Materials. Aggregates shall be handled in a manner to prevent mixing with soil and other foreign material.

Aggregates shall be handled in a manner which produces a uniform gradation, before placement in the plant bins. Aggregates delivered to the plant in a nonuniform gradation condition shall be stockpiled. The stockpiled aggregate shall be mixed uniformly before placement in the plant bins.

Aggregates shall have a uniform moisture content before placement in the plant bins. This may require aggregates to be stockpiled for 12 hours or more to allow drainage, or water added to the stockpile, or other methods approved by the Engineer. Moisture content requirements for crushed slag or lightweight aggregate shall be according to Article 1004.01(e).

Aggregates, cement, and finely divided minerals shall be measured by weight (mass). Water and admixtures shall be measured by volume or weight (mass).

The Engineer may permit aggregates, cement, and finely divided minerals to be measured by volume for small isolated structures and for miscellaneous items. Aggregates, cement, and finely divided minerals shall be measured individually. The volume shall be based upon dry, loose materials.

1020.11 Mixing Portland Cement Concrete. The mixing of concrete shall be according to the following.

- (a) Ready-Mixed Concrete. Ready-mixed concrete is central-mixed, truck-mixed, or shrink-mixed concrete transported and delivered in a plastic state ready for placement in the work and shall be according to the following.
 - (1) Central-Mixed Concrete. Central-mixed concrete is concrete which has been completely mixed in a stationary mixer and delivered in a truck agitator, a truck mixer operating at agitating speed, or a nonagitator truck.

The stationary mixer shall operate at the drum speed for which it was designed. The batch shall be charged into the drum so that some of the water shall enter in advance of the cement, finely divided minerals, and aggregates. The flow of the water shall be uniform and all water shall be in the drum by the end of the first 15 seconds of the mixing period. Water shall begin to enter the drum from zero to two seconds in advance of solid material and shall stop flowing within two seconds of the beginning of mixing time.

Some coarse aggregate shall enter in advance of other solid materials. For the balance of the charging time for solid materials, the aggregates, finely divided minerals, and cement (to assure thorough blending) shall each flow at acceptably uniform rates, as determined by visual observation. Coarse aggregate shall enter two seconds in advance of other solid materials and a uniform rate of flow shall continue to within two seconds of the completion of charging time.

The entire contents of the drum, or of each single compartment of a multiple-drum mixer, shall be discharged before the succeeding batch is introduced.

The volume of concrete mixed per batch shall not exceed the mixer's rated capacity as shown on the standard rating plate on the mixer by more than ten percent.

The minimum mixing time shall be 75 seconds for a stationary mixer having a capacity greater than 2 cu yd (1.5 cu m). For a mixer with a capacity equal to or less than 2 cu yd (1.5 cu m) the mixing time shall be 60 seconds. Transfer time in multiple drum mixers is included in the mixing time. Mixing time shall begin when all materials are in the mixing compartment and shall end when the discharge of any

part of the batch is started. The required mixing times will be established by the Engineer for all types of stationary mixers.

When central-mixed concrete is to be transported in a truck agitator or a truck mixer, the stationary-mixed batch shall be transferred to the agitating unit without delay and without loss of any portion of the batch. Agitating shall start immediately thereafter and shall continue without interruption until the batch is discharged from the agitator. The ingredients of the batch shall be completely discharged from the agitator before the succeeding batch is introduced. Drums and auxiliary parts of the equipment shall be kept free from accumulations of materials.

The vehicles used for transporting the mixed concrete shall be of such capacity, or the batches shall be so proportioned, that the entire contents of the mixer drum can be discharged into each vehicle load.

- (2) **Truck-Mixed Concrete.** Truck-mixed concrete is completely mixed and delivered in a truck mixer. When the mixer is charged with fine and coarse aggregates simultaneously, not less than 60 nor more than 100 revolutions of the drum or blades at mixing speed shall be required, after all of the ingredients including water are in the drum. When fine and coarse aggregates are charged separately, not less than 70 revolutions will be required. Additional mixing beyond 100 revolutions shall be at agitating speed unless additions of water, admixtures, cement, or other materials are made at the jobsite. The mixing operation shall begin immediately after the cement and water, or the cement and wet aggregates, come in contact. The ingredients of the batch shall be completely discharged from the drum before the succeeding batch is introduced. The drum and auxiliary parts of the equipment shall be kept free from accumulations of materials. If additional water or an admixture is added at the jobsite, the concrete batch shall be mixed a minimum of 40 additional revolutions after each addition.
- (3) **Shrink-Mixed Concrete.** Shrink-mixed concrete is mixed partially in a stationary mixer and completed in a truck mixer for delivery. The mixing time of the stationary mixer may be reduced to a minimum of 30 seconds to intermingle the ingredients, before transferring to the truck mixer. All ingredients for the batch shall be in the stationary mixer and partially mixed before any of the mixture is discharged into the truck mixer. The partially mixed batch shall be transferred to the truck mixer without delay and without loss of any portion of the batch, and mixing in the truck mixer shall start immediately. The mixing time in the truck mixer shall be not less than 50 nor more than 100 revolutions of the drum or blades at mixing speed. Additional mixing beyond 100 revolutions shall be at agitating speed, unless additions of water, admixtures, cement, or other materials are made at the jobsite. Units designed as agitators shall not be used for shrink mixing. The ingredients of the batch shall be completely discharged from the drum before the succeeding batch is introduced. The drum and auxiliary parts of the equipment shall be kept free from accumulations of materials. If additional water or an admixture is added at the jobsite, the concrete batch shall be mixed a minimum of 40 additional revolutions after each addition.

- (4) **Mixing Water.** Wash water shall be completely discharged from the drum or container before a batch is introduced. All mixing water shall be added at the plant and any adjustment of water at the jobsite by the Contractor shall not exceed the specified maximum water/cement ratio or slump. If strength specimens have been made for a batch of concrete, and subsequently during discharge there is more water added, additional strength specimens shall be made for the batch of concrete. No additional water may be added at the jobsite to central-mixed concrete if the mix design has less than 565 lbs/cu yd (335 kg/cu m) of cement and finely divided minerals summed together.
- (5) **Mixing and Agitating Speeds.** The mixing or agitating speeds used for truck mixers or truck agitators shall be per the manufacturer's rating plate.
- (6) **Capacities.** The volume of plastic concrete in a given batch will be determined according to AASHTO T 121, based on the total weight (mass) of the batch, determined either from the weight (masses) of all materials, including water, entering the batch or directly from the net weight (mass) of the concrete in the batch as delivered.

The volume of mixed concrete in truck mixers or truck agitators shall in no case be greater than the rated capacity determined according to the Truck Mixer, Agitator, and Front Discharge Concrete Carrier Standards of the Truck Mixer Manufacturer's Bureau, as shown by the rating plate attached to the truck. If the truck mixer does not have a rating plate, the volume of mixed concrete shall not exceed 63 percent of the gross volume of the drum or container, disregarding the blades. For truck agitators, the value is 80 percent.

- (7) **Time of Haul.** Haul time shall begin when the delivery ticket is stamped. The delivery ticket shall be stamped no later than five minutes after the addition of the mixing water to the cement, or after the addition of the cement to the aggregate when the combined aggregates contain free moisture in excess of two percent by weight (mass). If more than one batch is required for charging a truck using a stationary mixer, the time of haul shall start with mixing of the first batch. Haul time shall end when the truck is emptied for incorporation of the concrete into the work.

The time elapsing from when water is added to the mix until it is deposited in place at the site of the work shall not exceed 30 minutes when the concrete is transported in nonagitating trucks.

The maximum haul time for concrete transported in truck mixers or truck agitators shall be according to the following.

Concrete Temperature at Point of Discharge °F (°C)	Haul Time	
	Hours	Minutes
50-64 (10-17.5)	1	30

>64 (>17.5) - without retarder	1	0
>64 (>17.5) - with retarder	1	30

To encourage start-up testing for mix adjustments at the plant, the first two trucks will be allowed an additional 15 minutes haul time whenever such testing is performed.

For a mixture which is not mixed on the jobsite, a delivery ticket shall be required for each load. The following information shall be recorded on each delivery ticket: (1) ticket number; (2) name of producer and plant location; (3) contract number; (4) name of Contractor; (5) stamped date and time batched; (6) truck number; (7) quantity batched; (8) amount of admixture(s) in the batch; (9) amount of water in the batch; and (10) Department mix design number.

For concrete mixed in jobsite stationary mixers, the above delivery ticket may be waived, but a method of verifying the haul time shall be established to the satisfaction of the Engineer.

- (8) Production and Delivery. The production of ready-mixed concrete shall be such that the operations of placing and finishing will be continuous insofar as the job operations require. The Contractor shall be responsible for producing concrete that will have the required workability, consistency, and plasticity when delivered to the work. Concrete which is unsuitable for placement as delivered will be rejected. The Contractor shall minimize the need to adjust the mixture at the jobsite, such as adding water, admixtures, and cement prior to discharging.
- (9) Use of Multiple Plants in the Same Construction Item. The Contractor may simultaneously use central-mixed, truck-mixed, and shrink-mixed concrete from more than one plant, for the same construction item, on the same day, and in the same pour. However, the following criteria shall be met.
- a. Each plant shall use the same cement, finely divided minerals, aggregates, admixtures, and fibers.
 - b. Each plant shall use the same mix design. However, material proportions may be altered slightly in the field to meet slump and air content criteria. Field water adjustments shall not result in a difference that exceeds 0.02 between plants for water/cement ratio. The required cement factor for central-mixed concrete shall be increased to match truck-mixed or shrink-mixed concrete, if the latter two types of mixed concrete are used in the same pour.
 - c. The maximum slump difference between deliveries of concrete shall be 3/4 in. (19 mm) when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the slump difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for slump by the Contractor.

m

Thereafter, when a specified test frequency for slump is to be performed, it shall be conducted for each plant at the same time.

- d. The maximum air content difference between deliveries of concrete shall be 1.5 percent when tested at the jobsite. If the difference is exceeded, but test results are within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and shall test subsequent deliveries of concrete until the air content difference is corrected. For each day, the first three truck loads of delivered concrete from each plant shall be tested for air content by the Contractor. Thereafter, when a specified test frequency for air content is to be performed, it shall be conducted for each plant at the same time.
 - e. Strength tests shall be performed and taken at the jobsite for each plant. When a specified strength test is to be performed, it shall be conducted for each plant at the same time. The difference between plants for strength shall not exceed 900 psi (6200 kPa) compressive and 90 psi (620 kPa) flexural. If the strength difference requirements are exceeded, the Contractor shall take corrective action.
 - f. The maximum haul time difference between deliveries of concrete shall be 15 minutes. If the difference is exceeded, but haul time is within specification limits, the concrete may be used. The Contractor shall take immediate corrective action and check subsequent deliveries of concrete.
- (b) Class PC Concrete. The concrete shall be central-mixed or truck-mixed. Variations in plastic concrete properties shall be minimized between batches.
- (c) Class PV Concrete. The concrete shall be central-mixed or truck-mixed.

The required mixing time for stationary mixers with a capacity greater than 2 cu yd (1.5 cu m) may be less than 75 seconds upon satisfactory completion of a mixer performance test. Mixer performance tests may be requested by the Contractor when the quantity of concrete to be placed exceeds 50,000 sq yd (42,000 sq m). The testing shall be conducted according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Field Test Procedures for Mixer Performance and Concrete Uniformity Tests".

The Contractor will be allowed to test two mixing times within a range of 50 to 75 seconds. If satisfactory results are not obtained from the required tests, the mixing time shall continue to be 75 seconds for the remainder of the contract. If satisfactory results are obtained, the mixing time may be reduced. In no event will mixing time be less than 50 seconds.

The Contractor shall furnish the labor, equipment, and material required to perform the testing according to the current Bureau of Materials and Physical Research's Policy

Memorandum, "Field Test Procedures for Mixer Performance and Concrete Uniformity Tests".

A contract which has 12 ft (3.6 m) wide pavement or base course, and a continuous length of 1/2 mile (0.8 km) or more, shall have the following additional requirements.

- (1) The plant and truck delivery operation shall be able to provide a minimum of 50 cu yd (38 cu m) of concrete per hour.
 - (2) The plant shall have automatic or semi-automatic batching equipment.
- (d) All Other Classes of Concrete. The concrete shall be central-mixed, truck-mixed, or shrink-mixed concrete.

1020.12 Mobile Portland Cement Concrete Plants. The use of a mobile portland cement concrete plant may be approved under the provisions of Article 1020.10 for volumetric proportioning in small isolated structures, thin overlays, and for miscellaneous and incidental concrete items.

The first 1 cu ft (0.03 cu m) of concrete produced may not contain sufficient mortar and shall not be incorporated in the work. The side plate on the cement feeder shall be removed periodically (normally the first time the mixer is used each day) to see if cement is building up on the feed drum.

Sufficient mixing capacity of mixers shall be provided to enable continuous placing and finishing insofar as the job operations and the specifications require.

Slump and air tests made immediately after discharge of the mix may be misleading, since the aggregates may absorb a significant amount of water for four or five minutes after mixing.

1020.13 Curing and Protection. The method of curing, curing period, and method of protection for each type of concrete construction is included in the following Index Table.

INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Cast-in-Place Concrete ^{11/}			
Pavement Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/5/}	3	1020.13(c)
Base Course Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3	1020.13(c)
Driveway Median Barrier Curb Gutter Curb & Gutter Sidewalk Slope Wall Paved Ditch	1020.13(a)(1)(2)(3)(4)(5) ^{4/5/}	3	1020.13(c) ^{16/}
Catch Basin Manhole Inlet Valve Vault	1020.13(a)(1)(2)(3)(4)(5) ^{4/}	3	1020.13(c)
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3 ^{12/}	1020.13(c)
Bridge Deck Patching	1020.13(a)(3)(5)	3 or 7 ^{12/}	1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles and Drilled Shafts	1020.13(a)(3)(5)	7	1020.13(d)(1)(2)(3)
Foundations & Footings Seal Coat	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(d)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) ^{1/7/}	7	1020.13(d)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) ^{8/}	7	1020.13(d)(1)(2)
Deck			
Bridge Approach Slab	1020.13(a)(5)	7	1020.13(d)(1)(2) ^{17/}
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) ^{1/7/}	7	1020.13(d)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) ^{1/}	7	1020.13(d)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(d)(1)(2) ^{18/}
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete ^{11/}			
Bridge Slabs Piles and Pile Caps Other Structural Members	1020.13(a)(3)(5) ^{9/10/}	As ^{13/} Required	9/
All Other Precast Items	1020.13(a)(3)(4)(5) ^{2/9/10/}	As ^{14/} Required	9/
Precast, Prestressed Concrete ^{11/}			
All Items	1020(a)(3)(5) ^{9/10/}	Until Strand Tensioning is Released ^{15/}	9/

Notes-General:

- 1/ Type I, membrane curing only
- 2/ Type II, membrane curing only
- 3/ Type III, membrane curing only

- 4/ Type I, II and III membrane curing
- 5/ Membrane Curing will not be permitted between November 1 and April 15.
- 6/ The use of water to inundate foundations and footings, seal coats or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 45 °F (7 °C) or higher.
- 7/ Asphalt emulsion for waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.
- 8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed oil emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09(b).
- 9/ Steam, supplemental heat, or insulated blankets (with or without steam/supplemental heat) are acceptable and shall be according to the Bureau of Materials and Physical Research's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products" and the "Manual for Fabrication of Precast, Prestressed Concrete Products".
- 10/ A moist room according to AASHTO M 201 is acceptable for curing.
- 11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.
- 12/ Curing maintained only until opening strength is attained for pavement patching, with a maximum curing period of three days. For bridge deck patching the curing period shall be three days if Class PP concrete is used and 7 days if Class BS concrete is used.
- 13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

15/ The producer has the option to continue curing after strand release.

16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(d)(1).

17/ When Article 1020.13(d)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(d)(1).

18/ For culverts having a waterway opening of 10 sq ft (1 sq m) or less, the culverts may be protected according to Article 1020.13(d)(3).

(a) Methods of Curing. Except as provided for in the Index Table of Curing and Protection of Concrete Construction, curing shall be accomplished by one of the following described methods. When water is required to wet the surface, it shall be applied as a fine spray so that it will not mar or pond on the surface. Except where otherwise specified, the curing period shall be at least 72 hours.

(1) Waterproof Paper Method. The surface of the concrete shall be covered with waterproof paper as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the paper is placed. The blankets shall be lapped at least 12 in. (300 mm) end to end, and these laps shall be securely weighted with a windrow of earth, or other approved method, to form a closed joint. The same requirements shall apply to the longitudinal laps where separate strips are used for curing edges, except the lap shall be at least 9 in. (225 mm). The edges of the blanket shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Any torn places or holes in the paper shall be repaired immediately by patches cemented over the openings, using a bituminous cement having a melting point of not less than 180 °F (82 °C). The blankets may be reused, provided they are air-tight and kept serviceable by proper repairs.

A longitudinal pleat shall be provided in the blanket to permit shrinkage where the width of the blanket is sufficient to cover the entire surface. The pleat will not be required where separate strips are used for the edges. Joints in the blanket shall be sewn or cemented together in such a manner that they will not separate during use.

(2) Polyethylene Sheeting Method. The surface of the concrete shall be covered with white polyethylene sheeting as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the sheeting is placed. The edges of the sheeting shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Adjoining sheets shall overlap not less than 12 in. (300 mm) and the laps shall be securely weighted with earth, or any other means satisfactory to the Engineer, to provide an air tight cover.

For surface and base course concrete, the polyethylene sheets shall be not less than 100 ft (30 m) in length nor longer than can be conveniently handled, and shall be of such width that, when in place, they will cover the full width of the surface, including the edges, except that separate strips may be used to cover the edges. Any tears or holes in the sheeting shall be repaired. When sheets are no longer serviceable as a single unit, the Contractor may select from such sheets and reuse those which will serve for further applications, provided two sheets are used as a single unit; however, the double sheet units will be rejected when the Engineer deems that they no longer provide an air tight cover.

- (3) Wetted Burlap Method. The surface of the concrete shall be covered with wetted burlap blankets as soon as the concrete has hardened sufficiently to prevent marring the surface. The blankets shall overlap 6 in. (150 mm). At least two layers of wetted burlap shall be placed on the finished surface. The burlap shall be kept saturated by means of a mechanically operated sprinkling system. In place of the sprinkling system, at the Contractor's option, two layers of burlap covered with impermeable covering shall be used. The burlap shall be kept saturated with water. Plastic coated burlap may be substituted for one layer of burlap and impermeable covering.

The blankets shall be placed so that they are in contact with the edges of the concrete, and that portion of the material in contact with the edges shall be kept saturated with water.

- (4) Membrane Curing Method. Membrane curing will not be permitted where a protective coat, concrete sealer, or waterproofing is to be applied, or at areas where rubbing or a normal finish is required, or at construction joints other than those necessary in pavement or base course. Concrete at these locations shall be cured by another method specified in Article 1020.13(a).

After the concrete has been finished and the water sheen has disappeared from the surface, the concrete shall be immediately sealed with membrane curing compound of the type specified. The seal shall be maintained for the specified curing period. The edges of the concrete shall, likewise, be sealed immediately after the forms are removed. Two separate applications, applied at least one minute apart, each at the rate of not less than 1 gal/250 sq ft (0.16 L/sq m) will be required upon the surfaces and edges of the concrete. These applications shall be made with the mechanical equipment specified. Type III compound shall be agitated immediately before and during the application.

At locations where the coating is discontinuous or where pin holes show or where the coating is damaged due to any cause and on areas adjacent to sawed joints, immediately after sawing is completed, an additional coating of membrane curing compound shall be applied at the above specified rate. The equipment used may be of the same type as that used for coating variable widths of pavement. Before the additional coating is applied adjacent to sawed joints, the cut faces of the joint shall be protected by inserting a suitable flexible material in the joint, or placing an

adhesive width of impermeable material over the joint, or by placing the permanent sealing compound in the joint. Material, other than the permanent sealing compound, used to protect cut faces of the joint, shall remain in place for the duration of the curing period. In lieu of applying the additional coating, the area of the sawed joint may be cured according to any other method permitted.

When rain occurs before an application of membrane curing compound has dried, and the coating is damaged, the Engineer may require another application be made in the same manner and at the same rate as the original coat. The Engineer may order curing by another method specified, if unsatisfactory results are obtained with membrane curing compound.

- (5) Wetted Cotton Mat Method. After the surface of concrete has been textured or finished, it shall be covered immediately with dry or damp cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without marring the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 4 ft (1.2 m) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3).

- (b) Removing and Replacing Curing Covering. When curing methods specified above in Article 1020.13(a), (1), (2), or (3) are used for concrete pavement, the curing covering for each day's paving shall be removed to permit testing of the pavement surface with a profilograph or straightedge, as directed by the Engineer.

Immediately after testing, the surface of the pavement shall be wetted thoroughly and the curing coverings replaced. The top surface and the edges of the concrete shall not be left unprotected for a period of more than 1/2 hour.

- (c) Protection of Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 32 °F (0 °C), or lower, or if the actual temperature drops to 32 °F (0 °C), or lower, concrete less than 72 hours old shall be provided at least the following protection.

Minimum Temperature	Protection
25 – 32 °F (-4 – 0 °C)	Two layers of polyethylene sheeting, one layer of polyethylene and one layer of burlap, or two layers of waterproof paper.
Below 25 °F (-4 °C)	6 in. (150 mm) of straw covered with one layer of polyethylene sheeting or waterproof paper.

These protective covers shall remain in place until the concrete is at least 96 hours old. When straw is required on pavement cured with membrane curing compound, the compound shall be covered with a layer of burlap, polyethylene sheeting or waterproof paper before the straw is applied.

After September 15, there shall be available to the work within four hours, sufficient clean, dry straw to cover at least two days production. Additional straw shall be provided as needed to afford the protection required. Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (d) Protection of Concrete Structures From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low below 45 °F (7 °C), or if the actual temperature drops below 45 °F (7 °C), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities, and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. When winter construction is specified, the Contractor shall proceed with the construction, including excavation, pile driving, concrete, steel erection, and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (1) Protection Method I. The concrete shall be completely covered with insulating material such as fiberglass, rock wool, or other approved commercial insulating material having the minimum thermal resistance R, as defined in ASTM C 168, for

the corresponding minimum dimension of the concrete unit being protected as shown in the following table.

Minimum Pour Dimension		Thermal Resistance R
in.	(mm)	
6 or less	(150 or less)	R=16
> 6 to 12	(> 150 to 300)	R=10
> 12 to 18	(> 300 to 450)	R=6
> 18	(> 450)	R=4

The insulating material manufacturer shall clearly mark the insulating material with the thermal resistance R value.

The insulating material shall be completely enclosed on sides and edges with an approved waterproof liner and shall be maintained in a serviceable condition. Any tears in the liner shall be repaired in a manner approved by the Engineer. The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period.

On formed surfaces, the insulating material shall be attached to the outside of the forms with wood cleats or other suitable means to prevent any circulation of air under the insulation and shall be in place before the concrete is placed. The blanket insulation shall be applied tightly against the forms. The edges and ends shall be attached so as to exclude air and moisture. If the blankets are provided with nailing flanges, the flanges shall be attached to the studs with cleats. Where tie rods or reinforcement bars protrude, the areas adjacent to the rods or bars shall be adequately protected in a manner satisfactory to the Engineer. Where practicable, the insulation shall overlap any previously placed concrete by at least 1 ft (300 mm). Insulation on the underside of floors on steel members shall cover the top flanges of supporting members. On horizontal surfaces, the insulating material shall be placed as soon as the concrete has set, so that the surface will not be marred and shall be covered with canvas or other waterproof covering. The insulating material shall remain in place for a period of seven days after the concrete is placed.

The Contractor may remove the forms, providing the temperature is 35 °F (2 °C) and rising and the Contractor is able to wrap the particular section within two hours from the time of the start of the form removal. The insulation shall remain in place for the remainder of the seven days curing period.

- (2) Protection Method II. The concrete shall be enclosed in adequate housing and the air surrounding the concrete kept at a temperature of not less than 50 °F (10 °C) nor more than 80 °F (27 °C) for a period of seven days after the concrete is placed. The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period. All exposed surfaces within the housing shall be cured according to the Index Table.

The Contractor shall provide adequate fire protection where heating is in progress and such protection shall be accessible at all times. The Contractor shall maintain labor to keep the heating equipment in continuous operation.

At the close of the heating period, the temperature shall be decreased to the approximate temperature of the outside air at a rate not to exceed 15 °F (8 °C) per 12 hour period, after which the housing maybe removed. The surface of the concrete shall be permitted to dry during the cooling period.

- (3) Protection Method III. As soon as the surface is sufficiently set to prevent marring, the concrete shall be covered with 12 in. (300 mm) of loose, dry straw followed by a layer of impermeable covering. The edges of the covering shall be sealed to prevent circulation of air and prevent the cover from flapping or blowing. The protection shall remain in place until the concrete is seven days old. If construction operations require removal, the protection removed shall be replaced immediately after completion or suspension of such operations.

1020.14 Temperature Control for Placement. Temperature control for concrete placement shall be according to the following.

- (a) Concrete other than Structures. Concrete may be placed when the air temperature is above 35 °F (2 °C) and rising, and concrete placement shall stop when the falling temperature reaches 40 °F (4 °C) or below, unless otherwise approved by the Engineer.

The temperature of 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 of the concrete as placed in the forms shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). A maximum concrete temperature shall not apply to Class PP concrete.

- (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.

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 of the concrete as placed in the forms shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

When insulated forms are used, 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 mixed concrete may be increased to 80 °F (25 °C) by the Contractor to offset anticipated heat loss.

- (c) All Classes of Concrete. Aggregates and water shall be heated or cooled uniformly and as necessary to produce concrete within the specified temperature limits. No frozen aggregates shall be used in the concrete.
- (d) Temperature. The concrete temperature shall be determined according to Illinois Modified AASHTO T 309.

1020.15 Heat of Hydration Control for Concrete Structures. The Contractor shall control the heat of hydration for concrete structures when the least dimension for a drilled shaft, foundation, footing, substructure, or superstructure concrete pour exceeds 5.0 ft (1.5 m). The work shall be according to the following.

- (a) Temperature Restrictions. The maximum temperature of the concrete after placement shall not exceed 150 °F (66 °C). The maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface shall not exceed 35 °F (19 °C). The Contractor shall perform temperature monitoring to ensure compliance with the temperature restrictions.
- (b) Thermal Control Plan. The Contractor shall provide a thermal control plan a minimum of 28 calendar days prior to concrete placement for review by the Engineer. Acceptance of the thermal control plan by the Engineer shall not preclude the Contractor from specification compliance, and from preventing cracks in the concrete. At a minimum, the thermal control plan shall provide detailed information on the following requested items and shall comply with the specific specifications indicated for each item.
 - (1) Concrete mix design(s) to be used. Grout mix design if post-cooling with embedded pipe.

The mix design requirements in Articles 1020.04 and 1020.05 shall be revised to include the following additional requirements to control the heat of hydration.

- a. The concrete mixture shall be uniformly graded and preference for larger size aggregate shall be used in the mix design. Article 1004.02(d)(2) and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" shall be used to develop the uniformly graded mixture.
- b. The following shall apply to all concrete except Class DS concrete or when self-consolidating concrete is desired. For central-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 520 lbs/cu yd (309 kg/cu m) of cement and finely divided minerals summed together. For truck-mixed or shrink-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 550 lbs/cu yd (326 kg/cu m) of cement and finely divided minerals summed together. A water-reducing or high range water-reducing admixture shall be used in the central mixed, truck-mixed or shrink-mixed concrete mixture. For any mixture to be placed underwater, the minimum

cement and finely divided minerals shall be 550 lbs/cu yd (326 kg/cu m) for central-mixed concrete, and 580 lbs/cu yd (344 kg/cu m) for truck-mixed or shrink-mixed concrete.

For Class DS concrete, CA 11 may be used. If CA 11 is used, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 605 lbs/cu yd (360 kg/cu m) summed together. If CA 11 is used and either Class DS concrete is placed underwater or a self-consolidating concrete mixture is desired, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 635 lbs/cu yd (378 kg/cu m) summed together.

- c. The minimum portland cement content in the mixture shall be 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). For a drilled shaft, foundation, footing, or substructure, the minimum portland cement may be reduced to as low as 330 lbs/cu yd (196 kg/cu m) if the concrete has adequate freeze/thaw durability. The Contractor shall provide freeze/thaw test results according to AASHTO T 161 Procedure A or B, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Freeze/thaw testing will not be required for concrete that will not be exposed to freezing and thawing conditions as determined by the Engineer.
- d. The maximum cement replacement with fly ash shall be 40.0 percent. The maximum cement replacement with ground granulated blast-furnace slag shall be 65.0 percent. When cement replacement with ground granulated blast-furnace slag exceeds 35.0 percent, only Grade 100 shall be used.
- e. The mixture may contain a maximum of two finely divided minerals. The finely divided mineral in portland-pozzolan cement or portland blast-furnace slag cement shall count toward the total number of finely divided minerals allowed. The finely divided minerals shall constitute a maximum of 65.0 percent of the total cement plus finely divided minerals. The fly ash portion shall not exceed 40.0 percent. The ground granulated blast-furnace slag portion shall not exceed 65.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed 5.0 percent.
- f. The time to obtain the specified strength may be increased to a maximum 56 days, provided the curing period specified in Article 1020.13 is increased to a minimum of 14 days.

The minimum grout strength for filling embedded pipe shall be as specified for the concrete, and testing shall be according to AASHTO T 106.

- (2) The selected mathematical method for evaluating heat of hydration thermal effects, which shall include the calculated adiabatic temperature rise, calculated maximum concrete temperature, and calculated maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface. The time when the maximum concrete temperature and maximum temperature differential will occur is required if the time frame will be more than seven days.

Acceptable mathematical methods include ACI 207.2R "Report on Thermal and Volume Change Effects on Cracking of Mass Concrete" as well as other proprietary methods. The Contractor shall perform heat of hydration testing on the cement and finely divided minerals to be used in the concrete mixture. The test shall be according to ASTM C 186 or other applicable test methods, and the result for heat shall be used in the equation to calculate adiabatic temperature rise.

The Contractor has the option to propose a higher maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface, but the proposed value shall not exceed 50 °F (10 °C). In addition, based on strength gain of the concrete, multiple maximum temperature differentials at different times may be proposed. The proposed value shall be justified through a mathematical method.

- (3) Proposed maximum concrete temperature or temperature range prior to placement.

Article 1020.14 shall apply except a minimum 40 °F (10 °C) concrete temperature will be permitted.

- (4) Pre-cooling, post-cooling, and surface insulation methods that will be used to ensure the concrete will comply with the specified maximum temperature and specified or proposed temperature differential. For reinforcement that extends beyond the limits of the pour, the Contractor shall indicate if the reinforcement is required to be covered with insulation.

Refer to ACI 207.4R "Cooling and Insulating Systems for Mass Concrete" for acceptable methods that will be permitted. A copy of the ACI document shall be provided to the Engineer at the construction site. If embedded pipe is used for post-cooling, the material shall be polyvinyl chloride or polyethylene. The embedded pipe system shall be properly supported, and the Contractor shall subsequently inspect glued joints to ensure they are able to withstand free falling concrete. The embedded pipe system shall be leak tested after inspection of the glued joints, and prior to the concrete placement. The leak test shall be performed at maximum service pressure or higher for a minimum of 15 minutes. All leaks shall be repaired. The embedded pipe cooling water may be from natural sources such as streams and rivers, but shall be filtered to prevent system stoppages. When the embedded pipe is no longer needed, the surface connections to the pipe shall be removed to a depth of 4 in. (100 mm) below the surface of the concrete. The remaining pipe shall be

completely filled with grout. The 4 in. (100 mm) deep concrete hole shall be filled with nonshrink grout. Form and insulation removal shall be done in a manner to prevent cracking and ensure the maximum temperature differential is maintained. Insulation shall be in good condition as determined by the Engineer and properly attached.

- (5) Dimensions of each concrete pour, location of construction joints, placement operations, pour pattern, lift heights, and time delays between lifts.

Refer to ACI 207.1R "Guide to Mass Concrete" for acceptable placement operations that will be permitted. A copy of the ACI document shall be provided to the Engineer at the construction site.

- (6) Type of temperature monitoring system, the number of temperature sensors, and location of sensors.

A minimum of two independent temperature monitoring systems and corresponding sensors shall be used.

The temperature monitoring system shall have a minimum temperature range of 32 °F (0 °C) to 212 °F (100 °C), an accuracy of ± 2 °F (± 1 °C), and be able to automatically record temperatures without external power. Temperature monitoring shall begin once the sensor is encased in concrete, and with a maximum interval of one hour. Temperature monitoring may be discontinued after the maximum concrete temperature has been reached, post-cooling is no longer required, and the maximum temperature differential between the internal concrete core and the ambient air temperature does not exceed 35 °F (19 °C). The Contractor has the option to select a higher maximum temperature differential, but the proposed value shall not exceed 50 °F (28 °C). The proposed value shall be justified through a mathematical method.

At a minimum, a temperature sensor shall be located at the theoretical hottest portion of the concrete, normally the geometric center, and at the exterior face that will provide the maximum temperature differential. At the exterior face, the sensor shall be located 2 to 3 in. (50 to 75 mm) from the surface of the concrete. Sensors shall also be located a minimum of 1 in. (25 mm) away from reinforcement, and equidistant between cooling pipes if either applies. A sensor will also be required to measure ambient air temperature. The entrant/exit cooling water temperature for embedded pipe shall also be monitored.

Temperature monitoring results shall be provided to the Engineer a minimum of once each day and whenever requested by the Engineer. The report may be electronic or hard copy. The report shall indicate the location of each sensor, the temperature recorded, and the time recorded. The report shall be for all sensors and shall include ambient air temperature and entrant/exit cooling water temperatures. The temperature data in the report may be provided in tabular or graphical format, and the report shall indicate any corrective actions during the monitoring period. At the

completion of the monitoring period, the Contractor shall provide the Engineer a final report that includes all temperature data and corrective actions.

- (7) Indicate contingency operations to be used if the maximum temperature or temperature differential of the concrete is reached after placement.
- (c) Temperature Restriction Violations. If the maximum temperature of the concrete after placement exceeds 150 °F (66 °C), but is less than 158 °F (70 °C), the concrete will be accepted if no cracking or other unacceptable defects are identified. If cracking or unacceptable defects are identified, Article 105.03 shall apply. If the concrete temperature exceeds 158 °F (70 °C), Article 105.03 shall apply.

If a temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface exceeds the specified or proposed maximum value allowed, the concrete will be accepted if no cracking or other unacceptable defects are identified. If unacceptable defects are identified, Article 105.03 shall apply.

When the maximum 150 °F (66 °C) concrete temperature or the maximum allowed temperature differential is violated, the Contractor shall implement corrective action prior to the next pour. In addition, the Engineer reserves the right to request a new thermal control plan for acceptance before the Contractor is allowed to pour again.

- (d) Inspection and Repair of Cracks. The Engineer will inspect the concrete for cracks after the temperature monitoring is discontinued, and the Contractor shall provide access for the Engineer to do the inspection. A crack may require repair by the Contractor as determined by the Engineer. The Contractor shall be responsible for the repair of all cracks. Protective coat or a concrete sealer shall be applied to a crack less than 0.007 in. (0.18 mm) in width. A crack that is 0.007 in. (0.18 mm) or greater shall be pressure injected with epoxy according to Section 590.

80279

PORTLAND CEMENT CONCRETE SIDEWALK (BDE)

Effective: January 1, 2012

Revise Article 424.07 of the Standard Specifications to read:

“424.07 Expansion Joints. Expansion joints shall be 1/2 in. (13 mm) thick and consist of preformed joint filler. The top of the joint filler shall be 1/4 in. (6 mm) below the surface of the sidewalk.

Expansion joints shall be placed in locations as follows.

- (a) Expansion joints shall be placed between the sidewalk and all structures such as light poles, traffic signal poles, traffic poles and subway columns, which extend through the sidewalk.
- (b) Transverse expansion joints shall be placed at maximum intervals of 50 ft (15 m) in the sidewalk. Where the sidewalk is constructed adjacent to pavement or curb having expansion joints, the expansion joints in the sidewalk shall be placed in line with the adjacent expansion joints as nearly as practicable.
- (c) Expansion joints shall also be placed where the sidewalk abuts existing sidewalks, between driveway pavement and sidewalk, and between sidewalk accessibility ramps and curbs where the ramp abuts a curb.”

80280

PREFORMED PLASTIC PAVEMENT MARKING TYPE D - INLAID (BDE)

Effective: April 1, 2012

Revise subparagraph (c) and add subparagraph (i) to Article 780.02 of the Standard Specifications:

- “(c) Preformed Plastic Pavement Markings, Type B and Type C 1095.03
- (i) Preformed Plastic Pavement Marking, Type D 1095.10”

Revise the first paragraph of Article 780.07(a) of the Standard Specifications to read:

- “(a) Type B or D - Inlaid Application. On freshly placed HMA, the inlaid markings shall be applied before final compaction and when the pavement temperature has cooled to approximately 150 °F (65 °C) and when, in the opinion of the Engineer, the pavement is acceptable for vehicular traffic.”

Revise the first paragraph of Article 780.11 of the Standard Specifications to read:

“**780.11 Inspection.** The epoxy, thermoplastic, preformed thermoplastic, preformed plastic Type B, C, or D, and polyurea pavement markings will be inspected following installation, but no later than October 15 for preformed plastic markings, November 1 for thermoplastic and preformed thermoplastic markings, and December 15 for epoxy and polyurea markings. In addition, they will be inspected following a winter performance period that extends 180 days from November 1.”

Revise the ninth paragraph of Article 780.11 of the Standard Specifications to read:

“This performance inspection and performance acceptance of the epoxy, thermoplastic, preformed thermoplastic, preformed plastic Type B, C, or D, and polyurea markings shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party "performance" bond naming the Department as obligee in the full amount of all pavement marking quantities listed in the contract, multiplied by the contract unit price. The bond shall be executed prior to acceptance and final payment of the non-pavement marking items and shall be in full force and effect until final performance inspection and performance acceptance of the epoxy, thermoplastic, preformed thermoplastic, preformed plastic, and polyurea pavement markings. Execution of the third party bond shall be the option of the Contractor.”

Revise the first paragraph of Article 780.13 of the Standard Specifications to read:

“**780.13 Basis of Payment.** This work will be paid for at the contract unit prices per foot (meter) of applied line width, as specified, for THERMOPLASTIC PAVEMENT MARKING - LINE; PAINT PAVEMENT MARKING - LINE; EPOXY PAVEMENT MARKING - LINE; PREFORMED PLASTIC PAVEMENT MARKING - LINE - TYPE B, C, B – INLAID, or D -

INLAID; PREFORMED THERMOPLASTIC PAVEMENT MARKING – LINE, POLYUREA PAVEMENT MARKING TYPE I – LINE, POLYUREA PAVEMENT MARKING TYPE II - LINE; and/or per square foot (square meter) for THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS; PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS; EPOXY PAVEMENT MARKING - LETTERS AND SYMBOLS; PREFORMED PLASTIC PAVEMENT MARKING - TYPE B, C, B – INLAID, or D - INLAID - LETTERS AND SYMBOLS; PREFORMED THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS.”

Add the following to Section 1095 of the Standard Specifications:

“**1095.10 Preformed Plastic Pavement Marking, Type D.** The preformed patterned markings shall consist of a white or yellow tape with wet retroreflective media incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. The pavement marking shall be manufactured without the use of heavy metals including lead chromate pigments or other similar, lead-containing chemicals.

The white and yellow preformed plastic pavement markings shall meet the Type B requirements of Article 1095.03(b), (c), (d), (e), (i), (l), (m), (n) and the following.

- (a) Composition. The pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a layer of wet retroreflective media bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 40% ± 10% of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed beads or particles.
- (b) Retroreflectance. The white and yellow markings shall meet the following for initial dry and wet retroreflectance.
 - (1) Dry Retroreflectance. Dry retroreflectance shall be measured under dry conditions according to ASTM D4061 and meet the values described in Article 1095.03(l) for Type B.
 - (2) Wet Retroreflectance. Wet retroreflectance shall be measured under wet conditions according to ASTM E2177 and meet the values shown in the following table.

Wet Retroreflectance, Initial R_L	
Color	R_L 1.05/88.76
White	300
Yellow	200

- (c) Color. The material shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degrees circumferential/zero degree geometry, illuminant D65, and a two degree observer angle.

The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

Color	Daylight Reflectance %Y
White	65 minimum
*Yellow	36-59

*Shall match Federal 595 Color No. 33538 and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

- (d) Sampling, Testing, Acceptance, and Certification. Prior to approval and use of the preformed pavement marking materials, the manufacturer shall submit a notarized certification from an independent laboratory, together with the results of all tests, stating that the material meets the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, and date of manufacture.

After approval by the Department, samples and certification by the manufacturer shall be submitted for each batch used. The manufacturer shall submit a certification stating that the material meets the requirements as set forth herein and is essentially identical to the material sent for qualification. The certification shall state the lot tested, manufacturer's name, and date of manufacture."

80300

QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Add the following to Section 1020 of the Standard Specifications:

"1020.16 Quality Control/Quality Assurance of Concrete Mixtures. This Article specifies the quality control responsibilities of the Contractor for concrete mixtures (except Class PC and PS concrete), cement aggregate mixture II, and controlled low-strength material incorporated in the project, and defines the quality assurance and acceptance responsibilities of the Engineer.

A list of quality control/quality assurance (QC/QA) documents is provided in Article 1020.16(g), Schedule D.

A Level I Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete testing.

A Level II Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete proportioning.

A Level III Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete mix design.

A Concrete Tester shall be defined as an individual who has successfully completed the Department's training to assist with concrete testing and is monitored on a daily basis.

Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving aggregate production and mixtures.

Mixture Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving mixtures.

Gradation Technician shall be defined as an individual who has successfully completed the Department's training to assist with gradation testing and is monitored on a daily basis.

- (a) Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing.

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Private Laboratory Requirements for Construction Materials Testing or Mix Design". Production of a mixture shall not begin until the Engineer provides written approval of the laboratory.

The Contractor shall refer to the Department's "Required Sampling and Testing Equipment for Concrete" for equipment requirements.

Test equipment shall be maintained and calibrated as required by the appropriate test method, and when required by the Engineer. This information shall be documented on the Department's "Calibration of Concrete Testing Equipment" form.

Test equipment used to determine compressive or flexural strength shall be calibrated each 12 month period by an independent agency, using calibration equipment traceable to the National Institute of Standards and Technology (NIST). The Contractor shall have the calibration documentation available at the test equipment location.

The Engineer will have unrestricted access to the plant and laboratory at any time to inspect measuring and testing equipment, and will notify the Contractor of any deficiencies. Defective equipment shall be immediately repaired or replaced by the Contractor.

- (b) Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan to the Engineer. The QC Plan shall be submitted a minimum of 45 calendar days prior to the production of a mixture. The QC Plan shall address the quality control of the concrete, cement aggregate mixture II, and controlled low-strength material incorporated in the project. The Contractor shall refer to the Department's "Model Quality Control Plan for Concrete Production" to prepare a QC Plan. The Engineer will respond in writing to the Contractor's proposed QC Plan within 15 calendar days of receipt.

Production of a mixture shall not begin until the Engineer provides written approval of the QC Plan. The approved QC Plan shall become a part of the contract between the Department and the Contractor, but shall not be construed as acceptance of any mixture produced.

The QC Plan may be amended during the progress of the work, by either party, subject to mutual agreement. The Engineer will respond in writing to a Contractor's proposed QC Plan amendment within 15 calendar days of receipt. The response will indicate the approval or denial of the Contractor's proposed QC Plan amendment.

- (c) Quality Control by Contractor. The Contractor shall perform quality control inspection, sampling, testing, and documentation to meet contract requirements. Quality control includes the recognition of obvious defects and their immediate correction. Quality control also includes appropriate action when passing test results are near specification limits, or to resolve test result differences with the Engineer. Quality control may require increased testing, communication of test results to the plant or the jobsite, modification of operations, suspension of mixture production, rejection of material, or other actions as appropriate. The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported no later than the start of the next work day.

When a mixture does not comply with specifications, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03.

- (1) Personnel Requirements. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for quality control. The jobsite and plant personnel shall be able to contact the QC Manager by cellular phone, two-way radio or other methods approved by the Engineer.

The QC Manager shall visit the jobsite a minimum of once a week. A visit shall be performed the day of a bridge deck pour, the day a non-routine mixture is placed as determined by the Engineer, or the day a plant is anticipated to produce more than 1000 cu yd (765 cu m). Any of the three required visits may be used to meet the once per week minimum requirement.

The Contractor shall provide personnel to perform the required inspections, sampling, testing and documentation in a timely manner. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

A Level I PCC Technician shall be provided at the jobsite during mixture production and placement, and may supervise concurrent pours on the project. For concurrent pours, a minimum of one Concrete Tester shall be required at each pour location. If the Level I PCC Technician is at one of the pour locations, a Concrete Tester is still required at the same location. Each Concrete Tester shall be able to contact the Level I PCC Technician by cellular phone, two-way radio or other methods approved by the Engineer. A single Level I PCC Technician shall not supervise concurrent pours for multiple contracts.

A Level II PCC Technician shall be provided at the plant, or shall be available, during mixture production and placement. A Level II PCC Technician may supervise a maximum of three plants. Whenever the Level II PCC Technician is not at the plant during mixture production and placement, a Concrete Tester or Level I PCC Technician shall be present at the plant to perform any necessary concrete tests. The Concrete Tester, Level I PCC Technician, or other individual shall also be trained to perform any necessary aggregate moisture tests, if the Level II PCC Technician is not at the plant during mixture production and placement. The Concrete Tester, Level I PCC Technician, plant personnel, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

For a mixture which is produced and placed with a mobile portland cement concrete plant as defined in Article 1103.04, a Level II PCC Technician shall be provided. The Level II PCC Technician shall be present at all times during mixture production and placement.

A Concrete Tester, Mixture Aggregate Technician, and Aggregate Technician may provide assistance with sampling and testing. A Gradation Technician may provide assistance with testing. A Concrete Tester shall be supervised by a Level I or Level II PCC Technician. A Gradation Technician shall be supervised by a Level II PCC Technician, Mixture Aggregate Technician, or Aggregate Technician.

- (2) Required Plant Tests. Sampling and testing shall be performed at the plant, or at a location approved by the Engineer, to control the production of a mixture. The required minimum Contractor plant sampling and testing is indicated in Article 1020.16(g) Schedule A.
- (3) Required Field Tests. Sampling and testing shall be performed at the jobsite to control the production of a mixture, and to comply with specifications for placement. For standard curing, after initial curing, and for strength testing; the location shall be approved by the Engineer. The required minimum Contractor jobsite sampling and testing is indicated in Article 1020.16(g), Schedule B.
- (d) Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing is indicated in Article 1020.16(g), Schedule C.
 - (1) Strength Testing. For strength testing, Article 1020.09 shall apply, except the Contractor and Engineer beam strength specimens may be cured in the same tank.
 - (2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will not be considered extreme if within the following limits:

Test Parameter	Acceptable Limits of Precision
Slump	0.75 in. (20 mm)
Air Content	0.9%
Compressive Strength	900 psi (6200 kPa)
Flexural Strength	90 psi (620 kPa)
Aggregate Gradation	See "Guideline for Sample Comparison" in Appendix "A" of the Manual of Test Procedures for Materials.

When acceptable limits of precision have been met, but only one party is within specification limits, the failing test shall be resolved before the material may be considered for acceptance.

(3) Test Results and Specification Limits.

a. Split Sample Testing. If either the Engineer's or the Contractor's split sample test result is not within specification limits, and the other party is within specification limits; immediate retests on a split sample shall be performed for slump, air content, or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength test result is a failure, and the other party is within specification limits; the following actions shall be initiated to investigate the test failure:

1. The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.
2. The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.
3. The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

For aggregate gradation, jobsite slump, and jobsite air content; if the failing split sample test result is not resolved according to 1., 2., or 3., and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed, or if a failing strength test result is not resolved according to 1., 2., or 3., the material will be considered unacceptable.

If a continued trend of difference exists between the Engineer's and the Contractor's split sample test results, or if split sample test results exceed the acceptable limits of precision, the Engineer and the Contractor shall investigate according to items 1., 2., and 3.

b. Independent Sample Testing. For aggregate gradation, jobsite slump, and jobsite air content; if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits, and the mixture has not been placed, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed or the Engineer obtains a failing strength test result, the material will be considered unacceptable.

(e) Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:

- (1) The Contractor's compliance with all contract documents for quality control.
- (2) Validation of Contractor quality control test results by comparison with the Engineer's quality assurance test results using split samples. Any quality control or quality assurance test determined to be flawed may be declared invalid only when reviewed and approved by the Engineer. The Engineer will declare a test result invalid only if it is proven that improper sampling or testing occurred. The test result is to be recorded and the reason for declaring the test invalid will be provided by the Engineer.
- (3) Comparison of the Engineer's quality assurance test results with specification limits using samples independently obtained by the Engineer.

The Engineer may suspend mixture production, reject materials, or take other appropriate action if the Contractor does not control the quality of concrete, cement aggregate mixture II, or controlled low-strength material for acceptance. The decision will be determined according to (1), (2), or (3).

(f) Documentation.

- (1) Records. The Contractor shall be responsible for documenting all observations, inspections, adjustments to the mix design, test results, retest results, and corrective actions in a bound hardback field book, bound hardback diary, or appropriate Department form, which shall become the property of the Department. The documentation shall include a method to compare the Engineer's test results with the Contractor's results. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the consultants, the subcontractors, or the producer of the mixture. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

The Department's form MI 504M, form BMPR MI654, and form BMPR MI655 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed form MI 504M, form BMPR MI654, and form BMPR MI655 are required to authorize payment by the Engineer, for applicable pay items.

- (2) Delivery Truck Ticket. The following information shall be recorded on each delivery ticket or in a bound hardback field book: initial/final revolution counter reading, at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; total amount of water added at the jobsite; and total amount of cement added at the jobsite if the air content needed adjustment.

(g) Basis of Payment and Schedules. Quality Control/Quality Assurance of portland cement concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various concrete contract items.

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING			
Item	Test	Frequency	IL Modified AASHTO or Department Test Method ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2,500 cu yd (1,900 cu m) for each gradation number ^{3/}	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture ^{4/} : Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pycnometer Jar, or T 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or T 255
Mixture ^{5/}	Slump, Air Content, Unit Weight / Yield, and Temperature	As needed to control production	T 141 and T 119 T 141 and T 152 or T 196 T 141 and T 121 T 141 and T 309

- 1/ Refer to the Department's "Manual of Test Procedures for Materials".
- 2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.
- 3/ One per week (Sunday through Saturday) minimum unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.

- 4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests, using the Dunagan or Illinois Modified AASHTO T 255 test method. The Department's "Water/Cement Ratio Worksheet" form shall be completed when applicable.
- 5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO T 141, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318; or other tests at the plant to control mixture production.

SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant ^{2/}	IL Modified AASHTO Test Method
Pavement, Shoulder, Base Course, Base Course Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump ^{3/ 4/}	1 per 500 cu yd (400 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 1250 cu yd (1000 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
Bridge Approach Slab ^{9/} , Bridge Deck ^{9/} , Bridge Deck Overlay ^{9/} , Superstructure ^{9/} , Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump ^{3/ 4/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
Seal Coat	Slump ^{3/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	As needed to control production	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Formed Concrete Revetment Mat ^{10/} , Miscellaneous Items, Incidental Items	Slump ^{3/ 4/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 400 cu yd (300 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
All	Temperature ^{3/}	As needed to control production	T 141 and T 309
Controlled Low-Strength Material (CLSM)	Flow, Air Content and Compressive Strength	As needed to control production	Illinois Test Procedure 307

1/ Sampling and testing of small quantities of curb, gutter, median, barrier, sidewalk, slope wall, paved ditch, miscellaneous items, and incidental items may be waived by the Engineer if requested by the Contractor. However, quality control personnel are still required according to Article 1020.16(c)(1) The Contractor shall also provide recent evidence that similar material has been found to be satisfactory under normal sampling and testing procedures. The total quantity that may be waived for testing shall not exceed 100 cu yd (76 cu m) per contract.

2/ If one mix design is being used for several construction items during a day's production, one testing frequency may be selected to include all items. The construction items shall have the same slump, air content, and water/cement ratio specifications. The frequency selected shall equal or exceed the testing required for the construction item.

One sufficiently sized sample shall be taken to perform the required test(s). Random numbers shall be determined according to the Department's "Method for Obtaining Random Samples for Concrete". The Engineer will provide random sample locations.

3/ The temperature, slump, and air content tests shall be performed on the first truck load delivered, for each pour. Unless a random sample is required for the first truck load, testing the first truck load does not satisfy random sampling requirements.

4/ The slump random sample testing frequency shall be a minimum 1/day for a construction item which is slipformed.

5/ If a pump or conveyor is used for placement, a correction factor shall be established to allow for a loss of air content during transport. The first three truck loads delivered shall be tested, before and after transport by the pump or conveyor, to establish the correction factor. Once the correction is determined, it shall be re-checked after an additional

206

50 cu yd (40 cu m) is pumped, or an additional 100 cu yd (80 cu m) is conveyed. This shall continue throughout the pour. If the re-check indicates the correction factor has changed, a minimum of two truckloads is required to re-establish the correction factor. The correction factor shall also be re-established when significant changes in temperature, distance, pump or conveyor arrangement, and other factors have occurred. If the correction factor is 3.0 percent or more, the Contractor shall take corrective action to reduce the loss of air content during transport by the pump or conveyor. The Contractor shall record all air content test results, correction factors and corrected air contents. The corrected air content shall be reported on form BMPR MI654.

- 6/ If the Contractor's or Engineer's air content test result is within the specification limits, and 0.2 percent or closer to either limit, the next truck load delivered shall be tested by the Contractor. For example, if the specified air content range is 5.0 to 8.0 percent and the test result is 5.0, 5.1, 5.2, 7.8, 7.9 or 8.0 percent, the next truck shall be tested by the Contractor.

If the Contractor's or Engineer's air content or slump test result is not within the specification limits, all subsequent truck loads delivered shall be tested by the Contractor until the problem is corrected.

- 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 at least two cylinder or two beam breaks for field tests.
- 8/ In addition to the strength test, an air test, slump test, and temperature test shall be performed on the same sample. For mixtures pumped or conveyed, the Contractor shall sample according to Illinois Modified AASHTO T 141.
- 9/ The air content test will be required for each delivered truck load.
- 10/ For fabric formed concrete revetment mat, the slump test is not required and the flexural strength test is not applicable.

SCHEDULE C

ENGINEER QUALITY ASSURANCE INDEPENDENT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins, Slump and Air Content	As determined by the Engineer.
Jobsite	Slump, Air Content and Strength	As determined by the Engineer.

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump and Air Content	As determined by the Engineer.
Jobsite	Slump ^{2/} and Air Content ^{2/3/}	At the beginning of the project, the first three tests performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Strength ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness and take immediate possession of or otherwise secure the Department's split sample obtained by the Contractor.
- 3/ Before transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant. After transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant.

SCHEDULE D

CONCRETE QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTS

- (a) Model Quality Control Plan for Concrete Production (*)
- (b) Qualifications and Duties of Concrete Quality Control Personnel (*)
- (c) Development of Gradation Bands on Incoming Aggregate at Mix Plants (*)
- (d) Required Sampling and Testing Equipment for Concrete (*)
- (e) Method for Obtaining Random Samples for Concrete (*)
- (f) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09) (*)
- (g) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)
- (h) Field/Lab Gradations (MI 504M) (*)
- (i) Concrete Air, Slump and Quantity (BMPR MI654) (*)
- (j) P.C. Concrete Strengths (BMPR MI655) (*)
- (k) Aggregate Technician Course or Mixture Aggregate Technician Course (*)
- (l) Portland Cement Concrete Tester Course (*)
- (m) Portland Cement Concrete Level I Technician Course - Manual of Instructions for Concrete Testing (*)
- (n) Portland Cement Concrete Level II Technician Course - Manual of Instructions for Concrete Proportioning (*)
- (o) Portland Cement Concrete Level III Technician Course - Manual of Instructions for Design of Concrete Mixtures (*)
- (p) Manual of Test Procedures for Materials

* Refer to Appendix C of the Manual of Test Procedures for Materials for more information."

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (BDE)

Effective: November 1, 2012

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 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 approved 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 ≤ 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 μm)	$\pm 5 \%$	
No. 200 (75 μm)	$\pm 2.0 \%$	$\pm 4.0 \%$
Asphalt Binder	$\pm 0.4 \%$ ^{1/}	$\pm 0.5 \%$
G_{mm}	± 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 ^{1/, 2/}	RAP/RAS Maximum ABR %		
Ndesign	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 tables listed below for the given N design.

Level 1 - FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures ^{1/, 2/}	Level 1 - FRAP/RAS Maximum ABR %		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified ^{3/, 4/}
30	35	35	10
50	30	25	10
70	25	20	10
90	20	15	10

105	10	10	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 20 percent.

Level 2 – FRAP/RAS Maximum Asphalt Binder Replacement (ABR) Percentage

HMA Mixtures <i>1/, 2/</i>	Level 2 – FRAP/RAS Maximum ABR %		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified ^{3/} _{4/}
30	40	40	10
50	40	30	10
70	30	20	10
90	30	20	10
105	30	15	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 above detailed requirements.

FRAP/RAS mix designs exceeding the Level 1 FRAP/RAS Maximum ABR percentages shall be tested prior to submittal for verification, according to Illinois Modified AASHTO T 324 (Hamburg Wheel) and shall meet the following requirements.

Asphalt Binder Grade	# Repetitions	Max. Rut Depth in. (mm)
PG76-XX	20,000	1/2 (12.5)
PG70-XX	15,000	1/2 (12.5)
PG64-XX	7,500	1/2 (12.5)
PG58-XX	5,000	1/2 (12.5)

- (a) RAP/FRAP and/or RAS. RAP/FRAP and/or RAS designs shall be submitted for volumetric verification. If additional RAP/FRAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP/FRAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP stockpiles may be used in the original mix design at the percent previously verified.
- (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. Mixture production where the FRAP/RAS ABR percentage exceeds the Level 1 limits, shall be sampled within the first 500 tons (450 metric tons) on the first day of production with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture conformance is demonstrated prior to start of mix production for a State contract.

- (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 ± 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.

When producing HMA containing RAS, a positive dust control system shall be utilized.

- (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).
- f. RAP/FRAP/RAS weight to the nearest pound (kilogram).
- g. Virgin asphalt binder weight to the nearest pound (kilogram).
- h. 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 and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

80306

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 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 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

SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)

Effective: November 1, 2005

Revised: April 1, 2012

Description. This work shall consist of constructing cast-in-place items involving Class DS or SI concrete with self-consolidating concrete. The concrete shall be according to the special provision, "Portland Cement Concrete", except as modified herein.

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Mix Design Criteria. Article 1020.04 shall apply, except as follows:

- (a) The slump requirements shall not apply.
- (b) The concrete mixture shall be uniformly graded, and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" shall be used to develop the uniformly graded mix design. The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. However, the final gradation when using a single coarse aggregate or combination of coarse aggregates shall have 100 percent pass the 1 in. (25 mm) sieve, and 95 percent pass the 3/4 in. (19 mm) sieve. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (c) The slump flow range shall be 22 in. (560 mm) minimum to 28 in. (710 mm) maximum.
- (d) The visual stability index shall be a maximum of 1.
- (e) The J-ring value shall be a maximum of 2 in. (50 mm).
- (f) The L-box blocking ratio shall be a minimum of 80 percent.
- (g) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-6, SCC-8 (Option C) and Illinois Modified AASHTO T 22, 23, 121, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mixing Portland Cement Concrete. In addition to Article 1020.11, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall ensure the design of the falsework and forms is adequate for the additional form pressure caused by the fluid concrete. Forms shall be tight to prevent leakage of fluid concrete.

When the form height for placing the self-consolidating concrete is greater than 10.0 ft (3.0 m), direct monitoring of form pressure shall be performed according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m). However, when the maximum distance of horizontal flow from the point of discharge exceeds 15 ft (4.6 m), the dynamic segregation index shall be a maximum 10.0 percent. If the maximum is exceeded, the maximum distance of horizontal flow from the point of deposit will not be allowed to exceed 15 ft (4.6 m). For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

“Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator will be permitted if it can be used in a manner that does not cause coarse aggregate separation from the mortar as determined by the Engineer. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.”

If the contract requires QC/QA for concrete, the following four sections shall supplement the special provision Quality Control/Quality Assurance of Concrete Mixtures. If QC/QC is not required, the following four sections shall be disregarded by the Contractor and the Engineer will perform QA testing as appropriate.

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

If the self-consolidating concrete horizontal flow will exceed 15 ft (4.6 m), the dynamic segregation index test shall be performed at start of production for each mix design and per contract.

The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, J-ring or L-box, dynamic segregation index, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For dynamic segregation index, quality assurance split sample testing will be performed as determined by the Engineer. The acceptable limit of precision will be 1.0 percent.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

80152

SELF-CONSOLIDATING CONCRETE FOR PRECAST AND PRECAST PRESTRESSED PRODUCTS (BDE)

Effective: July 1, 2004

Revised: April 1, 2012

Description. This work shall consist of constructing precast and precast prestressed concrete products with self-consolidating concrete. The concrete shall be according to the special provision, "Portland Cement Concrete", except as modified herein.

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Mix Design Criteria. Article 1020.04 shall apply, except as follows:

- (a) If the maximum cement factor is not specified for the product, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).
- (b) If the maximum allowable water/cement ratio is not specified for the product, it shall not exceed 0.44.
- (c) The slump requirements shall not apply.
- (d) The concrete mixture shall be uniformly graded, and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" shall be used to develop the uniformly graded mix design. The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. However, the final gradation when using a single coarse aggregate or combination of coarse aggregates shall have 100 percent pass the 1 in. (25 mm) sieve, and 95 percent pass the 3/4 in. (19 mm) sieve. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be 22 in. (560 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 2 in. (50 mm).
- (h) The L-box blocking ratio shall be a minimum of 80 percent.
- (i) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-6, SCC-8, (Option C) and Illinois Modified AASHTO T 22, 23, 121, 141, 152, 196, and 309 shall be used for testing of self-consolidating mixtures.

Mixing Portland Cement Concrete. In addition to Article 1020.11, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed and truck-mixed concrete.

Concrete Placement for Precast Products. The maximum distance of horizontal flow from the point of deposit shall not exceed 25 ft (7.6 m) for precast products. However, when the maximum distance of horizontal flow from the point of discharge exceeds 15 ft (4.6 m), the dynamic segregation index shall be a maximum 10.0 percent. If the maximum is exceeded, the maximum distance of horizontal flow from the point of deposit will not be allowed to exceed 15 ft (4.6 m).

Concrete Placement for Precast Prestressed Products. The maximum distance of horizontal flow from the point of deposit shall not exceed 15 ft (4.6 m) for precast prestressed products. In addition, the placement operation shall be moved as required to ensure the leading edge of the flowing concrete does not exceed 15 ft (4.6 m). For a bed of beams, a single beam shall be completely filled with concrete before placement of concrete in the next beam. For deck beams with void tubes installed in place prior to the pour, the concrete shall be placed on one side of the void tube until the concrete flows completely under the void tube to the other side. Once this has been completed, the concrete placement operation may be moved to the other side.

Consolidation. Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator will be permitted if it can be used in a manner that does not cause coarse aggregate separation from the mortar as determined by the Engineer. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

80132

SIDEWALK, CORNER OR CROSSWALK CLOSURE (BDE)

Effective: January 1, 2012

Add the following to Article 701.03 of the Standard Specifications:

“(p) Detectable Pedestrian Channelizing Barricades1106.02(k)”

Add the following to Article 701.15 of the Standard Specifications:

“(n) Detectable Pedestrian Channelizing Barricade. Detectable pedestrian channelizing barricades are cane detectable and visible to persons having low vision. These barricades are used to channelize pedestrian traffic.”

Add the following to Article 1106.02 of the Standard Specifications:

“(m) Detectable Pedestrian Channelizing Barricades. The top and bottom panels shall have alternating white and orange stripes sloping at 45 degrees on the side exposed to pedestrian traffic. Barricade stripes shall be 6 in. (150 mm) in width. The predominant color for other barricade components shall be white, orange, or silver.

The top and bottom rails shall be continuous to allow for detection for hand trailing and cane trailing, respectively.

The faces of the barricade rails shall be vertical.”

80285

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)	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness)	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness)	37 lb/ft (55 kg/m)
Other piling	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	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	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

232

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: April 2, 2005

Revised: April 1, 2011

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting according to Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

The mobilization payment to the subcontractor is an advance payment of the reported amount of the subcontract and is not a payment in addition to the amount of the subcontract; therefore, the amount of the advance payment will be deducted from future progress payments.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

80143

SYNTHETIC FIBERS IN CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH (BDE)

Effective: November 1, 2012

Add the following to Article 606.02 of the Standard Specifications.

- “(g) Grout 1024.01
- “(h) Synthetic Fibers (Note 1)

Note 1. Synthetic fibers may be used in the concrete mixture for slipform applications. Synthetic fibers shall be Type III according to ASTM C 1116. The synthetic fiber shall have a minimum length of 1/2 in. (13 mm) and a maximum length of 0.75 in. (19 mm).

The synthetic fibers shall be added to the concrete and mixed per the manufacturer’s recommendation. The maximum dosage rate in the concrete mixture shall be 1.5 lb/cu yd (0.9 kg/cu m).

The Department will maintain an “Approved List of Synthetic Fibers”.

Revise the second paragraph of Article 606.11 of the Standard Specifications to read:

“Forms shall be removed within 24 hours after the concrete has been placed, and minor defects shall be filled with grout consisting of one part cement and two parts sand mixed with water.”

80308

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: August 1, 2011

Revise the third sentence of the third paragraph of Article 105.03(b) of the Standard Specifications to read:

"The daily monetary deduction will be \$2,500."

80273

UTILITY COORDINATION AND CONFLICTS (BDE)

Effective: April 1, 2011

Revised: January 1, 2012

Revise Article 105.07 of the Standard Specifications to read:

“105.07 Cooperation with Utilities. The Department reserves the right at any time to allow work by utilities on or near the work covered by the contract. The Contractor shall conduct his/her work so as not to interfere with or hinder the progress or completion of the work being performed by utilities. The Contractor shall also arrange the work and shall place and dispose of the materials being used so as not to interfere with the operations of utility work in the area.

The Contractor shall cooperate with the owners of utilities in their removal and rearrangement operations so work may progress in a reasonable manner, duplication or rearrangement of work may be reduced to a minimum, and services rendered by those parties will not be unnecessarily interrupted.

The Contractor shall coordinate with any planned utility adjustment or new installation and the Contractor shall take all precautions to prevent disturbance or damage to utility facilities. Any failure on the part of the utility owner, or their representative, to proceed with any planned utility adjustment or new installation shall be reported promptly by the Contractor to the Engineer.”

Revise the first sentence of the last paragraph of Article 107.19 of the Standard Specifications to read:

“When the Contractor encounters unexpected regulated substances due to the presence of utilities in unanticipated locations, the provisions of Article 107.40 shall apply; otherwise, if the Engineer does not direct a resumption of operations, the provisions of Article 108.07 shall apply.”

Revise Article 107.31 of the Standard Specification to read:

“107.31 Reserved.”

Add the following four Articles to Section 107 of the Standard Specifications:

“107.37 Locations of Utilities within the Project Limits. All known utilities existing within the limits of construction are either indicated on the plans or visible above ground. For the purpose of this Article, the limits of proposed construction are defined as follows:

(a) Limits of Proposed Construction for Utilities Paralleling the Roadway.

- (1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 2 ft (600 mm) distant at right angles from the plan or revised slope limits.

236

In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 4 ft (1.2 m) outside the edges of structure footings or the structure where no footings are required.

- (2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.
 - (3) The lower vertical limits shall be either the top of the utility at the depth below the proposed grade as prescribed by the governing agency or the limits of excavation, whichever is less.
- (b) Limits of Proposed Construction for Utilities Crossing the Roadway in a Generally Transverse Direction.
- (1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc. and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction, unless otherwise required by the regulations governing the specific utility involved.
 - (2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general direction as the roadway.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utilities in their present and/or adjusted positions as indicated in the contract. It is further understood the actual location of the utilities may be located anywhere within the tolerances provided in 220 ILCS 50/2.8 or Administrative Code Title 92 Part 530.40(c), and the proximity of some utilities to construction may require extraordinary measures by the Contractor to protect those utilities.

No additional compensation will be allowed for any delays, inconveniences, or damages sustained by the Contractor due to the presence of or any claimed interference from known utility facilities or any adjustment of them, except as specifically provided in the contract.

107.38 Adjustments of Utilities within the Project Limits. The adjustment of utilities consists of the relocation, removal, replacement, rearrangements, reconstruction, improvement, disconnection, connection, shifting, new installation, or altering of an existing utility facility in any manner.

Utilities which are to be adjusted shall be adjusted by the utility owner or the owner's representative or by the Contractor as a contract item. Generally, arrangements for adjusting known utilities will be made by the Department prior to project construction; however, utilities will not necessarily be adjusted in advance of project construction and, in some cases, utilities will not be removed from the proposed construction limits as described in Article 107.37. When

utility adjustments must be performed in conjunction with construction, the utility adjustment work will be indicated in the contract.

The Contractor may make arrangements for adjustment of utilities indicated in the contract, but not scheduled by the Department for adjustment, provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any such adjustments shall be the responsibility of the Contractor.

107.39 Contractor’s Responsibility for Locating and Protecting Utility Property and Services. At points where the Contractor’s operations are adjacent to properties or facilities of utility companies, or are adjacent to other property, damage to which might result in considerable expense, loss, or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

Within the State of Illinois, a State-Wide One Call Notice System has been established for notifying utilities. Outside the city limits of the City of Chicago, the system is known as the Joint Utility Locating Information for Excavators (JULIE) System. Within the city limits of the City of Chicago the system is known as DIGGER. All utility companies and municipalities which have buried utility facilities in the State of Illinois are a part of this system.

The Contractor shall call JULIE (800-892-0123) or DIGGER (312-744-7000), a minimum of 48 hours in advance of work being done in the area, and they will notify all member utility companies involved their respective utility should be located.

For utilities which are not members of JULIE or DIGGER, the Contractor shall contact the owners directly. The plan general notes will indicate which utilities are not members of JULIE or DIGGER.

The following table indicates the color of markings required of the State-Wide One Call Notification System.

Utility Service	Color
Electric Power, Distribution and Transmission	Safety Red
Municipal Electric Systems	Safety Red
Gas Distribution and Transmission	High Visibility Safety Yellow
Oil Distribution and Transmission	High Visibility Safety Yellow
Telephone and Telegraph System	Safety Alert Orange
Community Antenna Television Systems	Safety Alert Orange
Water Systems	Safety Precaution Blue
Sewer Systems	Safety Green
Non-Potable Water and Slurry Lines	Safety Purple
Temporary Survey	Safety Pink
Proposed Excavation	Safety White (Black when snow is on the ground)

The State-Wide One Call Notification System will provide for horizontal locations of utilities. When it is determined that the vertical location of the utility is necessary to facilitate construction, the Engineer may make the request for location from the utility after receipt of notice from the Contractor. If the utility owner does not field locate their facilities to the satisfaction of the Engineer, the Engineer will authorize the Contractor in writing to proceed to locate the facilities in the most economical and reasonable manner, subject to the approval of the Engineer, and be paid according to Article 109.04.

The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

In the event of interruption of utility services as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authority and shall cooperate with the said authority in the restoration of service. If water service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

107.40 Conflicts with Utilities. Except as provided hereinafter, the discovery of a utility in an unanticipated location will be evaluated according to Article 104.03. It is understood and agreed that the Contractor has considered in the bid all facilities not meeting the definition of a utility in an unanticipated location and no additional compensation will be allowed for any delays, inconveniences, or damages sustained by the Contractor due to the presence of or any claimed interference from such facilities.

When the Contractor discovers a utility in an unanticipated location, the Contractor shall not interfere with said utility, shall take proper precautions to prevent damage or interruption of the utility, and shall promptly notify the Engineer of the nature and location of said utility.

- (a) Definition. A utility in an unanticipated location is defined as an active or inactive utility, which is either:
 - (1) Located underground and (a) not shown in any way in any location on the contract documents; (b) not identified in writing by the Department to the Contractor prior to the letting; or (c) not located relative to the location shown in the contract within the tolerances provided in 220 ILCS 50/2.8 or Administrative Code Title 92 Part 530.40(c); or

(2) Located above ground or underground and not relocated as provided in the contract.

Service connections shall not be considered to be utilities in unanticipated locations.

(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work applicable to the utility or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows:

(1) Minor Delay. A minor delay occurs when the Contractor's operation is completely stopped by a utility in an unanticipated location for more than two hours, but not to exceed three weeks.

(2) Major Delay. A major delay occurs when the Contractor's operation is completely stopped by a utility in an unanticipated location for more than three weeks.

(3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the contractor's rate of production decreases by more than 25 percent and lasts longer than seven days.

(c) Payment. Payment for Minor, Major and Reduced Rate of Production Delays will be made as follows.

(1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

(2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to three weeks plus the cost of move-out to either the Contractor's yard or another job, whichever is less. Rental equipment may be paid for longer than three weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

- (3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Whether covered by (1), (2) or (3) above, additional traffic control required as a result of the operation(s) delayed will be paid for according to Article 109.04 for the total length of the delay.

If the delay is clearly shown to have caused work, which would have otherwise been completed, to be done after material or labor costs have increased, such increases may be paid. Payment for materials will be limited to increased cost substantiated by documentation furnished by the Contractor. Payment for increased labor rates will include those items in Article 109.04(b)(1) and (2), except the 35 percent and ten percent additives will not be permitted. On a working day contract, a delay occurring between November 30 and May 1, when work has not started, will not be considered as eligible for payment of measured labor and material costs.

Project overhead (not including interest) will be allowed when all progress on the contract has been delayed, and will be calculated as 15 percent of the delay claim.

- (d) Other Obligations of Contractor. Upon payment of a claim under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this Provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this Provision."

80270

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: November 1, 2012

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 ± 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.

“(d) 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. Additional mixture verification requirements include Hamburg Wheel testing according to Illinois Modified AASHTO T324 and tensile strength testing according to Illinois Modified AASHTO T283 which shall meet the criteria in Tables 1 and 2 respectively herein. The Contractor shall provide the additional material as follows:
 - a. Four gyratory specimens to be prepared in the Contractor’s lab according to Illinois Modified AASHTO T324.
 - b. Sufficient mixture to conduct tensile strength testing according to Illinois Modified AASHTO T283.

Table 1. Illinois Modified AASHTO T324 Requirements ^{1/}

Asphalt Binder Grade	# Wheel Passes	Max Rut Depth in. (mm)
PG 76-XX	20,000	1/2 in. (12.5 mm)
PG 70-XX	15,000	1/2 in. (12.5 mm)

PG 64-XX	7,500	1/2 in. (12.5 mm)
PG 58-XX	5,000	1/2 in. (12.5 mm)

- 1/ Loose WMA shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

Table 2. Tensile Strength Requirements

Asphalt Binder Grade	Tensile Strength psi (kPa)	
	Minimum	Maximum
PG 76-XX	80 (552)	200 (1379)
PG 70-XX		
PG 64-XX	60 (414)	200 (1379)"
PG 58-XX		

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 mix of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix.”

Insert the following after the sixth paragraph of Article 1030.06(a) of the Standard Specifications:

“Warm mix technologies shall be as follows.

- (1) 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 and tensile strength testing according to Illinois Modified AASHTO T283 (approximately 110 lb (50 kg) total).
- (2) Upon completion of the start-up, WMA, or HMA using WMA technologies, production shall cease. The Contractor may revert to conventional HMA production provided a start-up has been previously completed for the current construction season for the mix design. WMA, or HMA using WMA technologies, may resume once all the test results, including Hamburg Wheel results are completed and found acceptable by the Engineer.”

Add the following after the first paragraph of Article 1030.05(d)(2)c. of the Standard Specifications:

“During production of each WMA mixture or HMA utilizing WMA technologies, the Engineer will request a minimum of one randomly located sample, identified by

the Engineer, for Hamburg Wheel testing to determine compliance with the requirements specified in Table 1 herein.”

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 Gyrotory 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

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	
Maximum Specific Gravity of Mixture	Day's production ≥ 1200 tons: 1 per half day of production	1 per day	Illinois-Modified AASHTO T 209
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

Note 1. The No. 8 (2.36 mm) and No. 30 (600 µm) sieves are not required for All Other Mixtures.

Note 2. The Engineer may waive the ignition oven requirement for asphalt binder content if the aggregates to be used are known to have ignition asphalt binder content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the asphalt binder content.

Note 3. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design.

Note 4. The Engineer reserves the right to require additional hot bin gradations for batch

Note 5. The WMA compaction temperature for mixture volumetric testing shall be 270 ± 5 °F (132 ± 3 °C) for quality control testing. The WMA compaction temperature for quality assurance testing will be 270 ± 5 °F (132 ± 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.

246

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

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.