

**RETURN WITH BID**

State of \_\_\_\_\_ )  
 ) ss.  
County of \_\_\_\_\_ )

**AFFIDAVIT**

\_\_\_\_\_ (name of affiant), of \_\_\_\_\_,

\_\_\_\_\_, being first duly sworn upon oath, states as follows:

1. That I am the \_\_\_\_\_ (officer or position) of \_\_\_\_\_ (bidder) and have personal knowledge of the facts herein stated.
2. That, if selected under this proposal, \_\_\_\_\_ (bidder) will maintain a business office in the State of Illinois which will be located in \_\_\_\_\_ County, Illinois.
3. That this business office will serve as the primary place of employment for any persons employed in the construction contemplated by this proposal.
4. That this Affidavit is given as a requirement of state law as provided in Section 30-22(8) of the Illinois Procurement Code.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name of Affiant

This instrument was acknowledged before me on the \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_ by \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

(SEAL)

## **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 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 Plans and Contracts Office at (217)782-7806 or [D&Econtracts@dot.il.gov](mailto:D&Econtracts@dot.il.gov)

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

**Cover page followed by the Pay Items.** If you are using special software or CBID to generate your schedule of prices, do not include the blank schedule of prices.

**Page 4 (Item 9)** – Check “YES” if you will use a subcontractor(s). Include the subcontractor(s) name, address and the dollar amount (if over \$25,000). If you will use subcontractor(s) but are uncertain who or the dollar amount; check “YES” but leave the lines blank.

**After page 4,** Insert affidavit for having an office in Illinois, your Cost Adjustments for Steel, Bituminous and Fuel (if applicable), and your State Board of Elections certificate of registration.

**Page 10 (Paragraph J)** – Check “YES” or “NO” whether your company has any business in Iran.

**Page 10 (Paragraph K)** – List the Union Local Name and number or certified training programs that you have in place. Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.

**Page 11 (Paragraph L)** - Insert a copy of your State Board of Elections certificate of registration after page 4 of the bid proposal. Only include the page that has the date stamp on it. Do not include any other certificates or forms showing that you are an Illinois business.

**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”.

**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), 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-----217-785-0230  
Estimates Unit -----217-785-3483

**QUESTIONS: following contract execution**

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

# 149

RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting April 27, 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. 76C52  
ST CLAIR County  
Section 82-1-R(A),82-1-R(B)  
Routes FAI 64 & 70  
District 8 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

S

(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) \_\_\_\_\_ a

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

**Contract No. 76C52  
ST CLAIR County  
Section 82-1-R(A),82-1-R(B)  
Routes FAI 64 & 70  
District 8 Construction Funds**

**This improvement consists of the construction of Ramps 70E64E, 55S70W, 70E55N and retaining wall (SN 082-W310); the reconstruction of Ramps 64W55N, 64W55S, 55N64E, O and P; the resurfacing of WB and EB I-64, NB and SB I-55 and Ramp 64W55S. The work also included drainage, lighting, signing, traffic control and protection, pavement markings, deep wells and all incidental and collateral work necessary to complete the improvements as shown on the plans and as described herein.**

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

**RETURN WITH BID**

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

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

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

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

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

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

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

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

Item \_\_\_\_\_

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

County \_\_\_\_\_

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



**RETURN WITH BID**

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

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

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

**Schedule of Combination Bids**

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

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

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

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

Check box Yes   
 Check box No

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

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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 or the State Purchasing Officer is for approval of the procurement process and execution of the contract by the Department. Neither the Chief Procurement Officer nor the State Purchasing Officer shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Illinois Procurement Code.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER - 76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0321309	CONCRETE PAD	SQ YD	63.000				
X0322628	FILL EXIST PIEZOMETER	EACH	2.000				
X0323255	DRILLED WELL	EACH	1.000				
X0323265	REMOVE EXIST RIPRAP	SQ YD	631.000				
X0323415	SITE CLEAN-UP	L SUM	1.000				
X0326366	ELECT EQPT REM/SALV	EACH	2.000				
X0326694	PLUG EX STORM SEWERS	CU YD	17.000				
X0326934	HDP PIPE 12"	FOOT	114.000				
X0327235	LOC UNDERGR UTILITIES	FOOT	100.000				
X0327263	COMB SEWER CL A T2 42	FOOT	16.000				
X0327321	INTERST WKEND CLSR SP	EACH	2.000				
X0327388	WELL PUMP FEEDER MOD	EACH	4.000				
X0327389	DISCHARGE PIPE REMOV	FOOT	415.000				
X0462500	SUBMERSIBLE PUMP	EACH	1.000				
X4202005	DIAMOND GRIND GRV R S	SQ YD	3,890.000				

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Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X4401198	HMA SURF REM VAR DP	SQ YD	29,624.000				
X4404000	PARKING LOT PAVT REM	SQ YD	3,513.000				
X6020190	DR STR T4 SP 2T20F&G	EACH	1.000				
X6020195	DR STR T4 SP 2T23F&G	EACH	2.000				
X6022830	MAN SAN 6 DIA T1F CL	EACH	1.000				
X6026054	SAN MAN REMOVED	EACH	1.000				
X6026057	SAN MH REC NEW T1F CL	EACH	1.000				
X6061305	CONC MEDIAN SURF SPL	SQ FT	463.000				
X6350120	DELINEATOR REMOVAL	EACH	216.000				
X6370050	CONC BAR WALL SPL	FOOT	469.000				
X6370279	CONC BAR 1F 42HT SPL	FOOT	4,680.000				
X7010216	TRAF CONT & PROT SPL	L SUM	1.000				
X7010225	TC-PROT 701451 SPL	L SUM	1.000				
X7030030	WET REF TEM TAPE T3 4	FOOT	153,564.000				
X7030045	WET REF TEM TAPE T3 8	FOOT	20,801.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X7030050	WET REF TEM TPE T3 12	FOOT	2,323.000				
X7040650	REM TEMP CONC BARRIER	FOOT	2,975.000				
X7330076	BR MOUNT SIGN SUPPORT	EACH	2.000				
X7340020	DRILL SHAFT CON F SPL	CU YD	11.900				
X7340100	CONC FOUNDATION GR MT	CU YD	6.300				
X7830070	GRV RCSD PVT MRKG 5	FOOT	17,176.000				
X7830076	GRV RCSD PVT MRKG 9	FOOT	7,408.000				
X7830078	GRV RCSD PVT MRKG 13	FOOT	1,406.000				
Z0001495	BR APPROACH SHLD REM	SQ YD	11.000				
Z0012754	STR REP CON DP = < 5	SQ FT	52.000				
Z0012755	STR REP CON DP OVER 5	SQ FT	60.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0019800	EARTH DITCH BERM	EACH	9.000				
Z0022800	FENCE REMOVAL	FOOT	1,896.000				
Z0024110	FILL DEEP WELL	EACH	2.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
Z0024112	WELL CONT CENTER MOD	L SUM	1.000				
Z0029990	REM SALV IMPACT ATTEN	EACH	2.000				
Z0029999	IMPACT ATTENUATOR REM	EACH	7.000				
Z0030260	IMP ATTN TEMP FRN TL3	EACH	6.000				
Z0030330	IMP ATTN REL FRD TL3	EACH	9.000				
Z0034210	MECH ST EARTH RET WL	SQ FT	940.000				
Z0040000	PIEZOMETERS	EACH	1.000				
Z0048665	RR PROT LIABILITY INS	L SUM	1.000				
Z0062456	TEMP PAVEMENT	SQ YD	1,073.000				
Z0076602	TRAINEES SPL	HOUR	2,500.000		3.500		8,750.000
Z0076604	TRAINEES TPG	HOUR	2,500.000		10.000		25,000.000
20100500	TREE REMOV ACRES	ACRE	0.750				
20200100	EARTH EXCAVATION	CU YD	113,545.000				
20700220	POROUS GRAN EMBANK	CU YD	62.000				
20800150	TRENCH BACKFILL	CU YD	2,302.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
25100115	MULCH METHOD 2	ACRE	11.000				
25100630	EROSION CONTR BLANKET	SQ YD	19,349.000				
28000250	TEMP EROS CONTR SEED	POUND	2,200.000				
28000305	TEMP DITCH CHECKS	FOOT	108.000				
28000400	PERIMETER EROS BAR	FOOT	12,311.000				
28000500	INLET & PIPE PROTECT	EACH	148.000				
28100107	STONE RIPRAP CL A4	SQ YD	1,351.000				
28200200	FILTER FABRIC	SQ YD	1,351.000				
31200500	STAB SUBBASE HMA 4	SQ YD	32,179.000				
35100110	AGG BASE CSE A	CU YD	30,394.000				
40201000	AGGREGATE-TEMP ACCESS	TON	400.000				
40600200	BIT MATLS PR CT	TON	38.300				
40600300	AGG PR CT	TON	180.000				
40603148	P HMA BC SMA N80	TON	3,269.000				
40603153	P HMA SC SMA N80	TON	11,521.000				

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Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
42000511	PCC PVT 10 1/2 JOINTD	SQ YD	11,699.000				
42000551	PCC PVT 12 1/2 JOINTD	SQ YD	2,317.000				
42000564	PCC PVT 14 JOINTED	SQ YD	114.000				
42001200	PAVEMENT FABRIC	SQ YD	225.000				
42001300	PROTECTIVE COAT	SQ YD	61,724.000				
42001420	BR APPR PVT CON (PCC)	SQ YD	313.000				
42100350	CONT R PCC PVT 12 1/2	SQ YD	10,554.000				
42100380	CONT REINF PCC PVT 14	SQ YD	2,333.000				
42100615	PAVT REINFORCEMENT	SQ YD	12,886.000				
44000100	PAVEMENT REM	SQ YD	25,814.000				
44000157	HMA SURF REM 2	SQ YD	4,362.000				
44000165	HMA SURF REM 4	SQ YD	15,100.000				
44000400	GUTTER REM	FOOT	3,398.000				
44000500	COMB CURB GUTTER REM	FOOT	3,414.000				
44000600	SIDEWALK REM	SQ FT	1,229.000				

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Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
44001980	CONC BARRIER REMOV	FOOT	6,015.000				
44004000	PAVED DITCH REMOVAL	FOOT	358.000				
44004250	PAVED SHLD REMOVAL	SQ YD	20,841.000				
44200620	CL A PATCH T2 14	SQ YD	10.000				
44200624	CL A PATCH T3 14	SQ YD	16.000				
44200628	CL A PATCH T4 14	SQ YD	874.000				
44201015	CL B PATCH T1 14	SQ YD	10.000				
44201019	CL B PATCH T2 14	SQ YD	84.000				
44201023	CL B PATCH T3 14	SQ YD	132.000				
44213000	PATCH REINFORCEMENT	SQ YD	900.000				
44213100	PAVEMENT FABRIC	SQ YD	226.000				
44213200	SAW CUTS	FOOT	5,753.000				
44213204	TIE BARS 3/4	EACH	2,638.000				
48101200	AGGREGATE SHLDS B	TON	2,890.000				
48300500	PCC SHOULDERS 10	SQ YD	4,622.000				



ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
48300510	PCC SHOULDERS 10 1/2	SQ YD	7,380.000				
48300710	PCC SHOULDERS 12 1/2	SQ YD	11,946.000				
48300820	PCC SHOULDERS 14	SQ YD	1,499.000				
50100300	REM EXIST STRUCT N1	EACH	1.000				
50100400	REM EXIST STRUCT N2	EACH	1.000				
50100500	REM EXIST STRUCT N3	EACH	1.000				
50100600	REM EXIST STRUCT N4	EACH	1.000				
50100700	REM EXIST STRUCT N5	EACH	1.000				
50102400	CONC REM	CU YD	7.000				
50105220	PIPE CULVERT REMOV	FOOT	61.000				
50200100	STRUCTURE EXCAVATION	CU YD	184.000				
50300255	CONC SUP-STR	CU YD	74.000				
50300300	PROTECTIVE COAT	SQ YD	176.000				
50800105	REINFORCEMENT BARS	POUND	122.000				
50800205	REINF BARS, EPOXY CTD	POUND	16,936.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

State Job # - C-98-002-12

76C52

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
51500100	NAME PLATES	EACH	1.000				
54213657	PRC FLAR END SEC 12	EACH	4.000				
54213660	PRC FLAR END SEC 15	EACH	4.000				
54248510	CONCRETE COLLAR	CU YD	15.610				
550A0050	STORM SEW CL A 1 12	FOOT	884.000				
550A0070	STORM SEW CL A 1 15	FOOT	812.000				
550A0090	STORM SEW CL A 1 18	FOOT	327.000				
550A0120	STORM SEW CL A 1 24	FOOT	188.000				
550A0340	STORM SEW CL A 2 12	FOOT	2,383.000				
550A0360	STORM SEW CL A 2 15	FOOT	1,083.000				
550A0380	STORM SEW CL A 2 18	FOOT	313.000				
550A0410	STORM SEW CL A 2 24	FOOT	152.000				
550A0430	STORM SEW CL A 2 30	FOOT	32.000				
550A0450	STORM SEW CL A 2 36	FOOT	16.000				
550A0480	STORM SEW CL A 2 48	FOOT	8.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
550A0640	STORM SEW CL A 3 12	FOOT	241.000				
550A0680	STORM SEW CL A 3 18	FOOT	79.000				
55100500	STORM SEWER REM 12	FOOT	2,033.000				
55100700	STORM SEWER REM 15	FOOT	357.000				
55100900	STORM SEWER REM 18	FOOT	397.000				
55101200	STORM SEWER REM 24	FOOT	29.000				
55200400	STORM SEWERS JKD 15	FOOT	60.000				
55200600	STORM SEWERS JKD 18	FOOT	286.000				
60100060	CONC HDWL FOR P DRAIN	EACH	8.000				
60100907	PIPE DRAINS 5	FOOT	141.000				
60100925	PIPE DRAINS 8	FOOT	126.000				
60100935	PIPE DRAINS 10	FOOT	42.000				
60100945	PIPE DRAINS 12	FOOT	38.000				
60100955	PIPE DRAINS 15	FOOT	38.000				
60107700	PIPE UNDERDRAINS 6	FOOT	17,229.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60108200	PIPE UNDERDRAIN 6 SP	FOOT	836.000				
60200105	CB TA 4 DIA T1F OL	EACH	2.000				
60200805	CB TA 4 DIA T8G	EACH	5.000				
60200905	CB TA 4 DIA T9F&G	EACH	1.000				
60201310	CB TA 4 DIA T20F&G	EACH	33.000				
60201340	CB TA 4 DIA T24F&G	EACH	9.000				
60203805	CB TA 5 DIA T1F OL	EACH	1.000				
60205010	CB TA 5 DIA T20F&G	EACH	5.000				
60218300	MAN TA 4 DIA T1F OL	EACH	2.000				
60218400	MAN TA 4 DIA T1F CL	EACH	17.000				
60221100	MAN TA 5 DIA T1F CL	EACH	6.000				
60222210	MAN TA 5 DIA T20F&G	EACH	1.000				
60223800	MAN TA 6 DIA T1F CL	EACH	2.000				
60224035	MAN TA 6 DIA T20F&G	EACH	1.000				
60236200	INLETS TA T8G	EACH	1.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60237420	INLETS TA T20F&G	EACH	4.000				
60237470	INLETS TA T24F&G	EACH	6.000				
60240210	INLETS TB T1F OL	EACH	3.000				
60240215	INLETS TB T1F CL	EACH	1.000				
60240301	INLETS TB T8G	EACH	6.000				
60240303	INLETS TB T9F&G	EACH	3.000				
60240324	INLETS TB T20F&G	EACH	13.000				
60240328	INLETS TB T24F&G	EACH	2.000				
60250200	CB ADJUST	EACH	8.000				
60255500	MAN ADJUST	EACH	7.000				
60257900	MAN RECONST	EACH	1.000				
60258200	MAN RECON NEW T1F CL	EACH	1.000				
60260100	INLETS ADJUST	EACH	6.000				
60263000	INL RECON NEW T1F CL	EACH	1.000				
60264140	INL RECON NEW T24F&G	EACH	2.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER - 76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60270050	DR STR T4 W/2 T20F&G	EACH	5.000				
60270055	DR STR T5 W/2 T22F&G	EACH	1.000				
60500040	REMOV MANHOLES	EACH	15.000				
60500050	REMOV CATCH BAS	EACH	9.000				
60500060	REMOV INLETS	EACH	45.000				
60602500	CONC GUTTER TA	FOOT	948.500				
60605000	COMB CC&G TB6.24	FOOT	365.000				
60605300	COMB CC&G TB6.24 MOD	FOOT	4,374.500				
60615400	PAVED DITCH TA-15	FOOT	103.000				
60618300	CONC MEDIAN SURF 4	SQ FT	490.000				
63000001	SPBGR TY A 6FT POSTS	FOOT	4,825.000				
63100045	TRAF BAR TERM T2	EACH	3.000				
63100085	TRAF BAR TERM T6	EACH	4.000				
63100089	TRAF BAR TERM T6B	EACH	13.000				
63100105	TRAF BAR TERM T10	EACH	3.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

State Job # - C-98-002-12

76C52

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
63100167	TR BAR TRM T1 SPL TAN	EACH	15.000				
63200310	GUARDRAIL REMOV	FOOT	5,761.000				
63500105	DELINEATORS	EACH	216.000				
63700175	CONC BAR 1F 42HT	FOOT	437.000				
63700275	CONC BAR 2F 42HT	FOOT	2,838.000				
63700805	CONC BAR TRANS	FOOT	558.000				
63700900	CONC BARRIER BASE	FOOT	8,982.000				
63801000	CONC GLARE SCREEN	FOOT	1,118.000				
64200116	SHOULDER RUM STRIP 16	FOOT	25,283.000				
64300260	IMP ATTEN FRD NAR TL3	EACH	1.000				
64300370	IMP ATTEN FRD WID TL3	EACH	1.000				
66400305	CH LK FENCE 6	FOOT	1,087.000				
66407600	CH LK GATES 6X12 DBL	EACH	2.000				
66900200	NON SPL WASTE DISPOSL	CU YD	1,800.000				
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER - 76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
66900530	SOIL DISPOSAL ANALY	EACH	3.000				
67100100	MOBILIZATION	L SUM	1.000				
70103815	TR CONT SURVEILLANCE	CAL DA	150.000				
70106800	CHANGEABLE MESSAGE SN	CAL MO	12.000				
70300100	SHORT TERM PAVT MKING	FOOT	16,124.000				
70300220	TEMP PVT MK LINE 4	FOOT	81,413.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	56,889.000				
70400100	TEMP CONC BARRIER	FOOT	10,175.000				
70400200	REL TEMP CONC BARRIER	FOOT	15,200.000				
72000100	SIGN PANEL T1	SQ FT	103.200				
72000200	SIGN PANEL T2	SQ FT	444.000				
72000300	SIGN PANEL T3	SQ FT	5,170.800				
72200100	DEMOUNT LEGD CHA & AR	EACH	7.000				
72400200	REMOV SIN PAN ASSY TB	EACH	1.000				
72400310	REMOV SIGN PANEL T1	SQ FT	16.500				



ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

State Job # - C-98-002-12

76C52

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
72400320	REMOV SIGN PANEL T2	SQ FT	311.000				
72400330	REMOV SIGN PANEL T3	SQ FT	358.000				
72400600	RELOC SIN PAN ASSY TB	EACH	1.000				
72400720	RELOC SIGN PANEL T2	SQ FT	30.000				
72600100	MILEPOST MKR ASSEMBLY	EACH	18.000				
72700100	STR STL SIN SUP BA	POUND	1,878.000				
73000100	WOOD SIN SUPPORT	FOOT	414.000				
73300200	OVHD SIN STR-SPAN T2A	FOOT	71.000				
73300300	OVHD SIN STR-SPAN T3A	FOOT	256.000				
73301810	OSS WALKWAY TY A	FOOT	224.500				
73301840	OSS WALKWAY CANT TA	FOOT	49.000				
73302120	OSS CANT 1CA 2-6X4-6	FOOT	22.000				
73302160	OSS CANT 2CA 2-6X5-6	FOOT	25.500				
73302190	OSS CANT 3CA 2-0X7-0	FOOT	34.000				
73304000	OVHD SIN STR BR MT	FOOT	57.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
73400200	DRILL SHAFT CONC FDN	CU YD	173.900				
73600100	REMOV OH SIN STR-SPAN	EACH	6.000				
73600200	REMOV OH SIN STR-CANT	EACH	1.000				
73700200	REM CONC FDN-GR MT	EACH	6.000				
73700300	REM CONC FDN-OVHD	EACH	25.000				
78003110	PREF PL PM TB LINE 4	FOOT	17,176.000				
78003140	PREF PL PM TB LINE 8	FOOT	7,408.000				
78003150	PREF PL PM TB LINE 12	FOOT	1,406.000				
78004210	PREF PL PM TB INL L4	FOOT	22,000.000				
78004240	PREF PL PM TB INL L8	FOOT	6,895.000				
78004250	PREF PL PM TB INL L12	FOOT	601.000				
78100100	RAISED REFL PAVT MKR	EACH	1,021.000				
78200410	GUARDRAIL MKR TYPE A	EACH	35.000				
78200530	BAR WALL MKR TYPE C	EACH	75.000				
78201000	TERMINAL MARKER - DA	EACH	15.000				

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER - 76C52

State Job # - C-98-002-12

Project Number

Route

County Name - ST CLAIR - -

FAI 64

Code - 163 - -

FAI 55

District - 8 - -

Section Number - 82-1-R(A), 82-1-R(B)

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
78300100	PAVT MARKING REMOVAL	SQ FT	4,778.000				
78300200	RAISED REF PVT MK REM	EACH	935.000				
80300100	LOCATE UNDERGR CABLE	FOOT	5,225.000				
81028390	UNDRGRD C PVC 4	FOOT	200.000				
81603085	UD 3#4#4GXLPUSE 1 1/4	FOOT	2,450.000				

**CONTRACT NUMBER**

**76C52**

**THIS IS THE TOTAL BID**

**\$ \_\_\_\_\_**

**NOTES:**

1. Each PAY ITEM should have a UNIT PRICE and a TOTAL PRICE.
2. The UNIT PRICE shall govern if no TOTAL PRICE is shown or if there is a discrepancy between the product of the UNIT PRICE multiplied by the QUANTITY.
3. If a UNIT PRICE is omitted, the TOTAL PRICE will be divided by the QUANTITY in order to establish a UNIT PRICE.
4. A bid may be declared UNACCEPTABLE if neither a unit price nor a total price is shown.

## RETURN WITH BID

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

#### I. GENERAL

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

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

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

#### II. ASSURANCES

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

##### A. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

## RETURN WITH BID

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

### **B. Negotiations**

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

### **C. Inducements**

1. The Illinois Procurement Code provides:

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

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

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

1. The Illinois Procurement Code provides:

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

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

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

1. The Illinois Procurement Code provides:

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

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

### **F. Confidentiality**

1. The Illinois Procurement Code provides:

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

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

## RETURN WITH BID

### **G. Insider Information**

1. The Illinois Procurement Act provides:

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

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

### **III. CERTIFICATIONS**

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

#### **A. Bribery**

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

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

#### **B. Felons**

1. The Illinois Procurement Code provides:

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

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

## RETURN WITH BID

### **C. Debt Delinquency**

1. The Illinois Procurement Code provides:

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

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

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

1. The Illinois Procurement Code provides:

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

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

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

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

### **F. Educational Loan**

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

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

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

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

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

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

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

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



## RETURN WITH BID

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

RETURN WITH BID

J. Disclosure of Business Operations in Iran

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

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

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

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

Check the appropriate statement:

- /\_\_\_/ Company has no business operations in Iran to disclose.
/\_\_\_/ Company has business operations in Iran as disclosed the attached document.

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

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

Three horizontal lines for listing program sponsors.

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.

**TO BE RETURNED WITH BID**

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

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

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

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

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

**M. Lobbyist Disclosure**

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

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

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

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

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

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

Or

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

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

## RETURN WITH BID

### IV. DISCLOSURES

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

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

### B. Financial Interests and Conflicts of Interest

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 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. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid.**

### C. Disclosure Form Instructions

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

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 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 \_\_\_

(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 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.

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

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

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

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

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

**DISCLOSURE OF FINANCIAL INFORMATION**

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

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

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

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

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

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 the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?  
Yes \_\_\_ No \_\_\_

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

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

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

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

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

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

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**RETURN WITH BID/OFFER**

(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 \_\_\_

**2. 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 Procurement Code.**

RETURN WITH BID

ILLINOIS DEPARTMENT  
OF TRANSPORTATION

Form B  
Other Contracts &  
Procurement Related Information  
Disclosure

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

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

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

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

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

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

**THE FOLLOWING STATEMENT MUST BE CHECKED**

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

## **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. 76C52  
ST CLAIR County  
Section 82-1-R(A),82-1-R(B)  
Routes FAI 64 & 70  
District 8 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 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**

**Contract No. 76C52**

**ST CLAIR County**

**Section 82-1-R(A),82-1-R(B)**

**Routes FAI 64 & 70**

**District 8 Construction Funds**

PROPOSAL SIGNATURE SHEET

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

(IF AN INDIVIDUAL) Firm Name \_\_\_\_\_  
Signature of Owner \_\_\_\_\_  
Business Address \_\_\_\_\_  
\_\_\_\_\_

(IF A CO-PARTNERSHIP) Firm Name \_\_\_\_\_  
By \_\_\_\_\_  
Business Address \_\_\_\_\_  
Name and Address of All Members of the Firm:  
\_\_\_\_\_  
\_\_\_\_\_

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

(IF A JOINT VENTURE) Corporate Name \_\_\_\_\_  
By \_\_\_\_\_  
Signature of Authorized Representative  
Typed or printed name and title of Authorized Representative  
Attest \_\_\_\_\_  
Signature  
Business Address \_\_\_\_\_  
\_\_\_\_\_

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



Return with Bid

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

Item No.
Letting Date

KNOW ALL MEN BY THESE PRESENTS, That We

as PRINCIPAL, and

as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in 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







**Illinois Department of Transportation**

**DBE Participation Statement**

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

Letting \_\_\_\_\_

**Participation Statement**

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

(1) Instructions

Contract \_\_\_\_\_

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

(2) Work

Pay Item No.	Description	Quantity	Unit Price	Total
Total				

(3) Partial Payment Items

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

(4) Commitment

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

Signature for Prime Contractor

Signature for DBE Firm

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Contact \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

Phone \_\_\_\_\_

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

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

Address \_\_\_\_\_

Address \_\_\_\_\_

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

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

E \_\_\_\_\_

WC \_\_\_\_\_

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

# PROPOSAL ENVELOPE



# PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

## **NOTICE**

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

# CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

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## 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. 76C52  
ST CLAIR County  
Section 82-1-R(A),82-1-R(B)  
Routes FAI 64 & 70  
District 8 Construction Funds**



**Illinois Department of Transportation**

## **SUBCONTRACTOR DOCUMENTATION**

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

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

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

## RETURN WITH SUBCONTRACT

### STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

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

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

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

#### **A. Bribery**

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

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

#### **B. Felons**

1. The Illinois Procurement Code provides:

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

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

## RETURN WITH SUBCONTRACT

### **C. Debt Delinquency**

1. The Illinois Procurement Code provides:

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

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

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

1. The Illinois Procurement Code provides:

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

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

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

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

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

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

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

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the subcontracting entity or its parent entity, whichever is less, unless the subcontractor is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 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. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies.

**C. Disclosure Form Instructions**

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

If the subcontractor is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 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 Illinois Procurement Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for subcontracts with a total value of \$25,000 or more, from subcontractors identified in Section 20-120 of the Illinois Procurement Code, and for all open-ended contracts. **A publicly traded company may submit a 10K disclosure (or equivalent if applicable) in satisfaction of the requirements set forth in Form A. See Disclosure Form Instructions.**

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

**DISCLOSURE OF FINANCIAL INFORMATION**

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

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

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

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

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

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

**RETURN WITH 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 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, as of 7/1/07) are you entitled to receive (i) more then 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 annual salary of the Governor?  
Yes \_\_\_ No \_\_\_

---

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

---

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

---

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

---

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

---

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

**RETURN WITH SUBCONTRACT**

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

---

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

---

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

---

**3. Communication Disclosure.**

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

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

**RETURN WITH SUBCONTRACT**

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

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

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

**APPLICABLE STATEMENT**

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

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

**NOT APPLICABLE STATEMENT**

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

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

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

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT  
OF TRANSPORTATION

Form B  
Subcontractor: Other Contracts &  
Procurement Related Information  
Disclosure

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

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

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

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

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

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

**THE FOLLOWING STATEMENT MUST BE CHECKED**

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



- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., April 27, 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. 76C52  
ST CLAIR County  
Section 82-1-R(A),82-1-R(B)  
Routes FAI 64 & 70  
District 8 Construction Funds**

**This improvement consists of the construction of Ramps 70E64E, 55S70W, 70E55N and retaining wall (SN 082-W310); the reconstruction of Ramps 64W55N, 64W55S, 55N64E, O and P; the resurfacing of WB and EB I-64, NB and SB I-55 and Ramp 64W55S. The work also included drainage, lighting, signing, traffic control and protection, pavement markings, deep wells and all incidental and collateral work necessary to complete the improvements as shown on the plans and as described herein.**

- 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.

RECURRING SPECIAL PROVISIONS

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

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
1	1
2	4
3 X	5
4 X	15
5 X	20
6	25
7	26
8	27
9	28
10 X	31
11	34
12	36
13	40
14 X	42
15	43
16	45
17	46
18	48
19 X	49
20 X	50
21	54
22	56
23	58
24 X	60
25	61
26	62
27	63
28 X	64
29	65
30	68
31	76



**TABLE OF CONTENTS**

LOCATION OF PROJECT ..... 1  
DESCRIPTION OF PROJECT ..... 1  
MONTHLY LABOR SUMMARY AND ACTIVITY REPORTING SYSTEM..... 2  
EMBANKMENT ..... 4  
GUARDRAIL REMOVAL..... 4  
TRAFFIC CONTROL PLAN ..... 5  
TEMPERATURE CONTROL FOR CONCRETE PLACEMENT ..... 5  
STATUS OF UTILITIES TO BE ADJUSTED..... 5  
PROTECTION AND RESTORATION OF PROPERTY..... 6  
TEMPORARY PAVEMENT ..... 7  
HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH..... 8  
FENCE REMOVAL ..... 8  
BRIDGE APPROACH SHOULDER REMOVAL ..... 8  
REMOVE TEMPORARY CONCRETE BARRIER..... 9  
REMOVE AND SALVAGE IMPACT ATTENUATOR..... 9  
CONCRETE REMOVAL..... 10  
REMOVE EXISTING RIPRAP ..... 10  
CONCRETE BARRIER REMOVAL..... 11  
IMPACT ATTENUATOR REMOVAL ..... 11  
PARKING LOT PAVEMENT REMOVAL ..... 11  
SITE CLEAN-UP ..... 12  
REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES ..... 12  
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED)..... 13  
CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL)..... 13  
CONCRETE BARRIER WALL (SPECIAL)..... 14  
CONCRETE MEDIAN SURFACE, SPECIAL ..... 14  
CONCRETE PAD..... 15  
STORM SEWERS..... 15  
COMBINED SEWERS ..... 15  
DISCHARGE PIPE REMOVAL ..... 16  
REMOVE EXISTING INLETS AND MANHOLES..... 17  
TYING EXISTING PIPE INTO NEW STORM STRUCTURES ..... 17  
DRAINAGE STRUCTURE – TYPE 4 & TYPE 5 ..... 17  
DRAINAGE STRUCTURE – TYPE 4, SPECIAL ..... 18  
MANHOLES, SANITARY ..... 18  
SANITARY MANHOLES TO BE RECONSTRUCTED ..... 19

HIGH DENSITY POLYETHYLENE PIPE .....	19
REPLACEMENT TOP FOR EXISTING OPEN THROAT INLET .....	21
PLUG EXISTING STORM SEWERS .....	21
EARTH DITCH BERM.....	22
MAINTENANCE OF ROADWAYS .....	22
TRAFFIC CONTROL AND PROTECTION (SPECIAL) .....	22
INTERSTATE WEEKEND CLOSURE, SPECIAL, FOR I-64.....	27
INTERSTATE WEEKEND CLOSURE, SPECIAL, FOR I-55/70.....	28
TRAFFIC CONTROL AND PROTECTION, STANDARD 701451, SPECIAL.....	30
CONTRACTOR COOPERATION .....	32
WORK DURING PEAK HOURS .....	33
LOCATING UNDERGROUND UTILITIES.....	33
MAINTENANCE OF EXISTING ELECTRICAL DEVICES.....	35
WELL CONTROL CENTER MODIFICATIONS.....	35
WELL PUMP FEEDER MODIFICATION.....	35
DEEP WELL CONSTRUCTION, ADJUSTMENT, AND FILLING - GENERAL.....	36
FILL DEEP WELL .....	37
FILL EXISTING PIEZOMETER.....	39
DRILLED WELL .....	40
SUBMERSIBLE PUMP .....	45
PIEZOMETER.....	48
REMOVAL OF EXISTING STRUCTURES NO. 1 .....	49
REMOVAL OF EXISTING STRUCTURES NO. 2 .....	50
REMOVAL OF EXISTING STRUCTURES NO. 3 .....	51
REMOVAL OF EXISTING STRUCTURES NO. 4 .....	52
REMOVAL OF EXISTING STRUCTURES NO. 5 .....	53
DRILLED SHAFT CONCRETE FOUNDATIONS (SPECIAL).....	54
ELECTRICAL EQUIPMENT REMOVAL AND SALVAGE .....	55
OVERHEAD SIGN STRUCTURES MEDIAN SUPPORT FOUNDATIONS.....	55
BRIDGE MOUNTED SIGN SUPPORT .....	55
CONCRETE FOUNDATION, GROUND MOUNT .....	56
TYPE III TEMPORARY TAPE FOR WET CONDITIONS .....	57
DELINEATOR REMOVAL.....	57
GROOVING FOR RECESSED PAVEMENT MARKING .....	57
ARCHITECTURAL FORM LINER FINISH .....	58
RAILROAD PROTECTIVE LIABILITY INSURANCE (5 AND 10) (BDE) .....	59
ON-THE-JOB TRAINING SPECIAL PROVISIONS (NMRB).....	60

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)	64
.....	64
COMPLETION DATE (BDE) .....	66
FURNISHING RIGHT-OF-WAY .....	66
STONE MATRIX ASPHALT (D-8).....	66
PORTLAND CEMENT CONCRETE PAVEMENT 12 1/2" (JOINTED).....	74
DIAMOND GRINDING, GROOVING, AND SURFACE TESTING.....	75
MECHANICALLY STABILIZED EARTH RETAINING WALLS .....	76
STRUCTURAL REPAIR OF CONCRETE.....	83
AGREEMENT TO PLAN QUANTITY (BDE) .....	91
CALCIUM CHLORIDE ACCELERATOR FOR CLASS PP-2 CONCRETE (BDE).....	91
CONCRETE MIX DESIGN – DEPARTMENT PROVIDED (BDE).....	91
CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE).....	92
CONSTRUCTION AIR QUALITY - DIESEL VEHICLE EMISSIONS CONTROL (BDE).....	93
CONSTRUCTION AIR QUALITY - IDLING RESTRICTIONS (BDE).....	94
DIGITAL TERRAIN MODELING FOR EARTHWORK CALCULATIONS (BDE).....	96
DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE) .....	97
ERRATA FOR THE 2012 STANDARD SPECIFICATIONS (BDE).....	104
FRICTION AGGREGATE (BDE).....	104
HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE).....	107
IMPACT ATTENUATORS (BDE) .....	108
IMPACT ATTENUATORS, TEMPORARY (BDE).....	109
METAL HARDWARE CAST INTO CONCRETE (BDE).....	111
PAVEMENT MARKING REMOVAL (BDE).....	111
PAVEMENT PATCHING (BDE) .....	112
PAYMENTS TO SUBCONTRACTORS (BDE).....	112
PAYROLLS AND PAYROLL RECORDS (BDE).....	113
PORTLAND CEMENT CONCRETE (BDE).....	114
QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE).....	148
RECLAIMED ASPHALT PAVEMENT (RAP) (BDE).....	159
RECLAIMED ASPHALT SHINGLES (RAS) (BDE) .....	166
REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE) .....	170
SELF-CONSOLIDATING CONCRETE FOR PRECAST AND PRECAST PRESTRESSED PRODUCTS (BDE) .....	170
SHOULDER RUMBLE STRIPS (BDE).....	172
SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE).....	172
SURFACE TESTING OF PAVEMENTS (BDE).....	172
TEMPORARY EROSION AND SEDIMENT CONTROL (BDE).....	178

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)..... 178  
UTILITY COORDINATION AND CONFLICTS (BDE) ..... 178  
BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)..... 183  
FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID) ..... 186  
STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID) ..... 190  
PROJECT LABOR AGREEMENT - QUARTERLY EMPLOYMENT REPORT..... 204  
PROJECT LABOR AGREEMENT..... 205

## **STATE OF ILLINOIS** **SPECIAL PROVISIONS**

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2012, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI Route 64 & 55 (I-64 & I-55 /70); Section 82-1-R(A), 82-1-R(B); St. Clair County; Contract No. 76C52 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

### **LOCATION OF PROJECT**

I-64 from I-55/I-70 to 18<sup>th</sup> Street: The improvement to WB I-64 pavement begins at Station 82+50.42 and ends at Station 113+49.39; the improvement to EB I-64 pavement begins at Station 26+70.53 and ends at Station 60+57.63; the improvement to Ramp A begins at Station 9+73.02 and ends at Station 11+44.22; improvement to Ramp 55N64E begins at Station 58+33.89 and ends at Station 77+27.82; improvement to Ramp 70E64E begins at Station 65+23.00 and ends at Station 76+13.08; improvement to Ramp 55S64E begins at Station 23+82.02 and ends at Station 26+70.53; improvement to Ramp 64W55N begins at Station 50+00.00 and ends at Station 72+04.50; improvement to Ramp 64W70W begins at Station 50+00.00 and ends at Station 64+87.96; improvement to Ramp 64W55S begins at Station 113+49.39 and ends at Station 133+75.15; and the improvements to Retaining Wall SN 082-W310 begins at Station 65+23.00 and ends at Station 66+75.00.

Relocated I-70 from B&O RR to 1<sup>st</sup> Street, I-70 from B&O RR to I-64: The improvement to NB I-55 begins at Station 63+50.16 and ends at Station 91+39.23; the improvement to SB I-55 begins at Station 68+00.27 and ends at Station 99+69.68 and additional 1,925' prior to beginning of alignment; the improvement to Ramp 55S70W begins at Station 51+08.01 and ends at Station 60+50.00; the improvement to Ramp 55S64E begins at Station 8+69.30 and ends at Station 16+00.00; the improvements to Ramp 70E55N begins at Station 78+50.00 and ends at Station 94+24.41; the improvements to Ramp O begins at Station 10+14.88 and ends at Station 15+56.16 and the improvements to Ramp P begins at Station 21+50.00 and ends at Station 36+80.28.

The gross length of improvement is 43,646.53 feet (8.274 miles) and the net length of the improvement is 38,144.26 feet (8.274 miles) all of which is located in the city of East St. Louis and in St. Clair County, Illinois.

### **DESCRIPTION OF PROJECT**

This improvement consists of the construction of Ramps 70E64E, 55S70W, 70E55N and retaining wall (SN 082-W310); the reconstruction of Ramps 64W55N, 64W55S, 55N64E, O and P; the resurfacing of WB and EB I-64, NB and SB I-55, and Ramp 64W55S. The work also includes drainage, lighting, signing, traffic control and protection, pavement markings, deep wells and all incidental and collateral work necessary to complete the improvements as shown on the Plans and as described herein.

## **MONTHLY LABOR SUMMARY AND ACTIVITY REPORTING SYSTEM**

Effective: 1-1-1995

Revised June 2001

### **I. Monthly Labor Summary Report, Form SBE 148**

The prime contractor and each first and second tier sub-contractor, (hereinafter referred to as "subcontractor") shall submit a certified Monthly Labor Summary Report directly to the District Engineer.

This report is in lieu of submittal of the Monthly Workforce Analysis Report, Form SBE 956.

This report must be received in District Eight no later than the tenth day of the next month.

This Report shall be submitted by the prime contractor and each subcontractor, for each consecutive month, from the start, to the completion of their work on the contract.

The data source for this Report will be a summation of all personnel and hours worked on each subject contract for the month based on weekly payrolls for that month.

The Monthly Labor Summary Report is required to be submitted in one of the following formats:

- a.) For contractors having IDOT contracts valued in the aggregate at \$250,000 or less, the report may be typed or clearly handwritten using Form SBE 148 for submittal to the District Engineer for District Eight.
- b.) For contractors having IDOT contracts valued in the aggregate at more than \$250,000, the report must be submitted in a specific "Fixed Length Comma Delimited ASCII Text File Format". The subject file format is detailed on the next page. Submittal of this file may be by 3.5 inch disk, modem, or by e-mail.

### **II. Monthly Contract Activity Report, Form SBE 248**

The prime contractor and each subcontractor shall submit a monthly report directly to the District Engineer reflecting their contract activity on all Illinois Department of Transportation contracts they have in force in District Eight.

This report shall be submitted for each consecutive month, from the start, to the completion of all contracts in District Eight.

The report must be received in the District Office no later than the tenth day of the next month.

### **Monthly Labor Summary and Activity Reporting System Codes and Formats**

Indicated below for your reference are the Employee Codes and File Formats required for this system.

#### **I.) Monthly Labor Summary Report, Form SBE 148**

The following employee codes are to be used to identify each individual on the Summary Report:

1. **Gender:** M - Male F - Female
2. **Ethnic Group:** 1 - White 2 - Black 3 - Hispanic  
 4 - American Indian/Alaskan Native 5 - Asian/Pacific Islander
3. **Work Classification:** OF - Official SU - Supervisor FO - Foremen  
 CL - Clerical CA - Carpenter EO - Operator ME - Mechanic  
 TD - Truck Driver IW - Ironworker PA - Painter OT - Other  
 EL - Electrician PP - Pipefitter TE - Technical LA - Laborer  
 CM - Cement Mason
4. **Employee Status:** O - Owner Operator J - Journeyman  
 C - Company A - Apprentice T - Trainee

Specific "Fixed Length Comma Delimited ASCII File Format"

Order	Field Name	Type	Size
1	Contractor Number	A	4
2	Contractor Reference Number	A	6
3	Contract Number	A	5
4	Period (07/28/2000)	D	10
5	SSN (111-11-1111)	A	11
6	Name	A	40
7	Gender	A	1
8	Ethnic Group	A	1
9	Work Classification	A	1
10	Employee Status	A	1
11	Total Hours (0000060.00)	N	10

File Name Conventions: (Contractor Number + Report Month/Year).Txt  
 i.e. 20001298.Txt

II.) Monthly Contract Activity Report, Form SBE 248

The following activity codes are to be used to identify the contractor's contract status each month on the Monthly Activity Report, Form SBE 248:

- A. **Contract Status:** 1 - Not Started 2 - Active 3 - No Work  
 4 - Suspended 5 - Complete

Failure to comply with this special provision may result in the withholding of payments to the contractor, and/or cancellation, termination, or suspension of the contract in whole or part.

Compliance with this Special Provision shall be considered incidental to the cost of the contract and no additional compensation will be allowed for any costs incurred.

All prime and subcontractors having contracts in the aggregate exceeding \$250,000 must provide a "Fixed Length Comma Delimited ASCII File" for approval prior to the start of construction.

This Special Provision must be included in each subcontract agreement.

The Department of Transportation is requesting disclosure of information necessary to accomplish the statutory purpose as outlined under 23CFR part 230 and 41CFR part 60.4 and the Illinois Human Rights Act. Disclosure of this information is REQUIRED. Failure to comply with this special provision may result in the withholding of payments to the contractor, and/or cancellation, termination, or suspension of the contract in whole or part.

Compliance with this Special Provision shall be considered incidental to the cost of the contract and no additional compensation will be allowed for any costs incurred.

This Special Provision must be included in each subcontract agreement.

## **EMBANKMENT**

Revised November 1, 2006

Material which is proposed for use by the Contractor to be used for embankment construction must be inspected and approved by the District Geotechnical Engineer. In order to be approved for use as embankment material, it must meet all applicable requirements of Sections 202, 203, 204, 205, and 502 of the Standard Specifications and meet the following requirements:

1. It must fall in one of the following Highway Research Board Classifications: A-1, A-2, A-3, A-4, A-6, or A-7-6.
2. It shall have a Liquid Limit of 49 or less.
3. Any A-4, A-6 or A-7-6 material to be used as borrow for embankment construction shall not have an organic content greater than 7%.
4. Classification of the material for points 1 and 2 shall be determined in accordance with the latest AASHTO Designation: M 145.
5. When tested for density in place, any soil classified as an A-4 shall not contain more than 100% of optimum moisture content determined according to AASHTO T-99.

The outside 9 feet (3 meters) of those portions of the embankment which will be permanently exposed in the completed roadway shall be constructed using native materials of a classification that will support vegetation and contain a plasticity index of 12 or greater as directed by the Engineer.

The lime modified soil layer shall be constructed with a minimum of 18 inches (450 mm) of "reactive" soil as defined by Article 1009.02 of the Standard Specifications.

## **GUARDRAIL REMOVAL**

*Effective: February 11, 1981*

*Revised: November 1, 2006*

This work shall be done in accordance with Section 632 of the Standard Specifications except as herein modified.

The removed material becomes the property of the Contractor at the time of removal. Contractor is responsible for proper disposal of all materials.

Basis Of Payment: This work will be paid for at the contract unit price per foot (meter) for GUARDRAIL REMOVAL.



**TRAFFIC CONTROL PLAN**

*Effective: July 12, 1993*

*Revised: May 12, 1997*

Traffic control shall be in accordance with the applicable sections of the "Standard Specifications for Road and Bridge Construction", the applicable guidelines contained in the "National Manual on Uniform Traffic Control Devices for Streets and Highways", Illinois Supplement to the National Manual of Uniform Traffic Control Devices, these Special Provisions, and any special details and Highway Standards contained herein and in the plans.

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

701101	701106	701400	701401	701402	701406
701411	701446	701451	701456	701601	701901
704001					

In addition, the following Special Provision(s) will also govern traffic control for this project:

- Traffic Control and Protection (Special)
- Interstate Weekend Closure, Special, For I-64
- Interstate Weekend Closure, Special, For I-55/70
- Traffic Control and Protection, Standard 701451, Special
- Contractor Cooperation
- Impact Attenuators
- Temporary Ramp Closure for Freeway/Expressway
- Pavement Marking Removal
- Work Zone Public Information Signs
- Temporary Information Signing
- Maintenance of Roadways
- Work During Park Hours
- Traffic Control Surveillance
- Traffic Control Deficiency Deduction (BDE)

**TEMPERATURE CONTROL FOR CONCRETE PLACEMENT**

*Effective: October 17, 2008*

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

**STATUS OF UTILITIES TO BE ADJUSTED**

**NO UTILITIES TO BE ADJUSTED**

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Sections 102, 103, and Articles 105.07 and 107.20 of the Standard Specifications for Road and Bridge Construction shall apply.

If any utility adjustment or removal has not been completed when required by the Contractor's operation, the Contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's operations were affected.

## **PROTECTION AND RESTORATION OF PROPERTY**

### Condition Surveys:

In addition to the requirements of Article 107.20 of the standard specifications, the Contractor shall conduct pre-construction surveys of all structures, within 500 feet of the construction limits and as directed by the Engineer, that may be potentially affected by vibration prior to any work by the Contractor. These preconstruction survey records shall be provided to the Engineer prior to beginning any work that may cause damage to nearby structures. The Contractor shall conduct and document post-construction surveys of any nearby structures that have a potential for vibration damage and make these records available to the Engineer for review. The Contractor shall be responsible for any damage resulting from excessive vibration-causing operations.

These condition surveys shall consist of visually inspecting and recording all existing defects in the structures before and after construction. Photographs and/or videotape may be used to assist in documentation. The Contractor shall submit a written report to the department detailing the visual and photographic investigation of potentially affected structures. This report will include copies of the Contractor preconstruction survey(s) and Contractor post-construction survey(s) and discuss any discrepancies and findings of these surveys.

### Vibration Control and Monitoring:

When performing pile driving, steel sheet driving, shaft drilling or any other activities that in the opinion of the Engineer could induce the potential for vibration damage to adjacent buildings, structures, or utilities, the Contractor shall monitor the operations with an approved seismograph, located as approved, between the vibration-causing work and the closest structure subject to vibration damage, and as close as practical to the subject structure.

Vibration monitoring shall be performed by a vibration specialist with a seismograph, subject to the Engineer's approval. The vibration specialist shall monitor vibration levels in accordance with the specification provided below: Vibrations measured at the foundation or basement floor of any structure shall not exceed the following limitations:

### Displacement:

<u>Frequency</u>	<u>Amplitude (in inches)</u>
2	0.1
5	0.01
10	0.005
20	0.0018
30	0.001
40	0.0008
50	0.0006
60	0.0005

Data recorded for each occurrence shall be furnished to the Engineer prior to the next vibration-causing work and shall include the following:

1. Identification of vibration monitoring instrument used.
2. Description of Contractor's equipment.
3. Name of qualified observer and interpreter.
4. Distance and direction of recording station from vibration-causing area.
5. Type of ground at recording station and material on which the instrument is sitting.
6. Principal frequency, amplitude and particle velocity in each component.
7. A dated and signed copy of records of seismograph readings.
8. Contractor documentation of any operational changes necessary to reduce vibration levels below the acceptable levels.

If the recorded vibration data exceeds the allowable levels as specified in this article, the Contractor shall immediately halt all work creating the excessive vibrations until such time that the Contractor changes the work operations and can show that acceptable vibration levels will be maintained.

All costs associated with the work described will not be paid for separately, but shall be considered as included in the Contract unit bid prices, and no additional compensation will be allowed.

## TEMPORARY PAVEMENT

Description: This work shall consist of furnishing, installing, and maintaining hot-mix asphalt (HMA) binder and surface course on a prepared base, at locations shown on the Plans and as directed by the Engineer. This work will be in accordance with Sections 406 and 440 of the Standard Specifications.

A PCC pavement shall be substituted by the Contractor if mix plants are not open at the time the temporary pavement is required. The substitution will be at no additional cost to the Department.

Materials: Materials shall be according to section 406.02 of the Standard Specifications.

Item	Article/Section
(a) Hot-Mix Asphalt.....	1030
(b) Bituminous Material.....	1032
(c) Fine Aggregate.....	1003.03

The TEMPORARY PAVEMENT shall be removed when no longer required by the Contract. The removal of TEMPORARY PAVEMENT shall be in accordance with Section 440 of the Standard Specifications. The removal of the TEMPORARY PAVEMENT shall be made separately as PAVEMENT REMOVAL. Materials resulting from the removal of TEMPORARY PAVEMENT shall be disposed of according to Article 202.03.

Method of Measurement and Basis of Payment: TEMPORARY PAVEMENT will be measured and paid for in place per square yard of TEMPORARY PAVEMENT and per cubic yard of AGGREGATE BASE COURSE, TYPE A of widths and thicknesses shown on the Plans. The bid price shall include all preparation, removal, and all other items necessary to complete the work.

### **HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH**

Description: This item is for cold milling of existing Hot-Mix Asphalt surfaces on which the proposed Hot-Mix Asphalt Surface Course Overlay material shall be placed.

Construction Requirements: Variable depth surface removal shall be performed in locations shown on the Plans or as directed by the Engineer in accordance with Article 440.04 of the Standard Specifications. Removal of HMA surface shall be to the top of existing PCC pavement, with approximate depths shown on the Plans.

Method of Measurement: This work shall be measured for payment in place and the area computed in square yards.

Basis of Payment: This work shall be paid for at the contract unit price per square yard of the measured surface area for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH. No additional compensation will be allowed for removal of additional thickness from what is shown in the Plans in order to reach the PCC pavement.

### **FENCE REMOVAL**

Description: This work shall consist of removing and disposing the existing fence of all kinds as shown in the Plans.

Construction Requirements: No removal work shall be completed without the approval of the Engineer. All associated hardware and appurtenances of the existing fence shall be removed off-site and disposed of by the Contractor in a legal disposal site. All postholes shall be backfilled and compacted to the satisfaction of the Engineer.

Method of Measurement and Basis of Payment: Fence removal shall be measured for payment in feet of FENCE REMOVAL and measured along the top of the fence from center to center of end post, including the length occupied by gates.

### **BRIDGE APPROACH SHOULDER REMOVAL**

Description: This work shall consist of the complete removal of existing paved shoulders at locations as shown on Plans and in accordance with Section 440 of the Standard Specifications for Road and Bridge Construction.

Construction Requirements: All existing pavement, including surface courses, base courses, and stabilized subbases, reinforcement, and other appurtenances which interfere with construction work shall be completely removed as shown on the Plans or as directed by the Engineer. Materials resulting from the removal of existing pavement and appurtenances shall be disposed of according to Article 202.03.

Method of Measurement and Basis of Payment: This work will be measured and paid for at the contract unit price per square yard for BRIDGE APPROACH SHOULDER REMOVAL.

## **REMOVE TEMPORARY CONCRETE BARRIER**

Description: This work shall consist of the complete removal of existing temporary concrete barrier which interfere with construction work shall be completely removed as specified in Section 704 of the Standard Specifications for Road and Bridge Construction.

General Requirements: Meet requirements of Section 704 of the Standard Specifications at locations as shown on the Plans and as directed by the Engineer, except for all materials removed shall become the property of the Contractor and shall be disposed of off-site.

Construction Requirements: The Contractor shall schedule and conduct work and shall place and dispose of material being used so as not to interfere with or cause unnecessary inconvenience or delay to the operations of other Contractors within the limits of the same project. The Contractor shall perform the work in proper sequence with the work of the other Contractors. Full cooperation of the Contractors involved, in careful and complete coordination of their respective activities in the area, will be required. This work shall be performed under Contractor Cooperation.

Method of Measurement and Basis of Payment: This work will be measured and paid for at the contract unit price per foot for REMOVE TEMPORARY CONCRETE BARRIER.

## **REMOVE AND SALVAGE IMPACT ATTENUATOR**

Description: This work consists of the removal and salvage of the existing Impact Attenuator at the locations shown on the Plans or as directed by the Engineer. The attenuator base or concrete pad shall also be removed. The cost of attenuator base or concrete pad removal shall be included in the cost of the PAVED SHOULDER REMOVAL.

Construction Requirements: When the Engineer determines the crash cushion system is no longer required, the installation shall be dismantled with all hardware and appurtenances shall remain the property of the Department and shall be delivered to the Bowman Yard, attention to Mike Cox at (618)-875-0177 and unloaded and stacked there, as directed by the Engineer.

Method of Measurement: REMOVE AND SALVAGE IMPACT ATTENUATOR will be measured for payment in place per each of REMOVE AND SALVAGE IMPACT ATTENUATOR at the locations shown on the Plans. No separate measurement will be made for removal of existing concrete pad.

Basis of Payment: This work shall be paid for at the contract unit price per each, for REMOVE AND SALVAGE IMPACT ATTENUATOR which price shall be payment in full for all labor, tools, equipment and materials necessary to remove and salvage of the impact attenuator as specified herein.

## **CONCRETE REMOVAL**

Description: This item shall consist of the removal and satisfactory disposal of the remainder of the existing 30" Water Pipe Bridge piers (Piers 1 and 2) along I-55/I-70 which interfere with construction work shall be completely removed as shown in the Plans and according to Section 501 of the Standard Specifications, and as directed by the Engineer.

The Contractor shall remove existing piers to the top of existing footing elevation. Portions of footing that interfere with guardrail posts and pavement will also be removed.

Construction Requirements: The removal of existing concrete shall be performed according to Section 501 of the Standard Specifications.

Prior to commencing this work, the Contractor shall verify the location of existing utilities and adjacent facilities. This work shall be performed in such a manner so as not to cause any settlement or damage to the existing utilities and/or adjacent facilities. Any damage to existing utilities and/or adjacent facilities shall be repaired by the Contractor at his/her own expense and in a manner satisfactory to the Engineer.

All removed materials containing asbestos shall be stockpiled separately from other removed Materials: All stockpiled materials containing asbestos shall be hauled to an approved landfill disposal site. These materials shall be wetted down and covered with an approved wetting material while stockpiled and being hauled away in trucks to prevent debris or dust from entering into the atmosphere.

Under no circumstances will the disposed material containing asbestos be permitted for use in recycling. The Contractor shall keep records of removal, stockpiling, trucking and the landfill disposal site used, and submit such records to the Engineer.

Existing Plans: See Contract drawings for original Plans for the existing structures involved in this work. The original Plans, however, may not show all modifications that have been made to the structures over the years. The completeness of these Plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy. Information is furnished for the Contractor's convenience and is to be used solely at the Contractor's risk.

Method of Measurement and Basis of Payment: This work shall be measured and paid for at the contract unit price per cubic yard, for CONCRETE REMOVAL which price shall be payment in full for all labor, tools, equipment and materials necessary to remove of the remainder of the Pipe Bridge Piers as specified herein.

Excavation of earth necessary to perform the removal of existing structures will not be measured for payment.

## **REMOVE EXISTING RIPRAP**

Description: This work consists of the removal and satisfactory disposal of the existing riprap at the locations shown on the Plans or as directed by the Engineer. This work shall be performed in accordance with the applicable portions of Section 202 of the Standard Specifications.

Construction Requirements: All material removed shall be disposed of in accordance with Article 202.03.

Method of Measurement: REMOVE EXISTING RIPRAP will be measured for payment in place per square yard of REMOVE EXISTING RIPRAP at the locations shown on the Plans.

Basis of Payment: This work shall be paid for at the contract unit price per square yard, for REMOVE EXISTING RIPRAP which price shall be payment in full for all labor, tools, equipment and materials necessary to remove and dispose of the riprap.

## **CONCRETE BARRIER REMOVAL**

Description: This work shall consist of the complete removal and satisfactory disposal of the existing concrete barrier and barrier base at the locations shown on the plans or as directed by the Engineer.

Construction Requirements: CONCRETE BARRIER REMOVAL shall be in accordance with the applicable portions of Article 440 of the Standard Specifications. Disposal shall meet the requirements for Article 440.06 of the Standard Specifications.

Method of Measurement: CONCRETE BARRIER REMOVAL shall be measured for payment in linear foot along the top of the barrier.

Basis of Payment: This work will be paid for at the contract unit price per foot for CONCRETE BARRIER REMOVAL which price shall be payment in full for all labor, tools, equipment and materials necessary to remove and dispose of the concrete barrier as specified herein.

## **IMPACT ATTENUATOR REMOVAL**

Description: This work shall consist of removing existing temporary impact attenuators at locations as specified in the Plans.

Construction Requirement: When the Engineer determines the existing temporary impact attenuators are no longer required, the installation shall be dismantled with all hardware becoming the property of the Contractor.

When temporary impact attenuators have been anchored to the pavement, the anchor holes shall be repaired with rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

Method of Measurement and Basis of Payment: This work will be measured for payment at the contract unit price per each for IMPACT ATTENUATOR REMOVAL, where each is defined as one complete installation.

## **PARKING LOT PAVEMENT REMOVAL**

Description: This work shall consist of the complete removal and satisfactory disposal of the existing parking lot pavement, HMA pavement or PCC pavement and shall include portland cement concrete or HMA bases, overlays, and stabilized subbase.

Construction Requirements: This work shall be performed in accordance with applicable Section 440 of the Standard Specifications for Road and Bridge Construction.

Method of Measurement: PARKING LOT PAVEMENT REMOVAL shall be measured for payment in square yard.

Basis of Payment: PARKING LOT PAVEMENT REMOVAL will be paid for at the contract unit price per square yard for PARKING LOT PAVEMENT REMOVAL for which said price shall include all labor, materials, equipment, and incidentals necessary for removal and disposal of the parking lot pavement.

## **SITE CLEAN-UP**

Description: This work consists of the removal and satisfactory disposal of the existing pipes, tires, tanks, trailers, and other miscellaneous debris and rubbish at the Bowman Yard II at locations as shown on the Plans and as directed by the Engineer. All associated appurtenances of the removed items shall become the property of the Contractor and shall be removed and disposed of by the Contractor according to Article 202.03. IDOT will also be relocating miscellaneous on-site items by the Bowman Yard as shown on the Plans and as directed by the Engineer. The Contractor is advised that it is the intent of this provision that the site is clear of debris and all rubbish such that the site can present a neat and clean appearance on completion of the project. If the Contractor encounters or suspects of any hazardous waste, the Contractor shall notify the Engineer and secure written instruction from the Engineer prior to proceeding with any part of the affected work, failing to do so will be considered as the Contractor having proceeded at his own risk and expense.

Method of Measurement: This item of work will be measured on a lump sum basis for relocating, removing, and clearing all debris off the Bowman Yard II Site at locations shown on the Plans and as directed by the Engineer. No separate measurement will be made for removal of existing items. Excavation of earth necessary to perform the removal of existing items will not be measured for payment.

Basis of Payment: This work shall be paid for at the contract unit price per lump sum, for SITE CLEAN-UP.

## **REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES**

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

Qualifications. The term environmental firm shall mean an environmental firm that is pre-qualified in hazardous waste by the Department. 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 any excavated soils and sediment **within the construction limits of this project as fill**. Although the soil concentrations may exceed the Maximum Allowable Concentrations (MACs) of Chemical Constituents in Uncontaminated Soils, they can be utilized within the construction limits as fill because the roadway is not considered a residential property. All storm sewer excavated soils can be placed back into the excavated trench as backfill unless trench backfill is specified. If the soils cannot be utilized within the construction limits as fill then they must be managed off-site as a non-special waste. The following areas can be managed within the construction limits as fill.
1. Station 64+90 to Station 65+45 40 to 80 feet LT (Site 55N64E, Ramp 55N64E) – non-special waste. Contaminants of concern sampling parameters: Antimony and Lead.
  2. Station 65+70 to Station 66+30 0 to 60 feet LT (Site 55N64E, Ramp 70E64E) – non-special waste. Contaminants of concern sampling parameters: Lead.
  3. Station 66+70 to Station 67+30 0 to 60 feet RT (Site 70E64E, Ramp 70E64E) – non-special waste. Contaminants of concern sampling parameters: Arsenic.
  4. Station 67+70 to Station 68+60 0 to 50 feet LT (Site 55N64E, Ramp 70E64E) – non-special waste. Contaminants of concern sampling parameters: Arsenic.
  5. Station 52+50 to Station 53+45 0 to 40 feet RT (Site 64W55N, Ramp 64W55N) – non-special waste. Contaminants of concern sampling parameters: Arsenic.
  6. Station 56+70 to Station 57+50 0 to 50 feet RT (Site 64W55N, Ramp 64W55N) – non-special waste. Contaminants of concern sampling parameters: Arsenic.

#### **COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED)**

Description: This work shall consist of constructing combination concrete curb and gutter in accordance with the applicable portions of Section 606 of the Standard Specifications, details shown in the Plans and as directed by the Engineer.

Materials: Materials shall meet the applicable requirements of Division 1000 of the Standard Specifications.

Construction Requirements: Meet applicable requirements of Section 606 of the Standard Specifications, details shown in Plans, and as directed by the Engineer.

Method of Measurement: COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED) will be measured for payment in place per foot, in the flow line of the gutter, which measurement will include drainage castings incorporated in various curbs and curbs and gutters but will exclude entrances, inlets, and outlets for gutters and outlets for combination curb and gutters.

Basis of Payment: This work will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED).

#### **CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL)**

Description: This item of work shall consist of constructing CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL) in accordance with Section 637 of the Standard Specifications, details in the Plans and as directed by the Engineer.

Materials: Materials shall meet the applicable requirements of Division 1000 of the Standard Specifications.

Construction Requirements: Meet applicable requirements of Section 637 of the Standard Specifications. Construct single face barrier at the locations, widths and thickness shown on the Plans. Provide reinforcement as shown on the Plans.

The coarse aggregate to be used in the concrete barrier walls shall conform to the requirements for the coarse aggregate that is used for superstructure concrete.

Method of Measurement: CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL) will be measured for payment in place per foot, along the centerline of the concrete barrier.

The cost of reinforcing bars shall be included in the cost of the CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL).

Basis of Payment: This work will be paid for at the contract unit price per foot for CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL).

### **CONCRETE BARRIER WALL (SPECIAL)**

Description: This item of work shall consist of constructing CONCRETE BARRIER WALL (SPECIAL) in accordance with Section 637 of the Standard Specifications, details in the Plans and as directed by the Engineer.

Materials: Materials shall meet the applicable requirements of Division 1000 of the Standard Specifications.

Construction Requirements: Meet applicable requirements of Section 637 of the Standard Specifications. Construct single face barrier at the locations, widths and thickness shown on the Plans. Provide reinforcement as shown on the Plans.

The coarse aggregate to be used in the concrete barrier walls shall conform to the requirements for the coarse aggregate that is used for superstructure concrete.

Method of Measurement: CONCRETE BARRIER WALL (SPECIAL) will be measured for payment in place per foot, along the centerline of the concrete barrier.

The cost of reinforcing bars shall be included in the cost of the CONCRETE BARRIER WALL (SPECIAL).

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

### **CONCRETE MEDIAN SURFACE, SPECIAL**

Description: This item of work shall consist of constructing CONCRETE MEDIAN SURFACE, SPECIAL in between the CONCRETE BARRIER WALL (SPECIAL) at the existing Metrolink Railroad Bridge pier and in accordance with Section 606 of the Standard Specifications, details in the Plans and as directed by the Engineer.

Materials: Materials shall meet the applicable requirements of Division 1000 of the Standard Specifications.

Construction Requirements: Meet applicable requirements of Section 606 of the Standard Specifications. Construct single face barrier at the locations, widths and thickness shown on the Plans.

Method of Measurement: CONCRETE MEDIAN SURFACE, SPECIAL will be measured for payment in place per square foot.

Basis of Payment: This work will be paid for at the contract unit price per square foot for CONCRETE MEDIAN SURFACE, SPECIAL.

## **CONCRETE PAD**

Description: This item of work shall consist of constructing and installing CONCRETE PAD as a base for the Impact Attenuator when required by the manufacturer at locations as specified in the Plans.

Materials: Materials shall meet the applicable requirements of Division 1000 of the Standard Specifications.

Construction Requirements: The CONCRETE PAD shall be constructed according to the manufacturer's specifications, on a prepared subgrade. The surface of the base shall be slightly sloped or crowned to facilitate drainage. Construct CONCRETE PAD at the locations, widths and thickness shown on the Plans.

Method of Measurement: CONCRETE PAD will be measured for payment in place per square yard.

Basis of Payment: This work will be paid for at the contract unit price per square yard for CONCRETE PAD.

## **STORM SEWERS**

Add the following paragraph to Article 550.06 of the Standard Specifications:

Extensions to existing storm sewers shall either meet an existing bell or spigot or shall be supplied with a concrete collar, a mission band seal, or approved coupling. The cost of labor and materials to complete this work shall be included in the cost of the storm sewer installed.

## **COMBINED SEWERS**

Description: This work shall consist of constructing combined sewers of the class, type, and diameter specified, at the locations shown on the Plans or as directed by the Engineer. This work shall be performed in accordance with the applicable portions of Section 550 of the IDOT Standard Specifications for Road & Bridge Construction, and Sections 30 and 31 of the Standard Specifications for Water & Sewer Construction in Illinois, except as modified herein.

General Requirements: All combined sewers shall be constructed using reinforced concrete pipe, which shall conform to ASTM Designation C 76, Class II. Concrete pipe joints shall conform to ASTM C 361 or C 443 for flexible gasket material, as specified in Article 30-4.01 of the Standard Specifications for Water & Sewer Construction in Illinois.

Pipe laying, jointing, and testing for the combined sewers shall be performed in accordance with Section 31 of the Standard Specifications for Water & Sewer Construction in Illinois.

The Contractor must maintain flow at all times in the existing sewer during and after construction. The Contractor is responsible for pumping and bypassing sewer flow from the existing sewer. The Contractor must take all necessary precautions to ensure that the water pressure created by diverting or retarding the flow does not cause any damage or flooding to public or private property being served by the main sewer section being repaired.

Trenches resulting from the installation of combined sewer shall be backfilled according to the applicable requirements of Article 550.07.

Method of Measurement: Combined sewers will be measured for payment in place in feet. When the sewer enters a manhole, the measurement will end at the inside wall of the manhole. Allowance will be made for the length of pipe necessary to permit the pipe to meet the sides of the manhole. No payment for combined sewer will be made through a manhole where the manhole is paid for as a separate item.

Basis of Payment: This work will be paid for at the contract unit price per foot for COMBINED SEWERS, of the class, type, and diameter specified.

Gasketed joints and sewer testing will also be included in the unit cost of this item.

The cost of pumping and bypassing sewers to permit rehabilitation operations shall be included in the unit cost of this item.

If trench backfill is required, it will be paid for separately.

## **DISCHARGE PIPE REMOVAL**

Description: This work shall consist of the removing existing well discharge pipes as shown on the Plans or as directed by the Engineer.

General Requirements: Work under this item shall be performed in accordance to Section 551 of the Standard Specifications, except that all references to storm sewer shall be replaced with discharge pipe.

Method of Measurement: This work will be measured for payment in feet, measured as removed.

Basis of Payment: This work shall be paid for at the contract unit price per foot for DISCHARGE PIPE REMOVAL, which price shall include the cost of all labor, equipment, and materials required to complete the work as specified herein.

## **REMOVE EXISTING INLETS AND MANHOLES**

Description: This work shall consist of the removal and satisfactory disposal of existing inlets, manholes and combined sewer manholes at locations shown on the Plans and as required to complete the project.

General: This work shall conform to Section 501 and Section 605 of the Standard Specifications. Existing storm sewer tied to the inlet or manhole being removed that is to remain in place shall be adjusted as necessary to fit to the new replacement inlet or manhole. The cost of labor and materials to adjust the existing storm sewers pipe shall be included in the cost of the removal of the inlet or manhole or as a per foot cost of the pipe as directed by the Engineer.

Method of Measurement: This work will be measured for payment in units of each at the location designated on the Plans.

Basis of Payment: This work will be paid for at the contract unit price per each for REMOVING INLETS, REMOVING MANHOLES or SANITARY MANHOLES TO BE REMOVED.

## **TYING EXISTING PIPE INTO NEW STORM STRUCTURES**

Description: Inverts and sizes of all existing storm pipe to remain in place at locations of new storm structures or new storm pipes will be field verified by the Contractor prior to ordering new storm structures. Adjustments to the storm sewer structures required as a result of the field measurements will be as directed by the Engineer.

Method of Measurement: This field work shall be considered incidental to the installation of the new storm sewers and will not be paid for separately but included in the cost of the new storm sewer work. Additional pipe required to tie into the existing storm sewer will be paid on a per foot basis for the size of pipe required.

## **DRAINAGE STRUCTURE – TYPE 4 & TYPE 5**

Description: This work shall include all labor, materials, tools, equipment, and incidentals required for all work involved in constructing the proposed Drainage Structures, Type 4 and Type 5, complete in place, as shown on the Plans and in accordance with the Illinois Department of Transportation Standard 602106 except the grates shall be adjusted per Section 602.11 of the Standard Specifications to meet the rim elevations specified on the Plans as required on each side of the concrete barrier, and as directed by the Engineer.

Materials: The materials to be used shall conform to Section 602 of the Standard Specifications for Road and Bridge Construction.

Construction: The Contractor shall be responsible for furnishing all necessary equipment, labor, materials and clean-up to complete this work to the satisfaction of the Resident Engineer.

Method of Measurement: Drainage Structures, Type 4 and Type 5, will be measured for payment in place per each and with the type of frame and grate or frame and lid specified and will include all the above appurtenances in the measurement.

**Basis of Payment:** This work will be paid for at the contract unit price per each for DRAINAGE STRUCTURES, TYPE 4 or DRAINAGE STRUCTURES, TYPE 5 and with the type of frame and grate or frame and lid specified.

#### **DRAINAGE STRUCTURE – TYPE 4, SPECIAL**

**Description:** This work shall include all labor, materials, tools, equipment, and incidentals required for all work involved in constructing the proposed Drainage Structures, Type 8' x 3', complete in place, as shown on the Plans and in accordance with the Illinois Department of Transportation Standard 602106 Type 4 Drainage Structure except the 8 foot dimension will replace the 7'-2" dimension, and as directed by the Engineer.

**Materials:** The materials to be used shall conform to Section 602 of the Standard Specifications for Road and Bridge Construction.

**Construction:** The Contractor shall be responsible for furnishing all necessary equipment, labor, materials and clean-up to complete this work to the satisfaction of the Resident Engineer.

**Method of Measurement:** Drainage Structures, 8' x 3', will be measured for payment in place per each and with the type of frame and grate or frame and lid specified and will include all the above appurtenances in the measurement.

**Basis of Payment:** This work will be paid for at the contract unit price per each for DRAINAGE STRUCTURES, TYPE 4, SPECIAL and with the type of frame and grate or frame and lid specified.

#### **MANHOLES, SANITARY**

**Description:** This work shall consist of furnishing and installing sanitary manholes of the size indicated on the Plans with the required frame and grate in accordance with Sections 550 and 602 of the IDOT Standard Specifications for Road & Bridge Construction, and Section 32 of the Standard Specifications for Water & Sewer Construction in Illinois, except as modified herein.

**General Requirements:** Sanitary manholes shall be constructed using precast reinforced concrete sections in accordance with Article 602.07, except that joints between precast sections and pipe to manhole connections shall include watertight flexible gaskets or rubber gaskets. Preformed flexible gaskets shall conform to the requirements of ASTM C 990. Rubber gaskets shall conform to the requirements of ASTM C 443. Pipe to manhole connections shall conform to the requirements of ASTM C 923. Dimensions of manholes and precast sections shall conform to the latest revision of Highway Standard 602406.

Sanitary manholes shall be tested for watertightness using the requirements specified in ASTM C 969 or ASTM C 1244, in accordance with Section 32-12 of the Standard Specifications for Water & Sewer Construction in Illinois.

Trenches resulting from the installation of sanitary manholes shall be backfilled according to the applicable requirements of Article 550.07 and Article 602.12.

**Method of Measurement:** Construction of sanitary manholes shall be measured for payment as an each item.

**Basis of Payment:** This work will be paid for at the contract unit price per each for MANHOLES, SANITARY of the specified size, with the specified frame(s) and grate(s), which price includes all labor, material, and equipment necessary to complete the work specified herein.

Preformed flexible gaskets or rubber gaskets used at the joints between precast sections will also be included in the unit cost of this item.

If trench backfill is required, it will be paid for separately.

## **SANITARY MANHOLES TO BE RECONSTRUCTED**

**Description:** This work consists of reconstructing combined sewer manholes with frames and lids as shown in the Plans. This work shall be done according to the applicable portions of Section 602 of the Standard Specifications and Section 32 of the Standard Specifications for Water & Sewer Construction in Illinois, except as modified herein.

The frame and lid castings shall be set in full bituminous mastic beds or approved rubber gasket seals.

Sanitary manholes to be reconstructed will require the removal of existing riser sections in the structure to meet the proposed rim elevation in accordance with Section 602 of the Standard Specifications. The Contractor is responsible for proper disposal of these riser sections.

The reconstructed sanitary manhole shall be tested for watertightness using the requirements specified in ASTM C 969 or ASTM C 1244, in accordance with Section 32-12 of the Standard Specifications for Water & Sewer Construction in Illinois.

**Basis of Payment:** This work will be paid for at the contract unit bid price per each for SANITARY MANHOLES TO BE RECONSTRUCTED with the type of frame and grate or frame and lid specified. No additional compensation will be allowed for watertight joints, flexible watertight connections, or any other additional requirements in this special provision.

## **HIGH DENSITY POLYETHYLENE PIPE**

**Description:** This work shall consist of providing corrugated high density polyethylene pipe of the diameter designated, placed and backfilled as specified in the Contract documents or as directed by the Engineer.

**Material Requirements:** All material shall be in accordance with Division 1000, Materials, and specifically as follows: Corrugated Polyethylene (CPE) Pipe, Section 1040.04. The Contractor shall provide a smooth interior wall unless approved otherwise by the Engineer.

**Construction Requirements:** All pipes shall be handled to avoid damage. Damaged pipe will be rejected and shall be repaired or replaced at the Contractor's expense to the satisfaction of the Engineer. Flexible pipe shall be laid as shown on the Plans, with bell ends upstream and with the spigot end entered the full length into the adjacent section of pipe. Any pipe that is not in true alignment or that shows any undue settlement after laying shall be taken up and re-laid at the Contractor's expense. Camber shall be built into the pipe structure to allow for settlement from fill loads if shown on the Plans or directed by the Engineer. Joints shall be soil tight and shall be installed such that the connection of pipe sections will form a continuous line free from appreciable irregularities in the flow line. Pipes shall be joined according to the manufacturer's specifications.

The allowable overfill height shall be in accordance with the Plans, unless specified otherwise. Minimum cover will be measured as shown on the Plans. Backfill material for polyethylene pipe shall consist of gravel, sand or sandy silt soil as shown on the Plans. Backfill shall be free of organic material or frozen clumps. Backfill for pipe with diameters 15 inches (375 mm) or less shall have a maximum particle size of 3/4 inch (19 mm). Backfill for pipe with diameters greater than 15 inches (375 mm) shall have a maximum particle size of 1 1/2 inches (38 mm). Gravel and sand shall consist of a well-graded mixture of stone fragments, gravel and sand, and shall be in accordance with AASHTO M 145, Classification A1 or A3. Sandy silt soil shall consist of non-plastic granular material with silt content higher than that of gravel or sand, and shall be in accordance with AASHTO M 145, Classification A2-4 or A2-5. Bedding material for pipe with diameters 15 inches (375 mm) or less shall have a maximum particle size of 3/4 inch (19 mm). Bedding material for pipe with diameters greater than 15 inches (375 mm) shall have a maximum particle size of 1 1/4 inches (30 mm).

Pipe shall be installed in a trench, whether installed below grade or in an embankment. When pipe is installed in an embankment, the embankment shall be placed and compacted to the required density to a minimum elevation of one foot (300 mm) above the top of pipe before a sub trench is excavated. The backfill shall be placed to the required thickness and grade taking care to avoid compaction of the backfill under the middle one third of the pipe. The backfill outside the middle one third of the pipe shall be compacted to the required density shown on the Plans before placing the pipe. Compaction of backfill material under the haunches of the pipe shall be accomplished without disturbing the pipe alignment. If rock is encountered, the bedding depth shall be increased to 6 inches (150 mm) below the bottom of the pipe. If soft, spongy or unstable material is encountered, the material shall be removed and excavated to a minimum depth of 10 inches (250 mm) below the bottom of the pipe and replaced with a suitable granular material. Payment for removal of unsuitable material and for backfilling will be made in accordance with Section 109.04, unless the unsuitable material is a result of the Contractor's operations, in which case removing and backfilling shall be at the Contractor's expense. Backfilling shall be completed as soon as practical. Suitable backfill material free from large lumps, clods or rocks shall be placed alongside the pipe and compacted as shown on the Plans. The placement of the remainder of the backfill shall be conducted in a manner to prevent misalignment of the pipe and in accordance with Sec 208. Backfill shall be compacted to a minimum of 90 percent standard maximum density or otherwise specified embankment density. Before heavy construction equipment is operated over the pipe, the Contractor shall provide adequate depth and width of compacted backfill or other cover to protect the pipe from damage or displacement. Any damage or displacement shall be repaired or corrected at the Contractor's expense.

Inspection: The internal diameter of the barrel shall not be reduced by more than 5 percent of the pipe's nominal inside diameter when measured no less than 30 days following completion of installation. After the roadway has been completed and before final inspection of the project, the Engineer will inspect all pipe locations for proper installation. Any section of pipe found to be improperly installed, shall be replaced or repaired by the Contractor at the Contractor's expense and to the satisfaction of the Engineer. Repaired or replaced pipe will be re-inspected by the Engineer. The Contractor shall provide equipment and assistance as deemed necessary by the Engineer to perform any testing. Pipe deflections will be determined by the Engineer by having the Contractor either pushing or pulling a mandrel through the pipe, or verifying deflections by other methods approved by the Engineer. Mandrels used for deflection testing may have either fixed or adjustable arms, but shall be approved by the Engineer prior to use. The following will constitute improper installation:



1. If any horizontal or vertical alignment is in excess of 15 percent from plan alignment, will restrict flow or will cause excessive ponding within the pipe.
2. Any section of pipe with deflections greater than 5 percent, based upon the units of measurement used in fabricating the pipe.
3. If settlement is greater than one inch (25 mm) at 5 percent or more joints.
4. The pipe shows evidence of being crushed or buckled at any location.
5. The pipe shows evidence of joint separation.

Method of Measurement: This work will be measured for payment in place per FOOT along the geometrical center of the pipe.

Basis of Payment: This work shall be paid for at the contract unit price per foot for HIGH DENSITY POLYETHYLENE PIPE, for the diameter specified, which price shall include the cost of all labor, equipment, and materials required to complete the work as specified herein.

### **REPLACEMENT TOP FOR EXISTING OPEN THROAT INLET**

Description: This work shall include all labor, materials, tools, equipment, and incidentals required for all work involved in constructing the proposed replacement top, complete in place, as shown on the Plans and in accordance with the Illinois Department of Transportation Section 602 and Section 604, and as directed by the Engineer.

Materials: The materials to be used shall conform to Section 602 and Section 604 of the Standard Specifications for Road and Bridge Construction.

Construction: The Contractor shall be responsible for furnishing all necessary equipment, labor, materials and clean-up to complete this work to the satisfaction of the Resident Engineer.

Method of Measurement: The replacement to shall be measured for payment in place per each and will include all the above appurtenances in the measurement.

Basis of Payment: This work will be paid for at the contract unit price per each for INLETS TO BE RECONSTRUCTED of the type of frame and grate or frame and lid specified.

### **PLUG EXISTING STORM SEWERS**

Description: This work consists of the plugging of existing storm sewers at the locations shown on the Plans.

General Requirements: The Contractor is responsible for verifying that there are no active connections draining into the pipe to be plugged. In the event that there are existing active connections, the Contractor must either re-route or maintain the existing pipe so as not to block flow from the existing active connections at no additional cost.

After field verification that there are no existing active connections draining into the pipe to be plugged, the Contractor must grout the entire length of pipe, as specified on the Plans. The grout shall consist of portland cement (portland cement and fly ash) and/or additives. The grout shall have a minimum penetration resistance of 100 psi in 24 hours when tested in accordance with ASTM 403, and a minimum compressive strength of 300 psi in 28 days when tested in accordance with ASTM C 495 or C 109. The grout mix shall have sufficient density to meet the requirements to prevent floating of the pipe. The apparent viscosity shall not exceed 35 seconds in accordance with ASTM C 939.

Method of Measurement: Plugging existing storm sewers shall be measured for payment per CUBIC YARD, as specified on the Plans. The entire length of pipe shall be plugged with grout.

Basis of Payment: This work will be paid for at the contract unit price per cubic yard for PLUG EXISTING STORM SEWERS, which shall be payment in full for plugging of the entire pipe in place as specified on the Plans.

All bulkheads used to seal off existing storm sewers will also be included in the unit cost of this item.

## **EARTH DITCH BERM**

Description: This work shall include all labor, materials, tools, equipment, and incidentals required for all work involved in constructing proposed EARTH DITCH BERM, as shown on the plans and in accordance with Section 205 of the Standard Specifications, except as modified herein.

Materials: The materials to be used to construct the EARTH DITCH BERM shall conform to Section 205 of the Standard Specifications.

Construction: EARTH DITCH BERM shall be constructed at locations shown on the Plans and in accordance with the applicable portions of Section 205 of the Standard Specifications.

Method of Measurement: EARTH DITCH BERM will be measured for payment in place per each.

Basis of Payment: This work will be paid for at the contract unit price per each for EARTH DITCH BERM.

## **MAINTENANCE OF ROADWAYS**

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

If items of work have not been provided in the Contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

## **TRAFFIC CONTROL AND PROTECTION (SPECIAL)**

Description: Traffic Control and Protection shall be provided as called for in the Plans, these Special Provisions, applicable Highway Standards, applicable sections of the Standard Specifications, or as directed by the Engineer.

The governing factor in the execution and staging of work for this project is to provide the motoring public with the safest possible travel conditions along the roadway through the construction zone. The Contractor shall arrange his operations to keep the closing of any lane of the roadway to a minimum.

Traffic Control Devices include signs and their supports, temporary pavement markings, barricades with sand bags, channelizing devices, warning lights, arrow boards, flaggers, and any other device used for the purpose of regulating, detouring, warning or guiding traffic through or around the construction zone. Traffic Control Devices will also include any custom made detour signs that are specific to this Contract, as well as mounting hardware, supports, sand bags, bases, and any other material used to properly install said signage.

The Contractor is required to conduct routine inspections of the worksite at a frequency that will allow for the prompt replacement of any traffic control device that has become displaced, worn or damaged to the extent that it no longer conforms to the shape, dimensions, color and operational requirements of the MUTCD, the Traffic Control Standards or will no longer present a neat appearance to motorists. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.

The Contractor shall be responsible for the proper location, installation and arrangement of all traffic control devices. Special attention shall be given to advance warning signs during construction operations in order to keep lane assignment consistent with barricade placement at all times. The Contractor shall immediately remove, cover or turn from the view of the motorists all traffic control devices which are inconsistent with detour or lane assignment patterns and conflicting conditions during the transition from one construction stage to another. When the Contractor elects to cover conflicting or inappropriate signing, materials used shall totally block out reflectivity of the sign and shall cover the entire sign. The method used for covering the signing shall meet with the approval of the Engineer.

The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour pattern. When directed by the Engineer, the Contractor shall remove all traffic control devices, which were furnished, installed and maintained by him under this Contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Engineer.

The Contractor shall ensure that all traffic control devices installed by him are operational, functional and effective 24 hours a day, including Sundays and holidays.

Signs. All signs, except those referring to daily lane closures, shall be post mounted in accordance with Standard 720001 for all projects that exceed four days.

Prior to the beginning of construction operations, the Contractor will be provided a sign log of all existing signs within the limits of the construction zone. The Contractor is responsible for verifying the accuracy of the sign log. Throughout the duration of this project, all existing traffic signs shall be maintained by the Contractor. All provisions of Article 107.25 of the Standard Specifications shall apply.

Whenever any vehicle, equipment, workers or their activities infringe on the shoulder or within 4.5 m (15 feet) of the traveled way and the traveled way remains unobstructed, then the applicable Traffic Control Standard shall be 701101. "Shoulder Work Ahead" sign (W21-5(0)-48) shall be used in lieu of the "Workers" sign (W21-1 or W21-1a).

For the approach to the lane shift on NB I-55 (in Stage 1) the traffic control signs shall be placed as shown in the plan sheets.

For the approach to a Lane Closure the Traffic Control Standard 701400 shall be utilized. Since the Speed on this portion of the Interstate is already reduced a Reduced Speed of 45 MPH Sign shall be used in lieu of the 55 MPH sign (R2-1-3648).

Barricades. Any drop off greater than 75 mm (3 inches), but less than 150 mm (6 inches) within 2.5 m (8 feet) of the pavement edge shall be protected by Type I or II barricades equipped with mono-directional steady burn lights at 30 m (100 feet) center to center spacing. If the drop off within 2.5 m (8 feet) of the pavement edge exceeds 150 mm (6 inches), the barricades mentioned above shall be placed at 15 m (50 feet) center to center spacing. Barricades that must be placed in excavated areas shall have leg extensions installed such that the top of the barricade is in compliance with the height requirements of Standard 701901.

All Type I and Type II barricades, drums, and vertical panels shall be equipped with a steady burn light when used during hours of darkness unless otherwise stated herein.

Check barricades shall be placed in work areas perpendicular to traffic every 300 m (1,000 feet), one per lane and per shoulder, to prevent motorists from using work areas as a traveled way. Two additional check barricades shall be placed in advance of each patch excavation or any hazard in the work area, the first at the edge of the open traffic lane and the second centered in the closed lane. Check barricades shall be Type I or II and equipped with a flashing light.

Public Convenience and Safety. At the preconstruction meeting, the Contractor shall furnish the name of the individual in his direct employ who is to be responsible for the installation and maintenance of the Traffic Control for this project. The Contractor shall also provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis to receive notification of any deficiencies regarding traffic control and protection. The Contractor shall dispatch men, materials and equipment to correct any such deficiencies. The Contractor shall respond to any call from the Department concerning any request for improving or correcting traffic control devices and begin making the requested repairs within two hours from the time of notification.

Personal vehicles shall not park within the right-of-way except in specific areas designated by the Engineer.

No road closure, lane closures or restriction shall be permitted without prior approval by the Engineer.

Detours:

General Requirements: Detours shall be in accordance with the Plans and these Special Provisions.

The Contractor shall notify the Engineer twenty-eight days prior to the anticipated weekend closure. Fourteen days prior to the anticipated shutdown, the Contractor shall have Changeable Message Signs (CMS) and the large orange detour notice panels with overlays in place according to the Interstate Weekend Closure Plan Sheets to alert the motoring public to the upcoming closure. These messages shall be coordinated with IDOT's Traffic Management Center (TMC) at 618-346-3279. IDOT will be responsible for all media releases regarding the closure.

Resident Engineer will be responsible for contacting the agencies listed below fourteen days prior to a weekend closure.

1. St. Clair County Transit District, (618) 628-8090, Attn: Bill Grogan
2. Madison County Transit District, Fax (618) 797-7547
3. East St. Louis Police Department, (618) 482-6767
4. East St. Louis Fire Department, (618) 482-6840
5. St. Clair County Emergency Telephone System Board, Fax (618) 277-7668, Attn: Carolyn Ligon

Interstate I-55/70 will be closed from the I-55/70 and I-64 Interchange in East St. Louis to IL 203. Detour signing and specific lane closures are detailed in the plan set on the Interstate Weekend Closure Plan Sheets. These drawings show the appropriate traffic control standards to be used. Any variation from the plans shown shall be approved by the Engineer.

The Interstate may be completely closed to traffic from 9:00 PM Friday evening to 5:00 AM Monday morning. The Contractor will be allowed to begin traffic control set up at 6:00 PM Friday Evening according to the Interstate Weekend Closure Plan Sheets, as long as there is no direct impact to the PM traffic leaving St. Louis.

The Contractor shall field-mark intended locations of signs a minimum of seven days prior to a scheduled closure. The Resident Engineer must approve the marked locations before the Contractor begins to install the signs. Any traffic control signs that are installed prior to 6:00 PM of the Friday Evening of the scheduled closure must be completely covered until 6:00 PM.

All devices used to provide traffic control shall be according to Section 1106.

Interstate Weekend Closures: See Special Provisions for INTERSTATE WEEKEND CLOSURE, SPECIAL, FOR I-64 and INTERSTATE WEEKEND CLOSURE, SPECIAL, FOR I-55/70.

Ramp 55N64E Detour: See Special Provision for TRAFFIC CONTROL AND PROTECTION, STANDARD 701451, SPECIAL.

Ramp 55S64E Detour: Ramp closure and detour duration shall not exceed 6 months.

Ramp 64W55N Detour: Ramp closure and detour duration shall not exceed 6 months.

Ramp O Detour: Ramp closure and detour duration shall not exceed 2 months.

Traffic Control Details and Highway Standards. All work shall conform to the Traffic Control details shown in the plan and the following Highway Standards:

- 701101-02 OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) to 24" (600 mm) FROM PAVEMENT EDGE
- 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
- 701400-05 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701401-06 LANE CLOSURE FREEWAY/EXPRESSWAY
- 701402-09 LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
- 701406-06 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
- 701411-08 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEED  $\geq$  45 MPH
- 701446-03 TWO LANE CLOSURE FREEWAY/EXPRESSWAY
- 701451-01 RAMP CLOSURE FREEWAY/EXPRESSWAY
- 701456-02 PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
- 701601-07 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
- 701901-02 TRAFFIC CONTROL DEVICES
- 704001-07 TEMPORARY CONCRETE BARRIER

Method of Measurement: This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, replacing, relocating and removing all traffic control devices and detour signage used for the purpose of regulating, warning, directing or diverting traffic during the construction or maintenance of this improvement as required in the Plans, specifications, listed Highway Standards, and these Special Provisions. Applications of individual Highway Standards will not be measured separately.

Basis of Payment: This work will be paid for at the Contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL) and no additional compensation will be allowed. Applications of individual Highway Standards will not be paid for separately but shall be included in the contract unit price for TRAFFIC CONTROL AND PROTECTION (SPECIAL). The salvage value of the materials removed shall be reflected in the bid price for this item. Contractor will be paid on a monthly basis using the following calculation:

$$\frac{1}{\text{Project Duration (months)}} \times \text{Lump Sum Price} = \text{Monthly Payment}$$

Note that no additional compensation will be provided for extensions of schedule. TEMPORARY CONCRETE BARRIER, TEMPORARY IMPACT ATTENUATORS, TEMPORARY PAVEMENT MARKINGS, INTERSTATE WEEKEND CLOSURE, SPECIAL and TRAFFIC CONTROL AND PROTECTION, STANDARD 701451, SPECIAL will be paid for separately.

## **INTERSTATE WEEKEND CLOSURE, SPECIAL, FOR I-64**

Description. This work shall consist of furnishing, installing, maintaining, monitoring, and complete removal of all traffic control devices necessary to successfully close Interstate I-64 for a weekend and provide a detour.

Interstate I-64 will be closed for one weekend to allow for mainline resurfacing work to be completed. During this closure of I-64, no lane restrictions will be allowed on I-55/70.

The weekend closure will not be allowed if the proposed weekend includes, or is adjacent to the seven legal holiday periods specified in Article 107.09.

The Interstate closure will not be allowed during major events in the St. Louis Metro area. These events include, but are not limited to, St. Louis Cardinals baseball home games, St. Louis Rams football home games, St. Louis Blues home games, the Fair St. Louis Celebration, the Mardi Gras Parade, the Big Muddy Blues Festival, Gateway International Raceway Events, and other possible events not listed here. The final determination on the acceptability of a weekend to do the closures will rest with the Engineer.

The Contractor shall notify the Engineer twenty-eight days prior to the anticipated weekend closure. Fourteen days prior to the anticipated shutdown, the Contractor shall have Changeable Message Signs (CMS) and the large orange detour notice panels with overlays in place according to the Interstate Weekend Closure Plan Sheets to alert the motoring public to the upcoming closure. These messages shall be coordinated with IDOT's Traffic Management Center (TMC) at 618-346-3279. IDOT will be responsible for all media releases regarding the closure.

Resident Engineer will be responsible for contacting the agencies listed below fourteen days prior to a weekend closure.

1. St. Clair County Transit District, (618) 628-8090, Attn: Bill Grogan
2. Madison County Transit District, Fax (618) 797-7547
3. East St. Louis Police Department, (618) 482-6767
4. East St. Louis Fire Department, (618) 482-6840
5. St. Clair County Emergency Telephone System Board, Fax (618) 277-7668, Attn: Carolyn Ligon

Interstate I-64 will be closed from the I-55/70 and I-64 Interchange in East St. Louis to IL 111 in Washington Park. Detour signing and specific lane closures are detailed in the plan set on the Interstate Weekend Closure Plan Sheets. These drawings show the appropriate traffic control standards to be used. Any variation from the Plans shown shall be approved by the Engineer.

The Interstate may be completely closed to traffic from 9:00 PM Friday evening to 5:00 AM Monday morning. The Contractor will be allowed to begin traffic control set up at 6:00 PM Friday Evening according to the Interstate Weekend Closure Plan Sheets, as long as there is no direct impact to the PM traffic leaving St. Louis.

The Contractor shall field-mark intended locations of signs a minimum of seven days prior to a scheduled closure. The Resident Engineer must approve the marked locations before the Contractor begins to install the signs. Any traffic control signs that are installed prior to 6:00 PM of the Friday Evening of the scheduled closure must be completely covered until 6:00 PM.

All devices used to provide traffic control shall be according to Section 1106.

The Contractor shall designate a representative that is solely responsible for the traffic control related to this item. This representative shall be able to be contacted and respond accordingly at all times during the closure. Due to the continuous work schedule, it is anticipated the appointed representative may experience shift change. This is acceptable, as long as the Engineer is notified of the representative's shift schedule before the closure begins.

Dynamic Message Signs (DMS) are part of the existing ITS system owned and maintained by IDOT. The Interstate Weekend Closure Plan Sheets detail messages that the Contractor shall coordinate with IDOT's Traffic Management Center during the weekend closure. The Contractor is not responsible for providing or maintaining the DMS during the weekend closure.

If the Resident Engineer determines, during resurfacing operations, that the Contractor will not be able to complete all anticipated work, the Resident Engineer has the sole discretion to direct the Contractor to cease and remove all operations and safely reopen all lanes of the Interstate.

Liquidated Damages. Should the Contractor (or in case of default, the surety) fail to open all lanes of eastbound and westbound Interstate 64 mainline pavement by 5:00 a.m. on the first Monday following the weekend closure, the Department, the traveling public, state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the Contractor will be charged with liquidated damages specified in the amount of \$2,500.00 for every fifteen (15) minute increment beginning strictly at 5:00 a.m. on the first Monday morning following the weekend closure, with liquidated damages continuing for each 15 minute increment until all lanes are open. It shall be the responsibility of the Engineer to determine the quantity of excess closure time.

If the Contractor is directed by the Department to reopen the interstate due to the Contractor's inability to complete the required work within the allowed closure time, or the Contractor willingly chooses to cease operations during the scheduled weekend closure without completing the required removal items, the above stated Liquidated Damages will apply for each and every future interstate lane closure required to complete the work.

Basis of Payment: This work shall be paid for at the contract unit price per EACH for INTERSTATE WEEKEND CLOSURE, SPECIAL, which will be payment in full for closing Interstate I-64 and furnishing, installing, maintaining, and removing traffic control for the closure described.

### **INTERSTATE WEEKEND CLOSURE, SPECIAL, FOR I-55/70**

Description: This work shall consist of furnishing, installing, maintaining, monitoring, and complete removal of all traffic control devices necessary to successfully close Interstate I-55/70 for a weekend and provide a detour.

Interstate I-55/70 will be closed for one weekend to allow for mainline resurfacing work to be completed. During this closure of I-55/70, no lane restrictions will be allowed on I-64.

The weekend closure will not be allowed if the proposed weekend includes, or is adjacent to the seven legal holiday periods specified in Article 107.09.



The Interstate closure will not be allowed during major events in the St. Louis Metro area. These events include, but are not limited to, St. Louis Cardinals baseball home games, St. Louis Rams football home games, St. Louis Blues home games, the Fair St. Louis Celebration, the Mardi Gras Parade, the Big Muddy Blues Festival, Gateway International Raceway Events, and other possible events not listed here. The final determination on the acceptability of a weekend to do the closures will rest with the Engineer.

The Contractor shall notify the Engineer twenty-eight days prior to the anticipated weekend closure. Fourteen days prior to the anticipated shutdown, the Contractor shall have Changeable Message Signs (CMS) and the large orange detour notice panels with overlays in place according to the Interstate Weekend Closure Plan Sheets to alert the motoring public to the upcoming closure. These messages shall be coordinated with IDOT's Traffic Management Center (TMC) at 618-346-3279. IDOT will be responsible for all media releases regarding the closure.

Resident Engineer will be responsible for contacting the agencies listed below fourteen days prior to a weekend closure.

6. St. Clair County Transit District, (618) 628-8090, Attn: Bill Grogan
7. Madison County Transit District, Fax (618) 797-7547
8. East St. Louis Police Department, (618) 482-6767
9. East St. Louis Fire Department, (618) 482-6840
10. St. Clair County Emergency Telephone System Board, Fax (618) 277-7668, Attn: Carolyn Ligon

Interstate I-55/70 will be closed from the I-55/70 and I-64 Interchange in East St. Louis to IL 203. Detour signing and specific lane closures are detailed in the plan set on the Interstate Weekend Closure Plan Sheets. These drawings show the appropriate traffic control standards to be used. Any variation from the Plans shown shall be approved by the Engineer.

The Interstate may be completely closed to traffic from 9:00 PM Friday evening to 5:00 AM Monday morning. The Contractor will be allowed to begin traffic control set up at 6:00 PM Friday Evening according to the Interstate Weekend Closure Plan Sheets, as long as there is no direct impact to the PM traffic leaving St. Louis.

The Contractor shall field-mark intended locations of signs a minimum of seven days prior to a scheduled closure. The Resident Engineer must approve the marked locations before the Contractor begins to install the signs. Any traffic control signs that are installed prior to 6:00 PM of the Friday Evening of the scheduled closure must be completely covered until 6:00 PM.

All devices used to provide traffic control shall be according to Section 1106.

The Contractor shall designate a representative that is solely responsible for the traffic control related to this item. This representative shall be able to be contacted and respond accordingly at all times during the closure. Due to the continuous work schedule, it is anticipated the appointed representative may experience shift change. This is acceptable, as long as the Engineer is notified of the representative's shift schedule before the closure begins.

Dynamic Message Signs (DMS) are part of the existing ITS system owned and maintained by IDOT. The Interstate Weekend Closure Plan Sheets detail messages that the Contractor shall coordinate with IDOT's Traffic Management Center during the weekend closure. The Contractor is not responsible for providing or maintaining the DMS during the weekend closure.

If the Resident Engineer determines, during resurfacing operations, that the Contractor will not be able to complete all anticipated work, the Resident Engineer has the sole discretion to direct the Contractor to cease and remove all operations and safely reopen all lanes of the Interstate.

Liquidated Damages: Should the Contractor (or in case of default, the surety) fail to open all lanes of northbound and southbound Interstate 55/70 mainline pavement by 5:00 a.m. on the first Monday following the weekend closure, the Department, the traveling public, state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the Contractor will be charged with liquidated damages specified in the amount of \$2,500.00 for every fifteen (15) minute increment beginning strictly at 5:00 a.m. on the first Monday morning following the weekend closure, with liquidated damages continuing for each 15 minute increment until all lanes are open. It shall be the responsibility of the Engineer to determine the quantity of excess closure time.

If the Contractor is directed by the Department to reopen the interstate due to the Contractor's inability to complete the required work within the allowed closure time, or the Contractor willingly chooses to cease operations during the scheduled weekend closure without completing the required removal items, the above stated Liquidated Damages will apply for each and every future interstate lane closure required to complete the work.

Basis of Payment: This work shall be paid for at the contract unit price per EACH for INTERSTATE WEEKEND CLOSURE, SPECIAL, which will be payment in full for furnishing, installing, maintaining, and removing traffic control for the closure described.

## **TRAFFIC CONTROL AND PROTECTION, STANDARD 701451, SPECIAL**

Description: This work shall consist of furnishing, installing, maintaining, monitoring, and complete removal of all traffic control devices necessary to close Interstate Ramp 55N64E and provide a detour.

Eastbound Interstate I-64 Ramp 55N64E will be closed for nine and one half days to allow for the complete demolition and reconstruction of the ramp pavement from STA. 61+96.34 to approximately STA. 69+50.00. During this work, Westbound Interstate I-64 and both directions of Interstate I-55/70 shall remain open to traffic.

The closure will not be allowed if the proposed timeframe includes, or is adjacent to the seven legal holiday periods specified in Article 107.09.

The chosen dates for the Interstate closure shall minimize motorist impacts during major events in the St. Louis Metro area. These events include, but are not limited to, St. Louis Cardinals baseball home games, St. Louis Rams football home games, St. Louis Blues home games, the Fair St. Louis Celebration, the Mardi Gras Parade, the Big Muddy Blues Festival, Gateway International Raceway Events, and other possible events not listed here. The final determination on the acceptability of a timeframe to do the closure will rest with the Engineer.

The Contractor shall notify the Engineer twenty-eight days prior to the anticipated closure. Fourteen days prior to the anticipated shutdown, the Contractor shall have Changeable Message Signs (CMS) and the large orange detour notice panels with overlays in place according to the Interstate Closure Plan Sheets to alert the motoring public to the upcoming closure. These messages shall be coordinated with IDOT's Traffic Management Center (TMC) at 618-346-3279. IDOT will be responsible for all media releases regarding the closure.

Resident Engineer will be responsible for contacting the agencies listed below fourteen days prior to a closure.

1. St. Clair County Transit District, (618) 628-8090, Attn: Bill Grogan
2. Madison County Transit District, Fax (618) 797-7547
3. East St. Louis Police Department, (618) 482-6767
4. East St. Louis Fire Department, (618) 482-6840
5. St. Clair County Emergency Telephone System Board, Fax (618) 277-7668, Attn: Carolyn Ligon

Eastbound Interstate I-64 Ramp 55N64E will be closed from the I-55/70 and I-64 Interchange in East St. Louis to 15<sup>th</sup> Street in East St. Louis. Detour signing and specific lane closures are detailed in the plan set on the Ramp Closure Freeway/Expressway Plan Sheets. These drawings show the appropriate traffic control standards to be used. Any variation from the Plans shown shall be approved by the Engineer.

Interstate Ramp 55N64E may be completely closed to traffic from 9:00 PM Friday evening and may remain continuously closed until 9:00 AM two Mondays from the beginning of the closure (9 ½ days). The Contractor will be allowed to begin traffic control set up at 6:00 PM Friday Evening according to the Interstate Closure Plan Sheets, as long as there is no direct impact to the PM traffic leaving St. Louis.

The Contractor shall field-mark intended locations of signs a minimum of seven days prior to a scheduled closure. The Resident Engineer must approve the marked locations before the Contractor begins to install the signs. Traffic control signs that are installed prior to 6:00 PM of the Friday Evening of the scheduled closure must be completely covered until 6:00 PM.

All devices used to provide traffic control shall be according to Section 1106.

The Contractor shall designate a representative that is solely responsible for the traffic control related to this item. This representative shall be able to be contacted and respond accordingly at all times during the closure. Due to the continuous work schedule, it is anticipated the appointed representative may experience shift change. This is acceptable, as long as the Engineer is notified of the representative's shift schedule before the closure begins.

Dynamic Message Signs (DMS) are part of the existing ITS system owned and maintained by IDOT. The Ramp Closure Freeway/Expressway Plan Sheets detail messages that the Contractor shall coordinate with IDOT's Traffic Management Center during the closure. The Contractor is not responsible for providing or maintaining the DMS during the closure.

Engineer's sole discretion will be used to determine when the reconstructed pavement may be opened to traffic. Items of work that must be completed before the pavement may be opened to traffic include:

1. Full removal of all demolished pavement and debris from site.
2. Installation of pipe under drain system.
3. Installation of storm drainage system under new pavement.
4. Complete installation of reconstructed pavements, including both shoulders flush to mainline driving surface.
5. Lane striping must be applied as shown on Plans.
6. Temporary tie-in pavement as shown in the Plans for smooth transition from reconstructed pavement to existing pavement.
7. All appropriate IDOT signage and markings in place for safe motorist travel in the construction zone.

Liquidated Damages: Should the Contractor (or in case of default, the surety) fail to open all lanes of Ramp 55N64E pavement by 9:00 AM on the second Monday morning following the beginning of the closure required for the reconstruction of Ramp 55N64E, the Department, the traveling public, state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the Contractor will be charged with liquidated damages specified in the amount of \$1,250.00 for every fifteen (15) minute increment beginning strictly at 9:00 a.m. on the second Monday morning following the beginning of the closure, with liquidated damages continuing for each 15 minute increment until all lanes are open. It shall be the responsibility of the Engineer to determine the quantity of excess closure time.

If the Contractor is directed by the Department to reopen Ramp 55N64E due to the Contractor's inability to complete the required work within the allowed closure time, or the Contractor willingly chooses to cease operations during the scheduled closure without completing the required removal items, the above stated Liquidated Damages will apply for each and every future closure required to complete the work.

Basis of Payment: This work shall be paid for at the contract unit price per LUMP SUM for TRAFFIC CONTROL AND PROTECTION, STANDARD 701451, SPECIAL, which will be payment in full for furnishing, installing, maintaining, and removing traffic control for the closure described.

## **CONTRACTOR COOPERATION**

Description: This work shall consist of any coordination of proposed project start dates and sequence of construction with the Engineer and other Contractors required for an effective and timely schedule, in accordance with Section 105.08 of the Standard Specifications. This work also pertains to delays and inconvenience incurred by the Contractor resulting from lack of coordination specified herein.

The Contractor must be aware that, during the duration of this Contract, other separate contracts may be under construction on or near the work covered by this Contract. Special attention is brought to the work covered by this Contract that may be on or near the work covered by Contract Nos. 76C36, 76C43, 76C49, 76C50, 76C51, 76C54, 76C75, 76C76 and 76867.

Construction Requirements: The Contractor shall schedule and conduct work and shall place and dispose of material being used so as not to interfere with or cause unnecessary inconvenience or delay to the operations of other Contractors within the limits of the same project. The Contractor shall perform the work in proper sequence with the work of the other Contractors. Full cooperation of the Contractors involved, in careful and complete coordination of their respective activities in the area, will be required.

Basis of Payment: Any additional costs, delays, or inconvenience incurred by the Contractor to meet the requirements of this provision or resulting from failure to meet the requirements of this provision shall be considered incidental to this Contract and no additional compensation will be allowed.

## **WORK DURING PEAK HOURS**

The Contractor shall have all lanes in each direction open to traffic during peak hours. The Contractor will not be permitted to conduct any operation in the open lanes nor will the Contractor be permitted to restrict or impede the flow of traffic during peak hours. Peak hours for this project are defined as occurring from 3:00 PM to 7:00 PM in the eastbound direction, and 5:00 AM to 9:00 AM in the westbound direction. The Contractor shall maintain a minimum of two lanes of traffic between the hours of 9:00 AM and 3:00 PM and maintain one lane of traffic with 15 minute closures to set barrier on ramps during the non-peak hours of 7:00 PM to 5:00 AM. Lane Closure should only be allowed at night.

Additionally, there are events of regional significance that may impact traffic within the project limits. For these events, the Contractor will be informed by the Engineer regarding special peak hour restrictions that will be implemented. Events of regional significance will include, but may not be limited to, St. Louis Cardinal home games, St. Louis Ram home games, racing events at Gateway International Raceway, Fair St. Louis, and Live on the Levee.

Peak hour restrictions for Cardinal and Ram home night games will be defined as occurring from 3:00 PM to 7:00 PM in the westbound direction, and from 9:00 PM to 60 minutes after the end of the game in the eastbound direction. The peak hour restrictions for day games are defined as 10:00 AM to 1:00 PM in the westbound direction, and 2:00 PM to 60 minutes after the end of the game in the eastbound direction.

### Failure To Open Traffic Lanes To Traffic For Peak Periods

If the Contractor fails to completely open and keep open all lanes of traffic open during the peak hours described elsewhere in these Special Provisions, he shall be liable to the Department in the amount of \$1000 for each and every 15 minute interval or portion thereof that a lane is blocked outside the allowable time limitations. No provision of this clause shall be construed as a penalty but as liquidated and ascertained damages. Such damages may be deducted by the Department from any monies due to the Contractor. These damages shall apply during the length of the Contract and includes any extensions of the Contract time.

## **LOCATING UNDERGROUND UTILITIES**

Description: This work shall consist of determining the exact locations of all existing underground utilities (storm water, water, gas, sewer, steam, etc.) owned and maintained by the Department, which are in possible conflict with construction operations, to protect them from damage.

Locating underground electric cable and electric conductors in conduit owned and maintained by the Department is not included in this pay and will be paid for according to Section 803.

General: Any prints from microfilm or any information shown on the Plans for existing underground utilities owned and operated by the Department are intended to show the general arrangement of the existing underground utilities only and are not intended to show exact locations of the utilities. The Contractor shall be responsible for determining the exact location of any such existing underground utilities that are within 5 ft of the limits of any excavation or penetration relative to the construction work that could interfere with the underground facilities.

Plans of existing Department owned facilities may be available in the District Office in which the construction is located. Prints of applicable Plans will be provided to the Contractor upon request, if available.

The Contractor shall take whatever precautions to protect the existing underground utilities from damage during location and construction operations. In the event that any utility is damaged, the Contractor shall replace the damaged utility in a manner satisfactory to the Engineer. In the event that cables or conductors in conduit are damaged, Contractor shall replace the entire length of cables or conductors in conduit. Splicing below grade is not permitted.

In the event that the repairs are not made by the Contractor, the Contractor shall reimburse the Department for such repairs within 60 days of receiving written notification of said damage. Otherwise, the cost of such repairs will be deducted from the monies due or which will become due the Contractor under the terms of the Contract.

If, in the opinion of the Engineer, it is determined prior to any construction that an existing underground utility at a particular location is impossible to avoid, the Contractor shall relocate that segment of the existing underground utility to avoid their operations as directed by the Engineer.

The Contractor may contact Linda Leonard for any ITS information at (618) 346-3285 and may contact Dave Walker for any issues relating to highway lighting and deep wells at (618) 346-3274.

Method of Measurement: This work will be measured for payment in feet in place for each single buried utility located within an area extending 5 ft. outside the limits of excavation or penetration in each direction. This work shall be measured for payment at a specific work location only one time.

Basis of Payment: This work will be paid for at the contract unit price per foot for LOCATING UNDERGROUND UTILITIES, which price shall include locating each utility and protecting it from damage during location and construction operations.

If the Contractor is requested to relocate a segment of a utility at a specific work location to avoid construction operations, this work will be paid for according to Article 109.04. Only that work which is requested in writing by the Engineer will be paid for.

## **MAINTENANCE OF EXISTING ELECTRICAL DEVICES**

The existing electrical devices which lie within the construction limits of this project will continue to be the maintenance responsibility of the Illinois Department of Transportation. Electrical devices are defined to mean highway lighting installations, traffic signals, flashing beacons, sign truss illumination units, changeable message signs, motorist aid call boxes, dewatering pumps, speed monitoring devices, traffic volume count stations, wrong way movement detectors, following-too-close monitors, ice/fog detectors or any such devices or facilities the Department may have to maintain.

Any damage or malfunctions of these devices, observed by the Contractor, shall be reported immediately to the Department.

If it is determined by the Engineer that the Contractor is responsible for damage of any type to above-mentioned existing electrical devices, including underground wiring, as a result of negligence or poor workmanship, the Contractor shall be responsible for the repair of these facilities. These repairs shall be accomplished by whatever method the Department deems necessary. In the event the repairs are not made by the Contractor, the Contractor will be required to reimburse the Department for such repairs within 60 days of receiving written notification of said damage.

The Department will continue to maintain the existing electrical devices until such time as the Contractor removes these devices, if required by this Contract. Any new, rebuilt, or modernized equipment installed as a requirement of this Contract shall be the maintenance responsibility of the Contractor until such time as this equipment is final inspected and found to be installed in a satisfactory manner by the Department. Existing individual equipment not involved with the work of this Contract will continue to be the maintenance responsibility of the Department.

## **WELL CONTROL CENTER MODIFICATIONS**

Description: This item consists of furnishing all materials, labor, tools, and equipment necessary to modify the existing well control center to accommodate new feeders to existing deep wells, as indicated on the Plans, as directed by the Engineer, and as specified herein.

Installation: The Contractor shall connect new feeders to Wells 5, 13, 14 and 15. The Contractor shall utilize existing capped spare conduits terminated five feet from the Well Control Center. To route new feeder cables into the Well Control Center. The Contractor shall clean the interior of the well control center cabinet of all dust, dirt and debris and tighten all electrical connections.

Basis of Payment: This work will be paid for at the Contract lump sum price for WELL CONTROL CENTER MODIFICATIONS which shall be payment in full for furnishing and installing all labor and materials required for the modifying the Well Control Center as herein specified.

## **WELL PUMP FEEDER MODIFICATION**

Description: This item consists of the connection of new feeder cables to existing deep wells as shown on the Plans, as directed by the Engineer, and as specified herein and elsewhere in these provisions.

Confined Space Entry. The existing deep well enclosure boxes are considered to be confined spaces. The Contractor shall comply with all OSHA requirements relative to confined space entry. An oxygen deficient, toxic, explosive or flammable atmosphere may exist within these confined spaces. Atmosphere testing shall be conducted prior to entry, and continuously recorded while employees are working within a confined space. The Contractor shall inform the Engineer of who will serve as the rescue responder in an emergency and what system will be used to notify the responder that an emergency exists. Compliance with this provision shall be considered included in the Contract and no additional compensation will be allowed.

Protection of Wells. At all times during the progress of the work, the Contractor shall protect each deep well in such manner as to effectively prevent either tampering with or the entrance of foreign matter into the deep well.

Electrical Supply. The Contractor shall locate and expose the existing underground feeder to the existing deep well enclosure. Disconnect the feeder cables at the existing disconnect switch. Cut the existing raceway approximately 5' from the enclosure and remove the cables to the disconnect switch. Utilize the existing raceway to route the new feeder cables to the disconnect switch. Seal all raceway openings. Connect the new feeder cables to the disconnect switch. The Contractor shall clean the existing deep well enclosure.

Contractor's Responsibility. The Contractor shall be responsible for performing all of the work in strict accordance with these specifications.

Method of Measurement: Each deep well that has a new feeder installed in accordance with this provision will be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price each for WELL PUMP FEEDER MODIFICATION.

## **DEEP WELL CONSTRUCTION, ADJUSTMENT, AND FILLING - GENERAL**

Description: This item consists of the construction of new high capacity deep wells and associated piezometers, the adjustment of and/or filling of existing deep wells and associated piezometers as shown on the Plans, as directed by the Engineer, and as specified herein and elsewhere in these provisions.

A Licensed Well Contractor will be required for all work associated with deep well or piezometer construction, adjustment, or abandonment as herein specified. All work shall be in conformance to the rules and regulations of the Department of Public Health, Water Well Construction Code, latest revision, and all applicable Federal, State, and Local rules and regulations

Confined Space Entry. The existing deep well enclosure boxes are considered to be confined spaces. The Contractor shall comply with all OSHA requirements relative to confined space entry. An oxygen deficient, toxic, explosive or flammable atmosphere may exist within these confined spaces. Atmosphere testing shall be conducted prior to entry, and continuously recorded while employees are working within a confined space. The Contractor shall inform the Engineer of who will serve as the rescue responder in an emergency and what system will be used to notify the responder that an emergency exists. Compliance with this provision shall be considered included in the Contract and no additional compensation will be allowed.



Permits, Fees, and Regulations. The Contractor shall apply for and obtain permits for the deep wells and associated piezometers from the Illinois Department of Public Health or an approved local health department prior to construction. The Contractor shall be responsible for all permit fees and for filing the deep well completion report and water well sealing forms with the Illinois Department of Public Health.

Protection of Wells. At all times during the progress of the work, the Contractor shall protect each deep well in such manner as to effectively prevent either tampering with or the entrance of foreign matter into the deep well.

Well Logs and Construction Drawings. The Contractor shall keep a log of the geologic material encountered in the drilling of each deep well and shall furnish four typewritten copies of such log to the Engineer upon completion of the well. The Contractor shall also furnish four (4) copies of a drawing for each deep well depicting the depth and exact construction giving all dimensions regarding lengths and diameters of casing and screen, size of slot openings, and other pertinent details and dimensions. Formation samples shall be collected at 5 ft intervals and delivered to a location directed by the Engineer.

Water Supply. The Contractor is advised that existing dewatering wells may be used as non-potable water supply source for the various operations.

Electrical Supply. The Contractor is advised that the deep well electrical control panels may be used as a power source for temporary pumps or other requirements as necessary. The Contractor will be required to furnish all wiring and electrical fixtures including motor starters.

The Contractor shall take into account the requirements as herein specified, in submitting the contract unit price for the various items of work involved as no additional compensation will be allowed for any costs incurred as a result of compliance with this provision.

## **FILL DEEP WELL**

Description: This item consists of furnishing all materials, labor, tools, and equipment necessary to fill and seal existing deep wells as indicated on the Plans, as directed by the Engineer, and as specified herein.

General. The Contractor shall notify Engineer at least 48 hours in advance when a deep well is ready to be shut down and filled.

Electrical Equipment Removal. All existing electrical equipment and wiring associated with an existing deep well to be filled shall be removed.

The existing deep well feeder conductors shall be disconnected from the existing deep well control center terminal strip for the deep well that is being filled. The existing conductors and conduit between the existing deep well control center and the well enclosure box shall be abandoned in place.

The existing pump power cable shall be disconnected from the existing disconnect switch located within the existing well enclosure box.

The existing equipment ground conductor between the existing disconnect switch and the existing ground rod shall be disconnected and removed.

The existing ground rod shall be removed.

The existing disconnect switch shall be disconnected and removed from the existing well enclosure box.

The existing junction box shall be disconnected and removed from the existing well enclosure box.

All material removed shall become the property of the Contractor and shall be disposed of off-site.

Well Head Removal. The removal of existing well heads shall be performed in accordance with the applicable portions of Section 501 of the Standard Specifications, and as herein specified.

The removal of existing well heads shall include the removal of submersible pumps including pump motors, column pipe, concrete thrust block, and all piping and appurtenances within the well enclosure box as required for the deep well abandonment.

The submersible pumps, pump motors, and the stainless steel pump columns shall remain the property of the Department. The Contractor shall deliver and unload the submersible pumps, pump motors, and the stainless steel pump columns to the Illinois Department of Transportation, Bowman Pump Station, 728 Exchange Avenue. The Contractor shall contact Pete Sawyer at (618)304-2082, 48 hours in advance of when material will be delivered.

All other material removed shall become the property of the Contractor and shall be disposed of off-site.

Well Enclosure Box Removal. The removal and satisfactory disposal of existing well enclosure boxes shall be performed in accordance with the applicable portions of Section 605 of the Standard Specifications, and as herein specified.

The existing well enclosure box to be removed under this item is reinforced concrete. The well enclosure box shall be completely removed and shall include the riser and heavy duty frame and grate as shown on the Plans.

The heavy duty frame and grate shall remain the property of the Department. The Contractor shall deliver and unload the heavy duty frame and grate to the Illinois Department of Transportation, Bowman Pump Station, 728 Exchange Avenue. The Contractor shall contact Pete Sawyer at (618)304-2082, 48 hours in advance of when material will be delivered.

All other material removed shall become the property of the Contractor and shall be disposed of off-site.

Deep Well Filling and Sealing. The sealing of filled deep wells shall be performed in accordance with the Illinois Water Well Construction Code of the Department of Public Health.

The deep wells shall be sealed by a licensed water well driller pursuant to the Water Well and Pump Installation Contractor's License Act.

The Department of Public Health shall be notified by telephone or in writing at least 48 prior to the commencement of any work to seal the deep wells. The filling of the deep wells shall be performed under the supervision of a well inspector of the Department of Public Health.

Two properly executed and notarized Water Well Sealing Forms of the Department of Public Health are required. One is to be filled with the Division of Environmental Health, Department of Public Health at Springfield, and the other with the Illinois Department of Transportation – District 8.

Before filling, the deep well is to be checked for obstructions. Any that would interfere with the effective sealing of the well shall be removed.

The deep wells shall be sealed by grouting from the bottom up by using neat cement containing bentonite or aquajel from 2% to 6% by dry weight, or pure bentonite in any form. This material shall be applied the full depth of the well and shall terminate within three feet of the ground surface.

The well casing shall be removed at least 3 feet below final grade or existing ground whichever is lower. Any concrete, brickwork, masonry, pipe, or other unsuitable material within three feet of final grade or existing ground whichever is lower shall be removed, and the hole shall be filled to final grade with sand, soil, or earth approved by the Engineer. The fill shall be placed and compacted in accordance with Article 810.04(a).

Method of Measurement: Each deep well that is filled and sealed including the removal of existing electrical equipment, well head, and well enclosure box in accordance with this provision will be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price each for FILL DEEP WELL.

### **FILL EXISTING PIEZOMETER**

Description: This item consists of furnishing all materials, labor, tools, and equipment necessary to fill and seal existing piezometers as indicated on the Plans, as directed by the Engineer, and as specified herein.

General: The Contractor shall notify Engineer at least 48 hours in advance when a piezometer is ready to be filled.

Piezometer Filling and Sealing: The existing piezometers associated with deep wells to be filled shall be abandoned in accordance with the Water Well Construction Code, latest edition, 77 Illinois Administrative Code, Chapter 1, and Section 920.120 thereof.

The existing piezometers associated with deep wells to be filled shall be sealed by filling with disinfected clean pea gravel or limestone chips to 10 feet above the piezometer screen. Disinfection of the piezometer shall be accomplished in accordance with Section 920.100(b) of the Water Well Construction Code. Neat cement containing bentonite or aquajel from 2% to 6% by dry weight, or pure Bentonite in any form shall be placed for a minimum of 20 feet above this point. An impervious clay slurry or concrete material shall be used to fill the remaining upper part of the well to the surface.

Concrete piezometer head protectors shall be removed and the piezometer filled as herein specified.

All material removed shall become the property of the Contractor and shall be disposed of off-site.

Method of Measurement: Each piezometer that is filled and sealed in accordance with this provision will be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price each for FILL EXISTING PIEZOMETER.

## **DRILLED WELL**

Description: This item consists of furnishing all materials, labor, tools, and equipment necessary for the construction of new gravel packed deep wells at the locations as indicated on the Plans, as directed by the Engineer, and as specified herein.

Casings. The casing for each well shall be Schedule 80S stainless steel not less than 24 inch outside diameter by 0.5 inch wall thickness. The casing shall extend from the top of the screen to the elevation indicated on the Plans. Steel casings shall be fabricated from Type 304 stainless steel and shall be manufactured in accordance with ASTM A312. Joints shall be welded and watertight.

Screens. Well screens shall be manufactured by a firm regularly engaged in the manufacturer of well screens. Screens shall be fabricated from Type 304 stainless steel. The outside diameter of the screen shall not be less than 24 inches. The vertical height of the screen shall be as indicated on the Plans, unless otherwise directed by the Engineer.

Screens or member and elements thereof shall be of adequate strength and thickness to meet the required service conditions. The screen shall be wire wound continuous slot. The width of screen openings shall be 50 slot for the deep well. The screen open area shall be 238 in<sup>2</sup> per foot of screen. All members and elements between slots shall be of adequate section and strength to safely withstand all loads and stresses to which they may be subjected. The screens shall have sufficient strength to safely support vertically the load imposed thereon by the casing. Screen sections shall be fabricated by the welding of all joints and points of contact of the assembled parts. All joints between screen sections shall be securely welded by continuous weld meeting the approval of the Engineer.

The end of the screen shall be tightly sealed by means of a stainless plate not less than 3/8 inch nominal thickness, attached to the screen by means of a continuous weld around its entire circumference. This plate will serve the dual purpose of closing the bottom of the deep well and of providing a support for the casing and screen assembly.

Gravel. All materials used for the gravel wall around the inner well casing shall be clean, well-rounded particles of 95% siliceous material which has been thoroughly cleaned of all silt, dust, and other foreign matter. The filter gravel as herein specified shall have 95.1% passing at 2.0 mm, and 6.7% passing at 1.18 mm. The Contractor will provide signed certification that states the gravel is composed of not less than 95 percent silica and meets the gradation requirements of this special provision. Contractor will need to sample every super sack or every 5,000 lbs of proposed gravel pack two weeks prior to drilling to verify the proposed gravel pack meets the special provisions. A representative of the Department will be present to witness the gravel sampling. Each super sack will have its own sieve analysis performed on the proposed gravel pack. Once the sieve analysis has been completed by an independent lab the results will be turned into the department for approval. Any super sacks not meeting the specifications will be rejected. Contractor will then have to replace the super sack with new and test again. The cost for testing will be included in this pay item.

Well Construction. Each well shall be constructed by using a Pier Rig method and/or Rotary Reverse method. If Reverse Rotary is used no pit will be allowed to be dug. A portable pit or tank will be allowed. A trench for the portable tank or pit will be allowed to be dug from the proposed well to the portable pit or tank. If a trench is used it must be lined. All cuttings will remain on site and will be graded out. The drilled hole shall be 3.5 feet in diameter. The Contractor shall provide a continuous and sufficient supply of water so that the drilled hole will be kept full of water at all times during the entire drilling operation.

No use of drilling mud or other Bentonite-type drilling additives shall be used in the drilling process, unless otherwise permitted by the Engineer.

The Contractor shall use a temporary surface casing or other approved means to keep the hole open during construction. The temporary casing used during the drilling, placement of gravel pack, and well development shall be removed and recovered by the Contractor. Should the drilling water become heavy with fines and mud, the Engineer will require the Contractor to pump the drilling fluid to waste and refill with clean water.

After the drilling is complete, the casing and screen shall be installed in the drilled hole. Care shall be taken that the closed end of the well screen shall have a uniform bearing on the bottom of the hole. The bottom of the casing shall be centered concentrically plumb in the hole. Centering guides designed to hold the screen in the center of the borehole shall be installed as shown on the Plans. The screen and casing shall be no more than 5 inches in 100 feet out of plumb.

The casing (including the screen sections) shall extend from the bottom of the well to the elevation indicated on the Plans.

Gravel shall be placed in the annular space between the casing and the side of the drilled hole from the bottom of the well up to the bottom of the surface casing mentioned above, or to the elevation indicated on the Plans, whichever is higher. Gravel shall be placed with a tremie in one continuous operation. The outside diameter of the gravel wall shall be not less than 3.5 feet and the horizontal thickness of the gravel pack shall not be less than 9 inches.

During the placement of the gravel, the elevation of the bottom of the tremie pipe shall be so controlled that at no time shall the bottom of the pipe be more than 5 feet above the top of the gravel already deposited in the well. All operations of handling and placing the gravel shall be regulated to prevent the segregation of sizes of gravel particles. The water used to wash the mixture down the tremie pipe shall contain a chlorine concentration of 400 ppm, obtained by the addition of sodium hypochlorite.

Well Development. Following placement of the gravel pack, each well shall be fully developed to obtain the maximum yield of water per foot of drawdown as approved by the Engineer. Each deep well shall be bailed, washed, backwashed, surged, and developed until the water produced has turbidity not greater than the raw water turbidity and contains not more than 5.00 ppm of sand by weight. Attention is directed to Appendix D of AWWA A100.

The final phase of the development shall be done by use of the test pump as wherein specified. During this final phase of development, the test pump shall be stopped and started frequently to provide a surging action to the operation. The pumping phase of the development shall be performed until the turbidity at the rate specified for the constant rate pumping test is within the specified limits.

In the event water pumped from the deep well does not meet the turbidity requirements specified, the Contractor will be required to remove the pump and redevelop the deep well by use of surge block and bailer, then reinstall the pump and repeat the pumping phase of the redevelopment at no additional compensation regardless of the number of times this procedure must be repeated. The minimum time to be committed towards well development is eight (8) hours.

Bentonite/Grout plug. Following well development, the annular space between the casing and the 3.5 foot drilled hole directly above the gravel pack shall be filled with a 3 foot Bentonite layer and then the remaining annular space between the casing and the drilled hole wall shall be filled with cement grout as indicated on the Plans. The grout shall be mixed 1 bag of cement to 6 gallons of water with 1% Bentonite added to reduce shrinkage. The Grout shall be placed with a tremie similar to the gravel pack, when placed below water level. No water from drilling of the new well will be allowed on the roadway pavement. Cost for this will be incidental to the project.

Test Pump. An electric turbine test pump capable of pumping at least 1000 gallons per minute under the static water levels indicated shall be furnished by the Contractor and temporarily installed in the deep well to complete development of the deep well and to conduct a final pumping test of the deep well as herein specified. A valve shall be installed in the discharge pipe from the pump to control the rate of pumping. Flow shall be measured by a freely discharging orifice of proper dimensions installed at the end of the discharge pipe, together with a transparent plastic manometer tube or by a calibrated propeller flow meter. The test pump shall be capable of operating at least 24 hours without shutdown.

Constant Rate Pumping Test. A 3 hour pumping test shall be conducted on the deep well as directed by the Engineer. The constant rate pumping test shall start after a shut down period of 12 hours. The Contractor shall be required to pump the deep well during the test for the full 3-hour period without shutdown. In the event a shutdown does occur during the test period, the Contractor will be required to repeat the test the following day with no additional compensation. During each constant rate pumping test, the pumping rate shall be maintained at 600 gallons per minute or as directed by the Engineer. The Contractor shall measure and record water levels in the deep well and provide a written record of the pumping rates, time and water levels.

Recording of the water levels shall begin one (1) hour prior to the start of pumping and shall continue for the duration of test pumping and recovery. Water levels shall be measured during the static readings and during the test in the new piezometer constructed as specified elsewhere in these provisions.

The minimum frequency and interval of water level measurements shall be as follows:

	<u>Frequency</u>	<u>Interval</u>
Preceding Pumping Pumping (3 hrs)	10 minutes	1 hour
	1 minute	0 to 5 minutes
	2 minutes	5 to 15 minutes
	5 minutes	15 to 60 minutes
	10 minutes	second hour
	20 minutes	third hour
Recovery (30 min.)	1 minute	0 to 5 minutes
	2 minutes	next 10 minutes
	5 minutes	remaining 15 min.

Step-Drawdown Pumping Test. The pumping test shall be step-drawdown type pumping test in which pumping rates shall be:

Rate	Period
200 gal/min	15 minutes
400 gal/min	15 minutes
600 gal/min	15 minutes

The drawdowns shall be measured in the well as follows:

	Frequency	Period
Pumping	1 minute	First 9 minutes
	2 minutes	Next 6 minutes

Within one (1) week following the end of the pumping test, the Contractor shall submit to the Engineer four (4) copies of a report summarizing the work. The report shall contain all data from the test pumping and recovery period reduced by computation and plotted in accordance with a satisfactory method to determine the following:

The degree of development of each water supply well.

The efficiency of each water supply well.

Submersible Pump Column Pipe and Well Head. Stainless steel pipe and fittings shall be Type 304L Schedule 40 stainless steel. Flanges shall be ANSI B16.5, 150 psi pressure rated. Bolts, nuts, and washers shall be Type 304 stainless steel. Flange gaskets shall be Buna-N. Stainless steel couplings shall be Type 304 stainless steel construction, consisting of full circle single band, and Grade 30 gasket material. Coupling width shall be no less than 12.5 in.

HDPE piping and fittings shall meet requirements specified elsewhere in these provisions.

Well Head Ball Valves. Valves shall be suitable for bi-directional service. Manual operators shall be safety oval type:

Type 1, Grade 1 PVC, body and ball, 150 psi pressure rating at 73°F; true union style, tfe seats, and EPDM or fluoroelastomer seals. Socket or flanged joint according to piping service.

Ball valves as herein specified shall be furnished by a manufacturer regularly engaged in the manufacture of such valves.

All valves shall be installed in accordance with the manufacturer's specification and fully tested for operation.

Well Head Knife Gate Valves. Valve shall be a bonnetless, wafer-type gate valve with a fabricated steel body. Port areas shall be 100% of the full pipe area throughout the entire length. All sizes shall have two (2) full-port rubber slurry sleeve halves which shall be supported and compressed between the flanges. The gate shall be stainless steel ASTM A240 T-316. The valve shall meet MSS SP-81 face-to-face dimensions and ANSI B16.5 Class 150 drilling dimensions. The gate will be of sufficient thickness to provide against permanent deformation at 1.2 times the rated working pressure. The seat halves will be molded rubber and shall act as a wiper blade to clean the gate as it strokes. The stem nut will be acid resistant bronze. Wetted parts will include the rubber slurry sleeves and gate only. Flush port area will be located in the base of the valve, and will be drilled, tapped, and plugged. Valve shall have steel plate body AISI 1020/1025 with pressure rating of 150 psi. Valve stem shall be stainless steel ASTM A276

T-304. Handwheel shall be cast iron. Bolts, nuts and washers for connection of valve to pipe line shall be 304SS of the size recommended by the manufacturer.

All valves shall be installed in accordance with the manufacturer's specification and fully tested for operation.

The well head including valves and appurtenances shall be constructed as shown on the Plans. The valves used shall conform to the provision Well Head Valves included elsewhere in these provisions.

Well Enclosure Box. The well enclosure box including access doors shall be constructed as indicated on the Plans, in accordance with the applicable portions of Section 602 of the Standard Specifications, and as herein specified.

The well enclosure box shall be constructed of reinforced cast in place or precast concrete. The Plans reflect the cast in place option. Should the Contractor elect to use precast units, shop drawings will be required.

Access Doors (Hatches). The channel frame shall be constructed of aluminum, minimum ¼ inch thick with aluminum anchor flange around the perimeter and have a minimum cross-sectional area of 7.5 square inches to allow for adequate water drainage.

Covers shall be constructed of aluminum checkered plate, minimum ¼ inch thick. Covers shall be reinforced for H2O loading. Cover shall open 90 degrees and lock automatically in that position. A handle shall be provided to release the cover for closing.

Hinges shall be of heavy forged brass with stainless steel pins. A stainless steel snap lock with removable handle shall be provided. A 1.5 inch drainage coupling shall be provided at locations shown on the Plans. Pentahead recessed bolt lock (2 each) and pentahead tee wrench required.

Provide factory finished units. Finish shall be mill finish with bituminous coating applied to exterior of frame.

Well Electrical. The Contractor shall provide electrical equipment and wiring in new wells which shall include:

Furnish and install a 100 amp, 600 volt, 3 pole with ground lug, heavy duty, non-fused disconnect switch with a NEMA 4X stainless steel enclosure in the well enclosure box. The proposed disconnect switch shall have a 1½" grommeted opening at the bottom for connecting power cable to the pump motor.

Furnish and install proposed 6 inch wide by 8 inch high by 4 inch deep NEMA 4X stainless steel junction box in the well enclosure box.

The proposed disconnect switch shall be grounded with a proposed number 6 AWG grounding electrode conductor that shall be connected to the ground rod.

Furnish and install liquid-tight flexible non-metallic conduit between the junction box and the disconnect switch to contain the conductors from the feeder unit duct cable assembly. The feeder conductors shall not be spliced in the junction box.

The pump power cable from the pump motor shall be connected to the proposed disconnect switch in the well enclosure box.



The exposed pump power cable shall be routed along the walls of the well enclosure box, from the well head to the proposed disconnect switch. The exposed pump power cable shall be supported on 12 inch centers by stainless steel expansion anchors and nylon “Ty-Raps” along the entire exposed length of the power cable.

Furnish and install grounding and bonding for the well enclosure as shown on the Plans. Furnish and install number 6 AWG bonding conductors from the ground rod to the well casing and to the access hatch frame. Bond the conductors to the well casing and to the access hatch frame.

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

Item	Article/Section
(a) Grounding.....	1087
(b) Junction Box.....	1088.04
(c) Wire and Cable.....	1076

Contractor’s Responsibility. The Contractor shall be responsible for performing all of the work in strict accordance with these specifications. If evidence indicates that the screen or casing in the well is broken or that the well is not constructed in accordance with the specifications to the satisfaction of the Engineer, the Engineer may order that proper changes be made by the Contractor, or in the event that proper changes cannot be made, the Engineer may order the Contractor to abandon such well without cost to the Department and to drill a new well.

Drawings and Data. Complete specifications, data, and catalog cuts and Plans covering the fabricated items furnished under this section shall be submitted in accordance with the Standard Specifications.

Method of Measurement: Each deep well installed complete with submersible pump column, associated valves, piping, enclosure and electrical equipment in accordance with this provision will be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price each for DRILLED WELL.

**SUBMERSIBLE PUMP**

Description: This item consists of furnishing all materials, labor, tools, and equipment necessary to install a submersible pump and motor in the proposed new wells at the locations as indicated on the Plans, as directed by the Engineer, and as specified herein.

Submersible Pumps. Pumps shall be submersible motor driven deep well turbine rated for performance under the following conditions:

<b>WELL NUMBER</b>	<b>12B</b>
Pump Discharge (gal/min)	600
TDH	80
Well Diameter	24”
Discharge Pipe Centerline Elev.	385.97’
Well Depth – Elev.	302.0’

<b>WELL NUMBER</b>	<b>12B</b>
Screen Length	30
Depth of Setting, Pump Intake	SEE PLANS
Water Temperature (°F)	60
Power	460 Volts, 3 Ph, 60 Hz

Note: The total dynamic head (TDH) includes the total change in elevation of the water, from the pumping water level to the point of discharge level, plus the friction and turbulence losses through the drop pipe and force main, valves, and fittings, from the pump to the point of discharge.

Submersible Pump Bowl Assembly. (ANSI/NSF Standard 61 Classified). Pump bowls, suction and discharge cases shall be lead and zinc free cast bronze, ASTM B584, free of blow holes, sand holes, or other imperfections. Tensile strength shall be a minimum of 300,000 psi. The bowl assembly shall be flanged construction utilizing Type 304 stainless steel bolts; or if threaded, must be left hand threads. Right hand threads will not be permitted. All mating surfaces shall be precision machined and fitted and no gaskets will be allowed. Rabbeted fits shall be utilized throughout the bowl assembly for accurate fit and alignment.

Each bowl casting shall be factory tested at hydrostatic test pressure of 150 psi before assembly to assure integrity of each bowl, and certification of test shall be provided if requested.

Impellers shall be precision lead and zinc free cast bronze, ASTM B584, machined and dynamically balanced for maximum efficiency and vibration-free operation. Enclosed type impellers, with sufficient skirt material thickness to enable repair and restoration of proper running clearance by installation of wear rings shall be furnished. Each impeller shall be securely fastened to the shaft with a split taper collet of stainless steel or lead and zinc free bronze.

The shaft shall be of sufficient diameter to transmit the pump horsepower with a liberal safety factor and rigidly support the impellers between the bowl or case bearings. The shaft material shall be 416SS, polished and precision straightened, with a minimum diameter of 1 inch.

The motor coupling shall be a stainless steel coupling, accurately machined for perfect alignment, balance, and power transmission. The coupling shall be fastened to the end of the pump shaft by means of reset Allen screw to prevent loss of coupling during handling and disassembly. The coupling shall be keyed to the pump shaft and splined to the motor shaft. The coupling shall be capable of transmitting the total torque of the unit, regardless of the direction of rotation.

Intermediate bowls, motor adapter and discharge case shall have cutlass rubber bearings to support and guide the shaft, and lend resistance to sand abrasion wear on shaft bearing surface. The discharge case shall be grease packed, with a top bearing plug to seal the bearing and also restrict excessive vertical upthrust on the shaft during start-up, imposed hydraulically or by positive suction pressures.

The suction screen shall be Type 304 stainless steel material with a net open area at least four (4) times the area of the impeller eye.

The pump shall have been classified by UL Laboratories as complying with ANSI/NSF Standard 61 and shall carry a label to clearly and positively show compliance.

Submersible Pump Motor. The motor shall be of the submersible type designed for continuous underwater operation. The motor shall be 20 HP, 3600 RPM, 460 volt, 3 phase, 60 Hz of the squirrel cage induction type, suitable for across the line starting, and conforming to the latest National Electrical Manufacturers Association (NEMA) Specifications for submersible motors.

The motor thrust bearing shall be of the Kingsbury design, sized to carry the weight of all rotating parts plus the hydraulic thrust of the pump. The thrust bearing shall have sufficient capacity to permit the pump to operate momentarily with the discharge valve closed.

The motor shaft shall be stainless steel, splined and fitted with a rotary face type seal to prevent entry of foreign material into the motor.

Motor leads shall be of sufficient length to be spliced above the bowl assembly. Leads shall be protected for the entire length of the bowl assembly by a stainless steel cable guard supplied with the pump. The motor shall have provisions for proper grounding.

Minimum flow velocity around the motor shall be 6 in/sec. If design flow velocity is less than 6 in/sec or the motor is installed within the screened section of the well, a shroud shall be installed around the pump and motor to direct the flow of water around the motor for cooling purposes.

Submersible Pump Cable. The power cable shall be sized such that the voltage drop will not exceed 5% from the power source to the motors terminals, at the motor full load current and voltage. Cable shall be three (3) conductor with ground jacketed, and all four (4) included in a single outer jacket. The conductor insulation shall be water and oil resistant, suitable for continuous immersion. The cable shall be suitably strapped to the column pipe by means of stainless steel bands on each joint of pipe. The cable shall have 3 layers of electrical tape applied, half-lapped, extending ¾-inches each side of each stainless steel band. A continuous length of cable, without splices, from the motor leads through the surface plate is required. The splice of the motor leads to the cable shall be watertight at the pressure encountered in the application. The entire length of cable and motor, together, shall be checked for insulation resistance (cable to ground) and winding resistance (cable to cable) and shall be within the motor manufacturers recommended values.

Submersible Pump Submittal: Complete data shall be submitted to the Engineer for approval, including a single stage pump performance characteristic curve, with actual horsepower required per stage and pump efficiency shown clearly. Statements from the pump manufacturer confirming ANSI/NSF Standard 61 may be required.

Submersible Pump Warranty. The pump manufacturer shall warrant the units being supplied to the Department against defect in workmanship and materials for a period of one (1) year from the date of acceptance of Department.

Submersible Pump Quality Assurance. The pump manufacturer shall perform the following inspections and tests on the pumps before shipment from the factory.

1. Impeller size, motor rating, and electrical connections shall first be checked for compliance to the customers purchase order.
2. A motor and cable insulation test for moisture content or insulation defects.

3. Pressurize the motor with an environmentally safe gas and use a sniffer device to check for leaks at all joints and seals.
4. Prior to submergence, the pump shall be run dry to establish correct rotation, proper amp readings, and mechanical integrity.
5. The pump shall be run for 30 minutes submerged a minimum of 6 feet under water.
6. After operational test No. 5, the insulation test (No. 2) is to be performed again.

A written report stating the foregoing has been done shall be supplied with each pump at the time of shipment.

The pump manufacturer's representative shall witness the pump installation and testing after the installation is complete. A written report covering the representative's findings and installation certification shall be submitted to the Engineer covering all inspections and outlining, in detail, any deficiencies noted.

Submersible Pump Testing. Before final acceptance of the pumps specified herein, the Contractor shall submit five (5) copies of certified and properly identified performance curves which shall reflect the operating characteristics of each pump model and impeller combination being supplied. The curves shall indicate head, capacity, horsepower, efficiency, and input QU. Test shall be performed in accordance with test code for Centrifugal Pumps per the standards of Hydraulic Institute. Tests shall be performed on the actual assembled pumps to be supplied – prototype model tests are not acceptable. Test shall cover a range from shut-off to a minimum 20% beyond specified design.

Method of Measurement: Each new submersible pump installed complete in accordance with this provision will be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price each for SUBMERSIBLE PUMP.

## **PIEZOMETER**

Description: This item consists of furnishing all materials, labor, tools, and equipment necessary for the construction of new piezometers wells associated with each new drilled well at the locations as indicated on the Plans, as directed by the Engineer, and as specified herein.

Piezometer Well. Piezometer wells shall be constructed of 2 inch PVC Schedule 40 material. A minimum 6 inch diameter bore hole shall be constructed to the depth shown on the Plans and 50 feet of 2 inch diameter PVC well screen and casing shall be installed. The width of screen openings shall be 10 slots. An end cap shall be placed on the bottom of the screen. At least four (4) stainless steel centralizers will be equally spaced on the screen and casing.

A gravel pack will be placed in the annular area to about 20 feet below the surface. On the gravel pack a 3 foot Bentonite layer will be placed and then the remaining annular space shall be filled with cement grout as indicated on the Plans. The grout shall be mixed 1 bag of cement to 6 gallons of water with 1% Bentonite added to reduce shrinkage.

All materials used for the gravel wall around the inner well casings shall be clean, well-rounded particles of 95% siliceous material which has been thoroughly cleaned of all silt, dust, and other foreign matter. The filter gravel as herein specified shall be uniformly graded between 0.02 inch to 0.04 inch and no more than 5% by weight should fall outside the upper and lower limits specified.

After installation, the piezometer shall be flushed of all drilling fluids until clean. A falling head permeability test shall be performed to ensure hydraulic continuity with the aquifer.

Contractor's Responsibility. The Contractor shall be responsible for performing all of the work in strict accordance with these specifications. If evidence indicates that the screen or casing in the well is broken or that the well is not constructed in accordance with the specifications to the satisfaction of the Engineer, the Engineer may order that proper changes be made by the Contractor, or in the event that proper changes cannot be made, the Engineer may order the Contractor to abandon such well without cost to the Department and to drill a new well.

Method of Measurement: Each new piezometer installed complete in accordance with this provision will be measured for payment.

Basis of Payment: This work will be paid for at the contract unit price each for PIEZOMETERS.

## **REMOVAL OF EXISTING STRUCTURES NO. 1**

Description: This item shall consist of the removal and satisfactory disposal of existing South Abutment of L&N RR Bridge over I-55/I-70, Ramp "L" and Ramp "N" as detailed in the Plans, described herein and according to Section 501 of the Standard Specifications, and as directed by the Engineer. The scope of this item shall also include removal and disposal of miscellaneous items appurtenant to these existing substructure units, including but not limited to fence, partial removal of piles, reinforcing steel, existing conduits, conduit supports, electrical wires, junction boxes, traffic signals etc. The Contractor shall submit a detailed procedure for removing the existing structures, to the Engineer for approval, prior to starting this Work.

The Contractor shall be advised that the existing L&N RR Bridge may still be in place up to June 30<sup>th</sup>, 2012.

The Contractor shall remove existing substructure units and associated piles to the elevation as describe below:

Existing South Abutment: Remove existing South Abutment to the bottom of existing footing elevation. All associated piles shall be removed to at least 1 ft below the existing footing elevation.

Construction Requirements: The removal of existing structures shall be performed according to Section 501 of the Standard Specifications. Materials that are required to be salvaged (if any) under the Contract are listed in the Plans. Materials to be salvaged shall be carefully removed and stored near the project site at a location designated by the Engineer.

Prior to commencing this work, the Contractor shall verify the location of existing utilities and adjacent facilities. This work shall be performed in such a manner so as not to cause any settlement or damage to the existing utilities and/or adjacent facilities. Any damage to existing utilities and/or adjacent facilities shall be repaired by the Contractor at his/her own expense and in a manner satisfactory to the Engineer.

All removed materials containing asbestos shall be stockpiled separately from other removed materials. All stockpiled materials containing asbestos shall be hauled to an approved landfill disposal site. These materials shall be wetted down and covered with an approved wetting material while stockpiled and being hauled away in trucks to prevent debris or dust from entering into the atmosphere.

Under no circumstances will the disposed material containing asbestos be permitted for use in recycling. The Contractor shall keep records of removal, stockpiling, trucking and the landfill disposal site used and submit such records to the Engineer.

Existing Plans. See Contract drawings for original Plans for the existing structures involved in this work. The original Plans, however, may not show all modifications that have been made to the structures over the years. The completeness of these Plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy. Information is furnished for the Contractor's convenience and is to be used solely at the Contractor's risk.

Method of Measurement: No separate measurement will be made for removal of existing structures.

Excavation of earth necessary to perform the removal of existing structures will not be measured for payment.

Basis of Payment: This item will be paid for at a contract unit price EACH for REMOVAL OF EXISTING STRUCTURES NO. 1, which payment must constitute full compensation for all labor, materials, tools and equipment required for removal and disposal of existing structures and incidental items, as detailed in the Plans, described herein and as directed by the Engineer.

## **REMOVAL OF EXISTING STRUCTURES NO. 2**

Description: This item shall consist of the removal and satisfactory disposal of existing Retaining Wall "P" located along existing eastbound I-55/I-70 entrance ramp N at South-West quadrant of existing L&N RR Bridge over I-55/I-70. The scope of this item shall include, but not limited to excavation, removal of existing concrete, reinforcing steel, miscellaneous steel embedded or attached thereto including electrical conduits, conduit supports, electrical wires, junction boxes, traffic signals, light poles, fencing, railings etc., as detailed in the Plans, described herein and according to Section 501 of the Standard Specifications, and as directed by the Engineer. The Contractor shall submit a detailed procedure for removing the existing structures, to the Engineer for approval, prior to starting this Work.

The Contractor shall remove existing Retaining Wall "P" to the bottom of existing footing elevation. All associated piles shall be removed to the elevation 381.

Construction Requirements: The removal of existing structures shall be performed according to Section 501 of the Standard Specifications. Materials that are required to be salvaged (if any) under the Contract are listed in the Plans. Materials to be salvaged shall be carefully removed and stored near the project site at a location designated by the Engineer.

Prior to commencing this work, the Contractor shall verify the location of existing utilities and adjacent facilities. This work shall be performed in such a manner so as not to cause any settlement or damage to the existing utilities and/or adjacent facilities. Any damage to existing utilities and/or adjacent facilities shall be repaired by the Contractor at his/her own expense and in a manner satisfactory to the Engineer.

All removed materials containing asbestos shall be stockpiled separately from other removed materials. All stockpiled materials containing asbestos shall be hauled to an approved landfill disposal site. These materials shall be wetted down and covered with an approved wetting material while stockpiled and being hauled away in trucks to prevent debris or dust from entering into the atmosphere.

Under no circumstances will the disposed material containing asbestos be permitted for use in recycling. The Contractor shall keep records of removal, stockpiling, trucking and the landfill disposal site used, and submit such records to the Engineer.

Existing Plans. See Contract drawings for original Plans for the existing structures involved in this work. The original Plans, however, may not show all modifications that have been made to the structures over the years. The completeness of these Plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy. Information is furnished for the Contractor's convenience and is to be used solely at the Contractor's risk.

Method of Measurement: No separate measurement will be made for removal of existing structures.

Excavation of earth necessary to perform the removal of existing structures will not be measured for payment.

Basis of Payment: This item will be paid for at a contract unit price EACH for REMOVAL OF EXISTING STRUCTURES NO. 2, which payment must constitute full compensation for all labor, materials, tools and equipment required for removal and disposal of existing structures and incidental items, as detailed in the Plans, described herein and as directed by the Engineer.

### **REMOVAL OF EXISTING STRUCTURES NO. 3**

Description: This item shall consist of the removal and satisfactory disposal of existing Retaining Wall "R" located along existing eastbound I-55/I-70 entrance ramp N at South-West quadrant of existing L&N RR Bridge over I-55/I-70. The scope of this item shall include, but not limited to excavation, removal of existing concrete, reinforcing steel, miscellaneous steel embedded or attached thereto including electrical conduits, conduit supports, electrical wires, junction boxes, traffic signals, light poles, fencing, railings etc., as detailed in the Plans, described herein and according to Section 501 of the Standard Specifications, and as directed by the Engineer. The Contractor shall submit a detailed procedure for removing the existing structures, to the Engineer for approval, prior to starting this Work.

The Contractor shall remove existing Retaining Wall "R" to the bottom of existing footing elevation. All associated piles shall be removed to at least 1 ft below existing footing elevation.

Construction Requirements: The removal of existing structures shall be performed according to Section 501 of the Standard Specifications. Materials that are required to be salvaged (if any) under the Contract are listed in the Plans. Materials to be salvaged shall be carefully removed and stored near the project site at a location designated by the Engineer.

Prior to commencing this work, the Contractor shall verify the location of existing utilities and adjacent facilities. This work shall be performed in such a manner so as not to cause any settlement or damage to the existing utilities and/or adjacent facilities. Any damage to existing utilities and/or adjacent facilities shall be repaired by the Contractor at his/her own expense and in a manner satisfactory to the Engineer.

All removed materials containing asbestos shall be stockpiled separately from other removed materials. All stockpiled materials containing asbestos shall be hauled to an approved landfill disposal site. These materials shall be wetted down and covered with an approved wetting material while stockpiled and being hauled away in trucks to prevent debris or dust from entering into the atmosphere.

Under no circumstances will the disposed material containing asbestos be permitted for use in recycling. The Contractor shall keep records of removal, stockpiling, trucking and the landfill disposal site used and submit such records to the Engineer.

Existing Plans. See Contract drawings for original Plans for the existing structures involved in this work. The original Plans, however, may not show all modifications that have been made to the structures over the years. The completeness of these Plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy. Information is furnished for the Contractor's convenience and is to be used solely at the Contractor's risk.

Method of Measurement: No separate measurement will be made for removal of existing structures.

Excavation of earth necessary to perform the removal of existing structures will not be measured for payment.

Basis of Payment: This item will be paid for at a contract unit price EACH for REMOVAL OF EXISTING STRUCTURES NO. 3, which payment must constitute full compensation for all labor, materials, tools and equipment required for removal and disposal of existing structures and incidental items, as detailed in the Plans, described herein and as directed by the Engineer.

#### **REMOVAL OF EXISTING STRUCTURES NO. 4**

Description: This item shall consist of the removal and satisfactory disposal of existing Retaining Wall "S1" located along existing eastbound I-55/I-70 entrance ramp N at South-East quadrant of existing L&N RR Bridge over I-55/I-70. The scope of this item shall include, but not limited to excavation, removal of existing concrete, reinforcing steel, miscellaneous steel embedded or attached thereto including electrical conduits, conduit supports, electrical wires, junction boxes, traffic signals, light poles, fencing, railings etc., as detailed in the Plans, described herein and according to Section 501 of the Standard Specifications, and as directed by the Engineer. The Contractor shall submit a detailed procedure for removing the existing structures, to the Engineer for approval, prior to starting this Work.

The Contractor shall remove existing Retaining Wall "S1" to the bottom of existing footing elevation. All associated piles shall be removed to at least 1 ft below existing footing elevation.

Construction Requirements: The removal of existing structures shall be performed according to Section 501 of the Standard Specifications. Materials that are required to be salvaged (if any) under the Contract are listed in the Plans. Materials to be salvaged shall be carefully removed and stored near the project site at a location designated by the Engineer.

Prior to commencing this work, the Contractor shall verify the location of existing utilities and adjacent facilities. This work shall be performed in such a manner so as not to cause any settlement or damage to the existing utilities and/or adjacent facilities. Any damage to existing utilities and/or adjacent facilities shall be repaired by the Contractor at his/her own expense and in a manner satisfactory to the Engineer.



All removed materials containing asbestos shall be stockpiled separately from other removed materials. All stockpiled materials containing asbestos shall be hauled to an approved landfill disposal site. These materials shall be wetted down and covered with an approved wetting material while stockpiled and being hauled away in trucks to prevent debris or dust from entering into the atmosphere.

Under no circumstances will the disposed material containing asbestos be permitted for use in recycling. The Contractor shall keep records of removal, stockpiling, trucking and the landfill disposal site used, and submit such records to the Engineer.

Existing Plans. See Contract drawings for original Plans for the existing structures involved in this work. The original Plans, however, may not show all modifications that have been made to the structures over the years. The completeness of these Plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy. Information is furnished for the Contractor's convenience and is to be used solely at the Contractor's risk.

Method of Measurement: No separate measurement will be made for removal of existing structures.

Excavation of earth necessary to perform the removal of existing structures will not be measured for payment.

Basis of Payment: This item will be paid for at a contract unit price EACH for REMOVAL OF EXISTING STRUCTURES NO. 4, which payment must constitute full compensation for all labor, materials, tools and equipment required for removal and disposal of existing structures and incidental items, as detailed in the Plans, described herein and as directed by the Engineer.

## **REMOVAL OF EXISTING STRUCTURES NO. 5**

Description: This item shall consist of the removal and satisfactory disposal of existing Retaining Wall "S2" located along existing eastbound I-55/I-70 entrance ramp N at South-East quadrant of existing L&N RR Bridge over I-55/I-70. The scope of this item shall include, but not limited to excavation, removal of existing concrete, reinforcing steel, miscellaneous steel embedded or attached thereto including electrical conduits, conduit supports, electrical wires, junction boxes, traffic signals, light poles, fencing, railings etc., as detailed in the Plans, described herein and according to Section 501 of the Standard Specifications, and as directed by the Engineer. The Contractor shall submit a detailed procedure for removing the existing structures, to the Engineer for approval, prior to starting this Work.

The Contractor shall remove existing Retaining Wall "S2" to the bottom of existing footing elevation. Piles between Sta. 77+10.50 to 77+60.50 shall be removed to at least 1 ft below existing footing elevation. All remaining piles shall be removed to the elevation 397.

Construction Requirements: The removal of existing structures shall be performed according to Section 501 of the Standard Specifications. Materials that are required to be salvaged (if any) under the Contract are listed in the Plans. Materials to be salvaged shall be carefully removed and stored near the project site at a location designated by the Engineer.

Prior to commencing this work, the Contractor shall verify the location of existing utilities and adjacent facilities. This work shall be performed in such a manner so as not to cause any settlement or damage to the existing utilities and/or adjacent facilities. Any damage to existing utilities and/or adjacent facilities shall be repaired by the Contractor at his/her own expense and in a manner satisfactory to the Engineer.

All removed materials containing asbestos shall be stockpiled separately from other removed materials. All stockpiled materials containing asbestos shall be hauled to an approved landfill disposal site. These materials shall be wetted down and covered with an approved wetting material while stockpiled and being hauled away in trucks to prevent debris or dust from entering into the atmosphere.

Under no circumstances will the disposed material containing asbestos be permitted for use in recycling. The Contractor shall keep records of removal, stockpiling, trucking and the landfill disposal site used and submit such records to the Engineer.

Existing Plans. See Contract drawings for original Plans for the existing structures involved in this work. The original Plans, however, may not show all modifications that have been made to the structures over the years. The completeness of these Plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy. Information is furnished for the Contractor's convenience and is to be used solely at the Contractor's risk.

Method of Measurement: No separate measurement will be made for removal of existing structures.

Excavation of earth necessary to perform the removal of existing structures will not be measured for payment.

Basis of Payment: This item will be paid for at a contract unit price EACH for REMOVAL OF EXISTING STRUCTURES NO. 5, which payment must constitute full compensation for all labor, materials, tools and equipment required for removal and disposal of existing structures and incidental items, as detailed in the Plans, described herein and as directed by the Engineer.

### **DRILLED SHAFT CONCRETE FOUNDATIONS (SPECIAL)**

Description: This work shall consist of construction the overhead sign structure foundation at WB Baugh Avenue Station 14+03.00. The foundation work shall be according to Section 516 except as herein modified.

The existing 36" storm sewer at this location shall be located prior to starting work and, if necessary, protected and secured prior to placing the foundation. If required, the Contractor shall adjust the plan location of the foundation to avoid the 36" storm sewer. Adjustments to the plan foundation location shall be approved by the Engineer. Any abandoned holes shall be backfilled to the satisfaction of the Engineer.

If moving the existing Right-of-way fence at this location is required in order to do this work, the cost of removing and re-erecting the fence shall be included in the work.

Concrete shall be cured before the overhead sign structures are installed.

Method of Measurement: This item will be measured for payment according to Article 503.21.

Excavation in Rock will be measured for payment according to Article 502.12.

Basis of Payment: This work will be paid for at the contract unit price per cubic yard for DRILLED SHAFT CONCRETE FOUNDATIONS (SPECIAL).

Excavation in Rock will be paid for according to Article 502.13.

Abandoned foundation excavations and backfill will be paid for according to Article 109.04.

## **ELECTRICAL EQUIPMENT REMOVAL AND SALVAGE**

Description: This item shall involve removal and disposal and/or salvage of the existing electrical equipment for overhead sign lighting at the existing sign truss locations as shown in the plan sheets where the truss is to remain in place and the sign panels are replaced or upgraded.

Upon removal of the equipment the Contractor will be responsible for all costs associated with the disposal or salvage of the material removed as part of this item.

Method of Measurement: This work will be measured for payment in units of each and will include all equipment, hardware, wiring, conduit and attachments or other hardware at each sign truss location.

Basis of Payment: This work shall be paid for at the contract unit price per each for ELECTRICAL EQUIPMENT REMOVAL AND SALVAGE.

## **OVERHEAD SIGN STRUCTURES MEDIAN SUPPORT FOUNDATIONS**

Description: OVERHEAD SIGN STRUCTURE MEDIAN SUPPORT FOUNDATIONS will be constructed as shown on the MEDIAN SUPPORT FOUNDATION, SPECIAL MEDIAN SUPPORT FOUNDATION, or SPECIAL MEDIAN SUPPORT CANTILEVER FOUNDATION detail sheets.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineers written permission.

Concrete shall be placed monolithically, without construction joints. Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Sealer application will be required on the concrete surfaces above the lowest elevation 6" below finished ground line.

Basis of Payment: The quantity of concrete for median support foundation is incidental and the costs of this work shall be included in DRILLED SHAFT CONCRETE FOUNDATIONS.

## **BRIDGE MOUNTED SIGN SUPPORT**

Description: This item shall involve building a bridge mounted sign support as shown in the BRIDGE MOUNTED SIGN SUPPORT plan detail and installation at the location shown in the plan or as otherwise specified by the Engineer.

Prior to installation the Contractor shall confirm the design as shown is suitable at each location specified and if changes are required shall produce measurements and a shop drawing for review and approval by the Engineer prior to altering the design and subsequent installation.

This item shall also include a 4" diameter galvanized steel pipe sign post to be included to the length needed to allow the sign to be mounted with a bottom height 6' above the pavement elevation. This post shall be considered incidental to the cost for the BRIDGE MOUNTED SIGN SUPPORT.

Method of Measurement: This work will be measured for payment in units of each. Each unit shall include the BRIDGE MOUNTED SIGN SUPPORT as specified as well as any additional material or hardware required to secure the unit to the structure.

Basis of Payment: This work shall be paid for at the contract unit price per each for BRIDGE MOUNTED SIGN SUPPORT.

### **CONCRETE FOUNDATION, GROUND MOUNT**

Description: This work shall consist of constructing a foundation for structural steel sign supports.

Materials: Materials used shall conform to Section 734 of the Standard Specifications.

Installation: Concrete foundations of the type and size specified in the Plans, shall be constructed according to the applicable requirements of Section 503 and the following.

The finished segments of these foundations shall be finished according to Article 503.15(a) and formed down to a depth of at least 1 ft below the grade line, and the concrete shall be finished level at the grade line.

Concrete shall be cured before sign supports and sign panels are installed.

Method of Measurement: This work will be measured for payment according to Article 502.12.

Excavation in rock will be measured for payment according to Article 502.12.

Basis of Payment: This work shall be paid for at the contract unit price per cubic yard for CONCRETE FOUNDATION, GROUND MOUNT.

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

Obstruction mitigation or abandon foundation excavations and backfill will be paid for according to Article 109.04.

### **TYPE III TEMPORARY TAPE FOR WET CONDITIONS**

Description: Type III Temporary Tape shall be of the color specified and meet the requirements of Article 1095.06 of the Standard Specifications. Initial minimum reflectance values under dry and wet conditions shall be as specified in Article 1095.06. The marking tape shall maintain its reflective properties when submerged in water. The wet reflective properties shall be verified by a visual inspection method performed by the Department. The surface of the material shall provide an average skid resistance of 50 BPN when tested according to ASTM E 303.

Prior to application a surface preparation adhesive shall be applied to a clean, dry road surface. The pavement marking tape shall have a pre-coated pressure sensitive adhesive and shall require no activation procedures.

Method of Measurement and Basis of Payment: This work will be paid for at the contract unit price per foot for WET REFLECTIVE TEMPORARY TAPE TYPE III of the line width specified.

### **DELINEATOR REMOVAL**

Description: This item of work shall include the existing delineator posts and reflectors at the locations shown on the Plans or as directed by the Engineer. Upon removal of the reflectors and posts, the Contractor shall be responsible for their disposal.

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

Basis of Payment: The work of removing the delineator posts and reflectors will be paid for at the contract unit price per each for DELINEATOR REMOVAL. No additional compensation will be allowed for two single reflectors placed on one post.

### **GROOVING FOR RECESSED PAVEMENT MARKING**

Description: This work shall consist of the grooving of an existing pavement surface in preparation for the application recessed pavement marking lines.

Equipment: The grooving equipment shall be equipped with a free-floating cutting or grinding head. The grinding or cutting head shall be equipped with diamond saw blades, steel star cutters and/or carbide tipped star cutters. A grinder head configuration may be used on hot-mix asphalt (HMA) surfaces to achieve a rough surface texture in the bottom of the groove. Diamond saw blades shall be used on the cutting head when a smooth surface in the bottom of the groove is required by the Engineer, or Contract specifications, or pavement marking material manufacturer's recommendations.

### **CONSTRUCTION REQUIREMENTS**

Pavement Grooving Methods: The grooves for recessed pavement markings shall be constructed using the following methods.

- a) Wet Saw Blade Operation. When water is required or used to cool the saw blades, such as during a continuous edge line grooving operation, the groove shall be flushed with high pressure water immediately following the cut to avoid build up and hardening of slurry in the groove. The pavement surface shall be allowed to dry for 24 hours prior to the application of the pavement markings following a wet saw blade operation. Short

term pavement markings shall be installed and will not be paid for as a separate item, but will be considered incidental to Wet Saw Blade Operation.

- b) Dry Saw Blade Operation. If the grooving is done with dry saw blades, the groove shall be flushed with high-pressure air to remove debris and dust generated during the cutting operation.

Pavement Grooving: Grooves shall be cut into the pavement prior to the application of the pavement marking. The grooves shall be cut such that the width is 1 in. (25 mm) wider than that of the line to be placed. Grooves for letters and symbols shall be cut in a shape so that the entire marking will fit. The position of the edge of the grooves shall be a minimum of 2 in. (50 mm) from the edge of concrete joints or HMA paving seams along edge or centerlines. The depth of the groove shall not be less than the manufacturer's recommendations for the marking material specified, but shall be installed to a minimum depth of 100 mils (2.54 mm) +/- 10 mils for pavement marking tapes and 40 mils (1.02 mm) +/- 10 mils for liquid markings.

On new HMA surfaces the Engineer shall determine if the new HMA has achieved the necessary strength and hardness to support grooving prior to the start of a grooving operation. Some HMA mixes may require 14 or more days to achieve adequate hardness to support a grooving operation. On existing HMA surfaces some existing HMA pavements may not be strong enough to support a grooving operation. For existing HMA pavements the Engineer shall determine if the existing HMA has the necessary strength and hardness to support grooving prior to the start of a grooving operation.

Cleaning: Immediately prior to the application of the pavement markings the groove shall be cleaned with high-pressure air blast.

Method of Measurement: This work will be measured for payment in place, in linear feet (meter) of the pavement marking lines applied and accepted, for the groove width specified.

Grooving for letters, numbers and symbols will be measured in square feet (square meters) as specified in the Plans.

Basis of Payment: This work will be paid for at the contract unit price per foot (meter) for GROOVING FOR RECESSED PAVEMENT MARKING of the groove width specified, and per square foot (square meter) for GROOVING FOR RECESSED PAVEMENT MARKING, LETTERS, NUMBERS AND SYMBOLS, of the type specified.

## **ARCHITECTURAL FORM LINER FINISH**

Description: This item shall include, but not limited to designing, developing, furnishing and installing form liners and forming concrete using single and/or multiple use form liners to produce Bush Hammer surface texture. Provide form liners to produce a Bush Hammer surface texture with a maximum relief range of  $\frac{3}{16}$ " to  $\frac{5}{16}$ " on front faces of MSE Retaining Walls.

Provide architectural form liners from the listed manufactures or an approved equal:

1. Greenstreak, Inc.  
3400 Tree Court Industrial Boulevard  
St. Louis, Missouri 63122  
(800) 325-9504  
www.greenstreak.com

2. Scott System, Inc.  
10777 East 45th Ave.  
Denver, CO 80239  
(303) 373-2500  
www.scottssystem.com
3. Symons  
2400 Arthur Avenue  
Elk Grove, IL 60007  
(800) 937-2700  
www.symons.com

This work shall be performed in accordance with applicable portions of Section 503 of IDOT Standard Specifications for Road and Bridge Construction.

Submittals: Contractor shall submit qualification data demonstrating capabilities and experience; include list of past project with contact information. Shop drawings shall be submitted depicting the form liner layout, coordinated with MSE wall panel supplier and Contractor.

Contractor shall provide a full scale mock-up containing Bush Hammer surface texture for approval. The mock-up shall be a minimum 5 ft x 5 ft x 6 inches thick.

Material: Provide Single-Use Form Liners of the Rigid polymer (HIPS) or polystyrene (SPS) plastic type, Multiple-Use Form Liners of the Rigid Polymer (ABS) or Elastomeric Urethane type. Form liners shall be of high quality and capable of withstanding anticipated concrete pour pressure without causing leakage or physical defect. Form liners shall attach easily to forms and be removable without causing concrete surface damage or weakness in the substrate. Form liner release agent material shall be as recommended by the form liner manufacturer being used. Form liner release agents shall be non-staining, non-residual, non-reactive and shall not contribute to the degradation of the form liner material.

Method of Measurement and Basis of Payment: This work will not be measured for payment but shall be included in the pay item for "Mechanically Stabilized Earth Retaining Wall".

### **RAILROAD PROTECTIVE LIABILITY INSURANCE (5 AND 10) (BDE)**

Description: Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

Route: FAI Route 64/ FAP 998

Job No. C-98-002-12

NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
Metro-Link 707 North First Street St. Louis, MO	300 per day @ 45 mph	No freight trains
DOT/AAR No.: 917326C RR Division: N/A	RR Mile Post: 18.45 RR Sub-Division: St. Clair	

For Freight/Passenger Information Contact: Gerald Wittenauer  
 Phone: (314) 982-1400 ext 1671

For Insurance Information Contact: Gerald Wittenauer  
 Phone: (314) 982-1400 ext 1671

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

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

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment: Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

**ON-THE-JOB TRAINING SPECIAL PROVISIONS (NMRB)**

This On-the-Job Training Special Provision (OJT special provision) supplements Recurring Special Provisions, Check Sheet #3: SPECIAL PROVISION FOR EEO and in the implementation of CFR 230, Subpart A.

It is the policy of the IDOT to require full utilization of all available training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of the OJT special provision is to recruit entry-level individuals, when feasible, and provide them with meaningful training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a federally assisted Contract, shall determine which federal-aid construction Contract shall include "Training Special Provisions." Under the Training Special Provisions, the Contractor shall make every reasonable effort to enroll minority, disadvantaged persons and women trainees to the extent such persons are available within a reasonable



recruitment area. This training provision is not intended, and shall not be used to discriminate against any applicant for training.

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide training opportunities aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this Contract is 5. In the event the Contractor subcontracts a portion of the Contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

Prior to commencing construction, the Contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him on the Contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. Accordingly, form SBE 1146 shall be submitted and approved prior to commencing work. It is the intention of these provisions that training is to be provided in the construction crafts rather

then clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office Engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed \$3.50 per hour of training given an employee on this Contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the Contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the Contract for a significant period. Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the Contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The Contractor shall provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

#### Reports:

The Contractor shall provide for the maintenance of records and furnish weekly reports documenting the Contractor's performance under this provision on form SBE 1014. All trainee notifications must be submitted prior to the start of the project. If a trainee has been previously approved by IDOT, the Contractor must still notify IDOT of the name of the individual(s) and proposed craft the trainees will be trained in, as well as, indicate which project the trainees will be working on. The trainee notifications or listing of the proposed trainees must be submitted

via fax, mail or electronically to the District EEO Office. If the Contractor fails to submit the trainee notification or list of proposed trainees prior to the onset of the project, the Contractor will be subject to the sanctions as outlined in this OJT special provision. Weekly reports shall include at least the following information:

Contractor's name and address

Period, which the report covers

Job Number, Description, and Federal Aid number

Information for each employee being trained on the project, including:

- Trainee Name and Individual Identification Number
- Ethnic Group
- Work Classification
- Status
- Hours and Days Worked
- Hours this Week
- Hours to Date

IDOT monitors contracts with training special provisions through onsite visits, investigations, weekly training and construction reports. These reports are generated by the Contractor and are to be disseminated to the Resident Engineer Office. If there are problems, the District EEO Office will contact the Contractor to address the deficiencies.

If there are deficiencies, the Contractor must provide a corrective action plan addressing the deficiencies.

No payment will be made under the bid item "Training" if the Contractor fails to provide the required training.

Payment will not be made if the Contractor fails to submit trainee reports in a timely manner.

Method of Measurement: The unit of measurement is in hours.

Basis of Payment: This work will be paid for at the contract unit price of \$3.50 per hour for TRAINEES (SPECIAL). The estimated total number of hours, unit price, and total price have been included in the schedule of prices.

Liquidated Damages:

Progress payments shall be withheld for failing to comply with all OJT special provision requirements unless IDOT accepts evidence of the Contractor's good faith efforts.

If the training hours have not been obtained and evidence of good faith efforts have not been displayed upon project completion, the Contractor will be assessed liquidated damages in the amount of \$7.00 per hour for those hours not realized. If the Department approves the Contractor's good faith efforts, these liquidated damages will not be assessed.

In the event the Contract will exceed the trainee goal on the project, the Contractor must submit a request to District EEO Office to obtain an extension of hours. The maximum amount of hours beyond those enumerated in the Contract cannot exceed 500 hours per 1,000. For instance, if the goal was 1,000, the Contractor can be granted an extra 500 hours subject to the advance approval of the District EEO Office, and concurrence from the FHWA.

Trainee reports must be submitted in accordance with the Instruction to Contractors for Completing Form SBE 1014. Failure to submit timely reports will result in trainee hours not credited. In the cases of voluntary or involuntary trainee termination or when the trainee completes the hours specified in the program, the Contractor must complete the final trainee report within five working days. The Contractor's failure to submit the proper reports in a timely manner may result in the loss of reimbursement for the training hours for that month

Failure to satisfactorily comply with the OJT special provision requirements will be reflected in the Contractor's performance evaluation.

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

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

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

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at \$10.00 per hour for training given a certified graduate trainee on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under the Illinois Prevailing Wage Act and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a certified graduate trainee will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG trainee employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the trainee's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the trainee under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for the trainee.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting his/her performance under this Special Provision.

**METHOD OF MEASUREMENT:** The unit of measurement is in hours.

**BASIS OF PAYMENT:** This work will be paid at the contract unit price of \$10.00 per hour for TPG TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeymen in the type of trade or job classification involved. The initial number of certified graduate trainees (TPG) for which the incentive is available under this contract is 5. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPG trainees. In the event the Contractor subcontracts a portion of the contract work, he/she shall determine how many, if any, of the certified graduate (TPG) trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the trainees are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

In an effort to assist the Contractor to meet the obligations for participation in this TPG trainee incentive program under this Special Provision, the Department has contracted with Southwestern Illinois Community College to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be certified graduates TPG participants. A designated IDOT staff member will be responsible for providing assistance and referrals to the Contractor for the applicable TPG graduates. For this contract, IDOT staff person Pam Simon is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting Ms. Simon and interviewing each candidate she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the certified TPG graduates to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as an on-the-job trainee TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPG graduates of IDOT pre-apprentice training programs is intended to move said graduates toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll graduate trainees by recruitment through the IDOT Illinois Community College Program to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that he/she has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate TPG Special Provision \$10.00 an hour incentive.

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

### **COMPLETION DATE (BDE)**

The Contractor shall complete all work for this Contract on or before November 1, 2013.

### **FURNISHING RIGHT-OF-WAY**

Add the following to the end of the first paragraph of Article 107.32 of the Standard Specifications:

“The area bordered by Interstate 64, St. Clair Avenue, 10<sup>th</sup> Street and 18<sup>th</sup> Street will not be available to the Contractor for use as material, equipment, or vehicle storage throughout the duration of the Contract.”

### **STONE MATRIX ASPHALT (D-8)**

Effective: January 1, 2012

Description. This work shall consist of constructing polymer modified 1/2 in. (12.5 mm) stone matrix asphalt (SMA) surface course and binder course. Work shall be according to Sections 406, 407 and 1030 of the Standard Specifications, except as modified herein.

#### Materials.

Add the following to the end of the first paragraph of Article 1003.03(a) of the Standard Specifications:

“Fine aggregate for SMA shall consist of stone sand, slag sand, or steel slag sand.”

Add the following to the end of the first paragraph of Article 1003.03(c) of the Standard Specifications.

“The fine aggregate gradation for SMA shall be FA/FM 20.”

Add the following to the end of Article 1004.03(a) of the Standard Specifications:

- “(1) For SMA surface course, the coarse aggregate shall be crushed aggregate meeting the friction requirement specified.
- “(2) For SMA binder course, the coarse aggregate shall be crushed aggregate. Steel slag will not be permitted in the binder course.”

Revise Article 1004.03(b) of the Standard Specifications to read:

“(b) Quality. For surface courses and binder courses when used as surface course, the coarse aggregate shall be Class B quality or better. For SMA surface and binder courses the coarse aggregate, excluding limestone, shall be Class B Quality or better. If limestone is to be blended, it shall be Class A quality. For Class A (seal or cover coat), other binder courses, and surface course IL-9.5L (Low ESAL), the coarse aggregate shall be Class C quality or better. For All Other courses, the coarse aggregate shall be Class D quality or better.”

Revise Article 1004.03(c) of the Standard Specifications to read:

“(c) Gradation. The coarse aggregate gradations shall be as listed in the following table.

Use	Size / Application	Gradation No.
Class A-1, 2, & 3	3/8 in. (10 mm) Seal	CA 16
Class A-1	1/2 in. (13 mm) Seal	CA 15
Class A-2 & 3	Cover	CA 14
HMA High ESAL	IL-25.0 IL-19.0 IL-12.5 IL-9.5	CA 7 <sup>1/</sup> or CA 8 <sup>1/</sup> CA 11 <sup>1/</sup> CA 16 and/or CA 13 CA 16
HMA Low ESAL	IL-19.0L IL-9.5L	CA 11 <sup>1/</sup> CA 16
HMA All Other	Stabilized Subbase or Shoulders	CA 6 <sup>2/</sup> , CA 10, or CA 12
SMA 3/	1/2 in. (12.5 mm) Binder & Surface	CA 13, CA 14, or CA 16

- 1/ CA 16 or CA 13 may be blended with the gradations listed.
- 2/ CA 6 will not be permitted in the top lift of shoulders.
- 3/ No individual coarse aggregate gradation is specified. The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.”

Add the following to Article 1004.03 of the Standard Specifications:

“(d) Flat and Elongated Particles. For SMA the coarse aggregate shall meet the criteria for Flat and Elongated Particles listed in Illinois Modified AASHTO M 325.  
 (e) Absorption. For SMA the coarse aggregate shall also have water absorption ≤ 2.5 percent.”

Add the following to Article 1011.01 of the Standard Specifications:

“(c) Additional requirements for SMA. Mineral filler for use in SMA shall be free from organic impurities and have a Plasticity Index ≤ 4.”

Revise Article 1030.02(g) of the Standard Specifications to read:

“(g) Performance Graded Asphalt Binder (Notes 3).....1032”

Add the following to Article 1030.02 of the Standard Specifications:

“ (h) Fibers (Note 4)”

Add the following notes to Article 1030.02 of the Standard Specifications:

Note 3. The asphalt cement shall be an SBS PG 76-22 .

Note 4. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements.”

Mix Design.

Add the following below the referenced AASHTO standards in Article 1030.04 of the Standard Specifications:

“The SMA mixture shall be designed according to the following additional Illinois Modified AASHTO references listed below, except as modified herein.

AASHTO M 325 Standard Specification for Designing Stone Matrix Asphalt (SMA)

AASHTO R 46 Standard Practice for Designing Stone Matrix Asphalt (SMA)

AASHTO T 305 Determination of Draindown Characteristics in Uncompacted Mixtures”

Revise Article 1030.04(a)(1) of the Standard Specifications to read:

“ (1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.”



"High ESAL, MIXTURE COMPOSITION (% PASSING) <sup>1/</sup>										
Sieve Size	IL - 25.0 mm		IL - 19.0 mm		IL - 12.5 mm		IL - 9.50 mm		SMA	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in (37.5mm)		100								
1 in (25mm)	90	100		100						
3/4 in (19.0mm)		90	82	100		100				100
1/2 in (12.5mm)	45	75	50	85	90	100		100	85	99
3/8 in (9.5mm)						89	90	100	50	85
#4 (4.75mm)	24	42 <sup>2/</sup>	24	50 <sup>2/</sup>	28	65	28	65	20	40
#8 (2.36mm)	16	31	20	36	28	48 <sup>3/</sup>	28	48 <sup>3/</sup>	16	24 <sup>5/</sup>
#16 (1.18mm)	10	22	10	25	10	32	10	32		
#50 (300µm)	4	12	4	12	4	15	4	15		
#100 (150µm)	3	9	3	9	3	10	3	10		
#200 (75µm)	3.0	6.0	3.0	6.0	4.0	6.0	4.0	6.0	8.0	11.0 <sup>6/</sup>
Ratio Dust/Asph alt Binder		1.0		1.0		1.0		1.0		

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 40 percent passing the #4 (4.75 mm) sieve for binder courses with Ndesign ≥ 90.
- 3/ The mixture composition shall not exceed 40 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign ≥ 90.
- 4/ The maximum percent passing the 20 µm sieve shall be ≤3 percent.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the #8 (2.36 mm) sieve shall not be adjusted above 24 percent.
- 6/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler."

Add the following to Article 1030.04(b) of the Standard Specifications:

"(5) SMA Mixtures. The mix design shall meet the SMA Mixture Specifications for SGC listed in AASHTO M 325 except as listed below:

ESAL's (million)	Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.
> 10	80 <sup>1/2/</sup>	4.0	17.0

- 1/ Coarse aggregate shall be crushed gravel, diabase, granite, quartzite, sandstone, or steel slag.”
- 2/ A maximum of 25% coarse aggregate limestone may be blended by volume. Limestone shall be Class A quality as per Article 1004.01(b) of the Standard Specifications For Road and Bridge Construction.

### Plant Requirements.

Add the following to Article 1102.01(a) of the Standard Specifications:

“ (13) Requirements for SMA.

- a. Mineral Filler. When producing SMA, the mineral filler system shall accurately proportion the large amounts of mineral filler required for the mixture. Alteration or adjustment of the current system may be required. Mineral filler shall not be stored in the same silo as collected dust.

Only dust collected during the production of SMA may be returned to the SMA mixture. Any additional minus No. 200 (0.075 mm) material needed to produce the SMA shall be mineral filler meeting the requirements stated herein. Mineral filler shall not be collected dust.

- b. Stabilizing Additive. Adequate dry storage shall be provided for the stabilizing fiber additive. A separate feed system shall be provided to proportion the fiber into the mixture uniformly and in desired quantities. The feed system shall be interlocked with the aggregate feed or weigh system to maintain the correct proportions for all rates of production and batch sizes. The proportion of fibers shall be controlled at all times within  $\pm$  ten percent of the amount of fibers required. The fiber system shall provide in-process monitoring consisting of either a digital display of output or a printout of the feedrate, in pounds per minute. Flow indicators or sensing devices for the fiber system shall be provided and interlocked with plant controls so mix production shall be interrupted if fiber introduction fails, or if the output rate is not within the specified tolerances.

1. Batch Plant. Stabilizing additive shall be pneumatically added through a separate inlet directly into the weigh hopper above the pugmill. The addition of fiber shall be timed to occur during the hot aggregate charging of the hopper. Adequate mixing time will be required to ensure proper blending of the aggregate and fiber additive. Both the wet and dry mixing times shall each be increased a minimum of five seconds beyond the standard mixing time. The actual mixing time increase shall be determined by the Engineer based on individual plant characteristics. If concentrations of mastic (fiber, AC and fines) are visible behind the paver the batch size shall be reduced in ten percent increments until the problem is alleviated.

2. Drum Mix Plant. Stabilizing additive shall be introduced using specialized equipment to mix the asphalt cement with loose fiber at the time of introduction into the drum mixer. This equipment shall be approved by the Engineer. Care shall be taken to ensure the loose fiber does not become entrained in the exhaust system of the plant. A manufacturer's representative for the fiber and fiber equipment shall be present for the fiber system calibration and mixture startup and shall be available at all times during production and lay-down of the mix.
- c. Hot-mix Storage. SMA mixtures containing steel slag coarse aggregate shall have a combined silo storage time plus haul time not less than 1 1/2 hours.
  - d. Production Rate. The Bureau of Materials and Physical Research will establish the maximum production rate for SMA based items such as the plant's ability to (1) add mineral filler consistently within 0.3 percent of the target by total weight of mix and (2) thoroughly disperse the stabilizing additive."

QC/QA.

Add the following to the table in Article 1030.05(d)(2)(a) of the Standard Specifications:

Parameter	Frequency of Tests	Test Method
	SMA Mixture	
Draindown	1 per day of production	AASHTO T 305

Revise Article 1030.05(d)(4) of the Standard Specifications to read:

- " (4) Control Limits. Target values shall be determined by applying adjustment factors to the AJMF where applicable. The target values shall be plotted on the control charts within the following control limits.

CONTROL LIMITS					
Parameter	High ESAL Low ESAL		SMA		All Other
	Individual Test	Moving Avg. of 4	Individual Test	Moving Avg. of 4	Individual Test
% Passing: <sup>1/</sup>					
1/2 in. (12.5 mm)	± 6 %	± 4 %	± 6 %	± 4 %	± 15 %
3/8 in. (9.5 mm)			± 4%	± 3%	
No. 4 (4.75 mm)	± 5 %	± 4 %	± 5 %	± 4 %	± 10 %
No. 8 (2.36 mm)	± 5 %	± 3 %	± 3%	± 2%	
No. 30 (600 µm)	± 4 %	± 2.5 %	± 4 %	± 2.5 %	
Total Dust Content No. 200 (75 µm)	± 1.5 %	± 1.0 %			± 2.5 %
Asphalt Binder Content	± 0.3 %	± 0.2 %	± 0.2%	± 0.1%	± 0.5 %
Voids	± 1.2 %	± 1.0 %	± 1.2%	± 1.0%	± 1.2 %
Draindown			Max 0.3 %		

1/ Based on washed ignition oven

DENSITY CONTROL LIMITS		
Mixture Composition	Parameter	Individual Test
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0 %
IL-9.5, IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4 %
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 – 96.0 %
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4 %
SMA	Ndesign = 80	93.5 – 97.0 %
All Other	Ndesign = 30	93.0 <sup>1/</sup> - 97.4 %

1/ 92.0 percent when placed as first lift on an unimproved subgrade.”

Replace the first and second paragraphs of Article 1030.06(a) of the Standard Specifications with the following:

“ (a) High ESAL, Low ESAL and SMA Mixture.

During the mixture start-up for High or Low ESAL mixture the Contractor shall follow the QC/QA document “Hot-Mix Asphalt QC/QA Start-Up Procedures”. At the start of High or Low ESAL mixture production, QC/QA mixture start-up will be required for the following situations: at the beginning of production of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix.

Revise the table in Article 1030.06(a) of the Standard Specifications to read:

“Parameter	Adjustment
1/2 in. (12.5 mm)	± 5.0 %
No. 4 (4.75 mm)	± 4.0 %
No. 8 (2.36 mm)	± 3.0 %
No. 30 (600 µm)	1/
No. 200 (75 µm)	1/
Asphalt Binder Content	± 0.3 % <sup>2/</sup>

1/ In no case shall the target for the amount passing be greater than the JMF.

2/ For SMA, the asphalt binder content shall not be adjusted by more than 0.2 percent.”

Transportation.

Add the following after the second paragraph of Article 1030.08 of the Standard Specifications:

“(d) The mixture being placed is SMA.”

**CONSTRUCTION REQUIREMENTS**

Add the following paragraph after the first paragraph of Article 406.06(b) of the Standard Specifications:

“Additional temperature requirements for SMA. SMA mixture shall be placed on a dry surface when the temperature of the roadbed is above 50 °F (10 °C). The mixture shall be placed at a minimum mixture temperature of 300 °F (149 °C) when using SBS PG76-22. The mixture temperature shall be measured immediately behind the paver screed.”

Revise the last sentence of the third paragraph of Article 406.06(e) of the Standard Specifications to read:

“In no case shall the speed of the paver exceed 50 ft (15 m) per minutes for High and Low ESAL mixes or 30 ft (9 m) per minute for SMA.”

Revise Table 1 in Article 406.07(a) of the Standard Specifications to read:

“TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA				
	Breakdown Roller (one of the following)	Intermediate Roller	Final Roller (one or more of the following)	Density Requirement
Level Binder: (When the density requirements of Article 406.05(c) do not apply.)	P <sup>3/</sup>	- -	V <sub>S</sub> , P <sup>3/</sup> , T <sub>B</sub> , T <sub>F</sub> , 3W	To the satisfaction of the Engineer.
Binder and Surface <sup>1/</sup>  Level Binder <sup>1/</sup> : (When the density requirements of Article 406.05(c) apply.)	V <sub>D</sub> , P <sup>3/</sup> , T <sub>B</sub> , 3W	P <sup>3/</sup>	V <sub>S</sub> , T <sub>B</sub> , T <sub>F</sub>	As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7).
SMA <sup>4/</sup>	T <sub>B</sub> <sup>5/</sup>	- -	T <sub>F</sub>	
Bridge Decks <sup>2/</sup>	T <sub>B</sub>	- -	T <sub>F</sub>	As specified in Articles: 582.05 and 582.06.

- 1/ If the average delivery at the job site is 85 ton/hr (75 metric ton/hr) or less, any roller combination may be used provided it includes a steel wheeled roller and the required density and smoothness is obtained.
- 2/ One T<sub>B</sub> may be used for both breakdown and final rolling on bridge decks 300 ft (90 m) or less in length, except when the air temperature is less than 60 °F (15 °C).
- 3/ A vibratory roller (V<sub>D</sub>) may be used in lieu of the pneumatic-tired roller on mixtures containing polymer modified asphalt binder.
- 4/ Pneumatic-tired and vibratory rollers will not be allowed. Rollers shall be operated at a uniform speed not to exceed 3 mph (5 km/h) with the drive roll nearest the paver.
- 5/ The Contractor shall provide a minimum of two steel-wheeled tandem rollers for breakdown (T<sub>B</sub>). The breakdown rollers shall maintain an effective rolling distance of not more than 150 ft (45 m) behind the paver.”

Prepaving Conference. A prepaving conference shall be held a minimum of one week prior to the start of mix production. Those in attendance shall include the QC Manager, Construction Supervising Field Engineer, Resident Engineer, Mixture Control Engineer, BMPR representative, fiber supplier representative, asphalt binder supplier representative, as well as plant, paver and roller operators.

Basis of Payment. This work will be measured and paid for according to Article 406.13 and 406.14 of the Standard Specifications at the contract unit price per metric ton (ton) for POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the N design specified; and POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the N design specified.

### **PORTLAND CEMENT CONCRETE PAVEMENT 12 1/2" (JOINTED)**

Description. Proposed Ramp 55N64E located between Stations 61+96.34 and 70+50.14 shall be constructed of portland cement concrete pavement with additional thickness that shall be removed by grinding..

### **CONSTRUCTION REQUIREMENTS**

This pavement shall be constructed according to Section 420, except as follows.

This section of pavement is to be placed nominally 1/4 in. thicker than the final profile grades and thickness shown on the plans to allow for diamond grinding and grooving of the surface according to the Special Provision for Grinding, Grooving, and Surface Testing. The final pavement thickness, after diamond grinding and grooving, shall be the nominal 12 1/2 in. and within the thickness tolerance required in Article 420.15. The final pavement profile, after diamond grinding and grooving, shall be as shown in the plans.

The location of the tie bars and dowel bars shall be according to highway standard 420001, consistent with the final 12 1/2 in. slab thickness, and shall meet the tolerance requirements of Article 420.08.

The sealing of joints shall be according to Article 420.12, but shall be delayed until after the diamond grinding, grooving, and surface testing is completed.

Protective coat shall be applied according to Article 420.18, except the entire surface shall be treated regardless of the date of construction and the age of the pavement. The protective coat shall be applied after grinding, grooving, and surface testing, but prior to opening to traffic.

Surface testing shall be performed according to the Special Provision for Diamond Grinding, Grooving, and Surface Testing.

This work shall be paid for at the contract unit price per square yard for PORTLAND CEMENT CONCRETE PAVEMENT 12 1/2" (JOINTED). No additional compensation will be allowed for the additional pavement thickness.

Diamond grinding and grooving will be paid for separately.

## **DIAMOND GRINDING, GROOVING, AND SURFACE TESTING**

Description. This work shall consist of diamond grinding, grooving, and surface testing a section of PCC pavement described below.

The approximate location of the section of PCC Pavement to received diamond grinding, grooving, and surface testing is on proposed Ramp 55N64E between approximate stations 61+96 and 70+50. Diamond grinding shall be used to remove a nominal 1/4 in. thickness and provide a pavement surface that meets the lines and grades shown on the plans and conforms to the smoothness criteria described later in this special provision.

Equipment. Equipment shall be according to the following.

- (a) Diamond Grinding and Grooving Machine. The diamond grinding and grooving machine shall be a self-propelled planing machine specifically designed for diamond saw grinding and grooving. It shall be capable of accurately and automatically establishing the profile grade and shall have a positive means for controlling cross slope. It shall also have an effective means for removing excess material and slurry from the surface and for preventing dust from escaping into the air. The diamond grinding and grooving machine shall not cause strain or damage to the surface.

The grinding head shall be a minimum of 4 ft wide and the diamond saw blades shall be gang mounted on the grinding head at a rate of 50 blades / ft.

The grooving blades shall be either mounted within the grinding head to be used concurrently with the grinding operation, or on a separate head for use in a second operation. The grooving pattern shall produce longitudinal grooves 1/8 in. wide and 3/16 in. ± 1/16 in. deep at 3/4 in. centers.

- (b) Pavement Surface Test Equipment. This equipment shall meet the requirements of Article 1101.10 of the Special Provision for Surface Testing of Pavements, except the 16 ft Straightedge shall not be used for surface testing of the roadway pavement described herein.

## **CONSTRUCTION REQUIREMENTS**

Pavement Grinding and Grooving. At such time as the proposed contract staging and maintenance of traffic allow, and at a time approved by the Engineer, the roadway section noted earlier in this special provision shall be ground over its entire length and width. The maximum thickness removed shall be 1/4 in.; however, when the roadway thickness noted on the plans can be maintained, as a minimum, additional removal thickness may be permitted.

The vertical difference between longitudinal passes shall be 1/8 in. maximum. The grinding at the ends of the roadway section shall be diminished uniformly at a rate of 1:480 over the adjacent pavement. Grinding shall be extended as needed onto the proposed shoulders at the same cross slope as the roadway pavement to maintain proper drainage of the pavement and shoulders.

Grinding and grooving shall be continuous through all joints. When sealed joints are specified, grinding shall be completed prior to final installation of the joints sealer.

**Surface Tests.** Surface testing shall be completed according to Article 406.11 of the Special Provision for Surface Testing of Pavements, except as follows:

The finished surface of the pavement shall be tested for smoothness once the pavement has been ground to the final grade and cross slope.

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft from and parallel to each lane edge.

For pavement that is corrected by removal and replacement, the minimum length to be removed shall meet the requirements of either Class A or Class B patching.

For trace evaluation and smoothness assessment purposes, the entire pavement section described herein shall be considered one roadway section.

**SMOOTHNESS ASSESSMENT SCHEDULE**

Profile Index in./mile per Roadway Section	Smoothness Assessment per Roadway Section
15.0 or less	+\$7,500.00
>15.0 to 18.0	+\$5,000.00
>18.0 to 20.0	+\$2,500.00
>20.0 to 35.0	+\$0.00
>35.0 to 45.0	+\$0.00
>45.0	-\$5,000.00

**Method of Measurement.** This work will be measured for payment in place and the area computed in square yards of diamond grinding and grooving performed.

Protective coat will be measured for payment in place and the area computed in square yards.

**Basis of Payment.** This work will be paid for at the contract unit price per square yard for DIAMOND GRINDING AND GROOVING (ROADWAY SECTION).

Delete the fourth paragraph of Article 420.20 of the Standard Specifications.

Protective coat will be paid for at the contract unit price per square yard for PROTECTIVE COAT.

**MECHANICALLY STABILIZED EARTH RETAINING WALLS**

Effective: February 3, 1999

Revised: January 31, 2012

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

**General.** The MSE wall consists of a concrete leveling pad, precast concrete face panels, a soil reinforcing system, select fill and concrete coping (when specified). The soil reinforcement shall have sufficient strength, quantity, and pullout resistance, beyond the failure surface within the select fill, as required by design. The material, fabrication, and construction shall comply with this Special Provision and the requirements specified by the supplier of the wall system selected by the Contractor for use on the project.



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

**Company Name: Wall System**

Earth Tec International, LLC: EarthTrac HA

Sanders Pre-Cast Concrete Systems Company: Sanders MSE Wall

Shaw Technologies: Strengthened Soil

Sine Wall, LLC: Sine Wall

SSL Construction Products: MSE Plus

T&B Structural Systems: Stabilized Earth

Tensor Earth Technologies : ARES Wall

The Reinforced Earth Company: GeoMega System

The Reinforced Earth Company: Reinforced Earth

The Reinforced Earth Company: Retained Earth

Tricon Precast: Tricon Retained Soil

Tricon Precast: Tri-Web Retained Soil

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

**Submittals.** The wall system supplier shall submit complete design calculations and shop drawings to the Engineer according to Article 1042.03(b) of the Standard Specifications no later than 90 days prior to beginning construction of the wall. No work or ordering of materials for the structure shall be done by the Contractor until the submittal has been approved in writing by the Engineer. All submittals shall be sealed by an Illinois Licensed Structural Engineer and shall include all details, dimensions, quantities and cross sections necessary to construct the wall and shall include, but not be limited to, the following items:

- (a) Plan, elevation and cross section sheet(s) for each wall showing the following:
  - (1) A plan view of the wall indicating the offsets from the construction centerline to the face of the wall at all changes in horizontal alignment. The plan view shall show the limits of soil reinforcement and stations where changes in length and/or size of reinforcement occur. The centerline shall be shown for all drainage structures or pipes behind or passing through and/or under the wall.
  - (2) An elevation view of the wall indicating the elevations of the top of the panels. These elevations shall be at or above the top of exposed panel line shown on the contract plans. This view shall show the elevations of the top of the leveling pads, all steps in the leveling pads and the finished grade line. Each panel type, the number, size and length of soil reinforcement connected to the panel shall be designated. The equivalent uniform applied bearing pressure shall be shown for each designed wall section.
  - (3) A listing of the summary of quantities shall be provided on the elevation sheet of each wall.
  - (4) Typical cross section(s) showing the limits of the reinforced select fill volume included within the wall system, soil reinforcement, embankment material placed behind the select fill, precast face panels, and their relationship to the right-of-way limits, excavation cut slopes, existing ground conditions and the finished grade line.
  - (5) All general notes required for constructing the wall.
- (b) All details for the concrete leveling pads, including the steps, shall be shown. The top of the leveling pad shall be located at or below the theoretical top of the leveling pad line shown on the contract plans. The theoretical top of leveling pad line shall be 3.5 ft. (1.1 m) below finished grade line at the front face of the wall, unless otherwise shown on the plans.

- (c) Where concrete coping or barrier is specified, the panels shall extend up into the coping or barrier as shown in the plans. The top of the panels may be level or sloped to satisfy the top of exposed panel line shown on the contract plans. Cast-in-place concrete will not be an acceptable replacement for panel areas below the top of exposed panel line. As an alternative to cast in place coping, the Contractor may substitute a precast coping, the details of which must be included in the shop drawings and approved by the Engineer.
- (d) All panel types shall be detailed. The details shall show all dimensions necessary to cast and construct each type of panel, all reinforcing steel in the panel, and the location of soil reinforcement connection devices embedded in the panels. These panel embed devices shall not be in contact with the panel reinforcement steel.
- (e) All details of the wall panels and soil reinforcement placement around all appurtenances located behind, on top of, or passing through the soil reinforced wall volume such as parapets with anchorage slabs, coping, foundations, and utilities etc. shall be clearly indicated. Any modifications to the design of these appurtenances to accommodate a particular system shall also be submitted.
- (f) When specified on the contract plans, all details of architectural panel treatment, including color, texture and form liners shall be shown.
- (g) The details for the connection between concrete panels, embed devices, and soil reinforcement shall be shown.
- (h) When pile sleeves are specified, the pile sleeve material, shape, and wall thickness shall be submitted to the Engineer for approval. It shall have adequate strength to withstand the select fill pressures without collapse until after completion of the wall settlement. The annulus between the pile and the sleeve shall be as small as possible while still allowing it to be filled with loose dry sand after wall erection.

The initial submittal shall include three sets of shop drawings and one set of calculations. One set of drawings will be returned to the Contractor with any corrections indicated. After approval, the Contractor shall furnish the Engineer with ten (10) sets of corrected plan prints for distribution by the Department. No work or ordering of materials for the structure shall be done until the submittal has been approved by the Engineer.

**Materials.** The MSE walls shall conform to the supplier's standards as previously approved by the Department, and the following:

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

<u>Property for Geosynthetic Reinforcement</u>	<u>Value</u>	<u>Test</u>
Minimum Tensile Strength	**	ASTM D 6637

\*\* as specified in the approved design calculations and shown on the shop drawings.

<u>Property for HDPE</u>	<u>Value</u>	<u>Test</u>
Melt Flow Rate (g/cm)	0.060 – 0.150	ASTM D 1238, Procedure B
Density (g/cu m)	0.941 – 0.965	ASTM D 792
Carbon Black	2% (min)	ASTM D 4218

<u>Property for HTPET</u>	<u>Value</u>	<u>Test</u>
Carboxyl End Group (max) (mmol/kg)	<30	GRI-GG7
Molecular Weight (Mn)	>25,000	GRI-GG8

(3) Panel Embed/Connection Devices. Panel embeds and connection devices shall be according to the following.

a. Metallic panel embed/connection devices and connection hardware shall be galvanized according to AASHTO M 232 and shall be according to the following.

Mesh and Loop Embeds      ASTM A 706 (A 706M)

Tie Strip Embeds              AASHTO M 270/M 270M Grade 50 (345) or  
 ASTM A 1011 HSLAS Grade 50 (345) Class 2

b. Non metallic panel embed/connection devices typically used with geosynthetic soil reinforcement shall be manufactured from virgin or recycled polyvinyl chloride having the following properties:

<u>Property for Polyvinyl Chloride</u>	<u>Value</u>	<u>Test</u>
Heat Deflection Temperature (°F)	155 - 164	ASTM D 1896
Notched IZOD 1/8 inch @ 73°F (ft-lb/in)	4 – 12	ASTM D 256
Coefficient of Linear Exp. (in/in/°F)	3.5 – 4.5	ASTM D 696
Hardness, Shore D	79	ASTM D 2240

<u>Property for Polypropylene</u>	<u>Value</u>	<u>Test</u>
Melt Flow Rate (g/cm)	0.060 – 0.150	ASTM D 1238, Procedure B
Density (g/cu m)	0.88 – 0.92	ASTM D 792

(b) The select fill, defined as the material placed in the reinforced volume behind the wall, shall be according to Sections 1003 and 1004 of the Standard Specifications and the following:

(1) Select Fill Gradation. Either a coarse aggregate or a fine aggregate may be used. For coarse aggregate, gradations CA 6 thru CA 16 may be used. If an epoxy coated reinforcing is used, the coarse aggregate gradations shall be limited to CA 12 thru CA 16. For fine aggregate, gradations FA 1, FA 2, or FA 20 may be used.

Other aggregate gradations may be used provided the maximum aggregate size is 1 1/2 in. (38 mm), the maximum material passing the #40 (425 µm) sieve is 60 percent, and the maximum material passing the #200 (75 µm) sieve is 15 percent.

(2) Select Fill Quality. The coarse or fine aggregate shall be Class B quality or better, except that a maximum of 15 percent of the material may be finer than the #200 (75 µm) sieve.

- (3) Select Fill Internal Friction Angle. The effective internal friction angle for the coarse or fine aggregate shall be a minimum 34 degrees according to AASHTO T 236 on samples compacted to 95 percent density according to Illinois Modified AASHTO T 99. The AASHTO T 296 test with pore pressure measurement may be used in lieu of AASHTO T 236. If the vendor's design uses a friction angle higher than 34 degrees, as indicated on the approved shop drawings, this higher value shall be taken as the minimum required.
- (4) Select Fill and Steel Reinforcing. When steel reinforcing is used, the select fill shall meet the following requirements.
  - a. The pH shall be 5.0 to 10.0 according to AASHTO T 289.
  - b. The resistivity according to AASHTO T 288 shall be greater than 3000 ohm centimeters for epoxy coated and galvanized reinforcement, and 1500 ohm centimeters for Aluminized Type 2.
  - c. The chlorides shall be less than 100 parts per million according to AASHTO T 291 or ASTM D 4327. For either test, the sample shall be prepared according to AASHTO T 291.
  - d. The sulfates shall be less than 200 parts per million according to AASHTO T 290 or ASTM D 4327. For either test, the sample shall be prepared according to AASHTO T 290.
  - e. The organic content shall be a maximum 1.0 percent according to AASHTO T 267.
- (5) Select Fill and Geosynthetic Reinforcing. When geosynthetic reinforcing is used, the select fill pH shall be 4.5 to 9.0 according to AASHTO T 289.
- (6) Test Frequency. Prior to start of construction, the Contractor shall provide internal friction angle, pH, to show the select fill material meets the specification requirements. In addition, resistivity, chlorides, sulfates, and organic content test results will be required if steel reinforcing is used. All test results shall not be older than 12 months. In addition, a sample of select fill material will be obtained for testing and approval by the Department. Thereafter, the minimum frequency of sampling and testing at the jobsite will be one per 20,000 cubic yards (15,500 cubic meters) of select fill material.
- (c) The embankment material behind the select fill shall be according to Section 202 and/or Section 204. An embankment unit weight of 120 lbs/cubic foot (1921 kg/cubic meter) and an effective friction angle of 30 degrees shall be used in the wall system design, unless otherwise indicated on the plans.
- (d) The geosynthetic filter material used across the panel joints shall be either a non-woven needle punch polyester or polypropylene or a woven monofilament polypropylene with a minimum width of 12 in. (300 mm) and a minimum non-sewn lap of 6 in. (150 mm) where necessary.
- (e) The bearing pads shall be rubber, neoprene, polyvinyl chloride, or polyethylene of the type and grade as recommended by the wall supplier.
- (f) All precast panels shall be manufactured with Class PC concrete according to Section 504, Article 1042.02, Article 1042.03, and the following requirements:
  - (1) The minimum panel thickness shall be 5 1/2 in. (140 mm).
  - (2) The minimum reinforcement bar cover shall be 1 1/2 in. (38 mm).
  - (3) The panels shall have a ship lap or tongue and groove system of overlapping joints between panels designed to conceal joints and bearing pads.
  - (4) The panel reinforcement shall be according to Article 1006.10 (a)(2).
  - (5) All dimensions shall be within 3/16 in. (5 mm).
  - (6) Angular distortion with regard to the height of the panel shall not exceed 0.2 inches in 5 ft (5 mm in 1.5 m).

- (7) Surface defects on formed surfaces measured on a length of 5 ft. (1.5 m) shall not be more than 0.1 in. (2.5 mm).
- (8) The panel embed/connection devices shall be cast into the facing panels with a tolerance not to exceed 1 in. (25 mm) from the locations specified on the approved shop drawings.

Unless specified otherwise, concrete surfaces exposed to view in the completed wall shall be finished according to Article 503.15(a). The back face of the panel shall be roughly screeded to eliminate open pockets of aggregate and surface distortions in excess of 1/4 in. (6 mm).

**Design Criteria.** The design shall be according to the appropriate AASHTO Design Specifications noted on the plans for Mechanically Stabilized Earth Walls except as modified herein. The wall supplier shall be responsible for all internal stability aspects of the wall design and shall supply the Department with computations for each designed wall section. The analyses of settlement, bearing capacity and overall slope stability will be the responsibility of the Department.

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

The design of the soil reinforcing system shall be according to the applicable AASHTO or AASHTO LRFD Design Specifications for "Inextensible" steel or "Extensible" geosynthetic reinforcement criteria. The reduced section of the soil reinforcing system shall be sized to allowable stress levels at the end of a 75 year design life.

Steel soil reinforcing systems shall be protected by one of the following; epoxy coating, galvanizing or aluminizing. The design life for epoxy shall be 16 years. The corrosion protection for the balance of the 75 year total design life shall be provided using a sacrificial steel thickness computed for all exposed surfaces according to the applicable AASHTO or AASHTO LRFD Design Specifications.

Geosynthetic soil reinforcing systems shall be designed to account for the strength reduction due to long-term creep, chemical and biological degradation, as well as installation damage.

To prevent out of plane panel rotations, the soil reinforcement shall be connected to the standard panels in at least two different elevations, vertically spaced no more than 30 in. (760 mm) apart.

The panel embed/soil reinforcement connection capacity shall be determined according to the applicable AASHTO or AASHTO LRFD Design Specifications.

The factor of safety for pullout resistance in the select fill shall not be less than 1.5, based on the pullout resistance at 1/2 in. (13 mm) deformation. Typical design procedures and details, once accepted by the Department, shall be followed. All wall system changes shall be submitted in advance to the Department for approval.

For aesthetic considerations and differential settlement concerns, the panels shall be erected in such a pattern that the horizontal panel joint line is discontinuous at every other panel. This shall be accomplished by alternating standard height and half height panel placement along the leveling pad. Panels above the lowest level shall be standard size except as required to satisfy the top of exposed panel line shown on the contract plans.

At locations where the plans specify a change of panel alignment creating an included angle of 150 degrees or less, precast corner joint elements will be required. This element shall separate the adjacent panels by creating a vertical joint secured by means of separate soil reinforcement.

Isolation or slip joints, which are similar to corner joints in design and function, may be required to assist in differential settlements at locations indicated on the plans or as recommended by the wall supplier. Wall panels with areas greater than 30 sq. ft. (2.8 sq. m) may require additional slip joints to account for differential settlements. The maximum standard panel area shall not exceed 60 sq. ft. (5.6 sq. m).

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

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

When structure excavation is necessary, it shall be made and paid for according to Section 502 except that the horizontal limits for structure excavation shall be from the rear limits of the soil reinforcement to a vertical plane 2 ft. (600 mm) from the finished face of the wall. The depth shall be from the top of the original ground surface to the top of the leveling pad. The additional excavation necessary to place the concrete leveling pad will not be measured for payment but shall be included in this work.

The concrete leveling pads shall have a minimum thickness of 6 in. (150 mm) and shall be placed according to Section 503.

As select fill material is placed behind a panel, the panel shall be maintained in its proper inclined position according to the supplier specifications and as approved by the Engineer. Vertical tolerances and horizontal alignment tolerances shall not exceed 3/4 in. (19 mm) when measured along a 10 ft. (3 m) straight edge. The maximum allowable offset in any panel joint shall be 3/4 in. (19 mm). The overall vertical tolerance of the wall, (plumbness from top to bottom) shall not exceed 1/2 in. per 10 ft. (13 mm per 3 m) of wall height. The precast face panels shall be erected to insure that they are located within 1 in. (25 mm) from the contract plan offset at any location to insure proper wall location at the top of the wall. Failure to meet this tolerance may cause the Engineer to require the Contractor to disassemble and re-erect the affected portions of the wall. A 3/4 in. (19 mm) joint separation shall be provided between all adjacent face panels to prevent direct concrete to concrete contact. This gap shall be maintained by the use of bearing pads and/or alignment pins.

The back of all panel joints shall be covered by a geotextile filter material attached to the panels with a suitable adhesive. No adhesive will be allowed directly over the joints.

The select fill and embankment placement shall closely follow the erection of each lift of panels. At each soil reinforcement level, the fill material should be roughly leveled and compacted before placing and attaching the soil reinforcing system. The soil reinforcement and the maximum lift thickness shall be placed according to the supplier's recommended procedures except, the lifts for select fill shall not exceed 10 in. (255 mm) loose measurement or as approved by the Engineer. Embankment shall be constructed according to Section 205.

At the end of each day's operations, the Contractor shall shape the last level of select fill to permit runoff of rainwater away from the wall face. Select fill shall be compacted according to the project specifications for embankment except the minimum required compaction shall be 95 percent of maximum density as determined by AASHTO T 99. Select fill compaction shall be accomplished without disturbance or distortion of soil reinforcing system and panels. Compaction in a strip 3 ft. (1 m) wide adjacent to the backside of the panels shall be achieved using a minimum of 3 passes of a light weight mechanical tamper, roller or vibratory system. The Engineer will perform one density test per 5000 cu yd (3800 cu m) and not less than one test per 2 ft (0.6 m) of lift.

**Method of Measurement.** Mechanically Stabilized Earth Retaining Wall will be measured for payment in square feet (square meters). The MSE retaining wall will be measured from the top of exposed panel line to the theoretical top of leveling pad line for the length of the wall as shown on the contract plans.

**Basis of Payment.** This work, including placement of the select fill within the soil reinforced wall volume shown on the approved shop drawings, precast face panels, soil reinforcing system, concrete leveling pad and accessories will be paid for at the contract unit price per square foot (square meter) for MECHANICALLY STABILIZED EARTH RETAINING WALL.

Concrete coping when specified on the contract plans will be included for payment in this work. Other concrete appurtenances such as anchorage slabs, parapets, abutment caps, etc. will not be included in this work, but will be paid for as specified elsewhere in this contract, unless otherwise noted on the plans.

Excavation necessary to place the select fill for the MSE wall shall be paid for as STRUCTURE EXCAVATION and/or ROCK EXCAVATION FOR STRUCTURES as applicable, according to Section 502.

Embankment placed outside of the select fill volume will be measured and paid for according to Sections 202 and/or 204 as applicable.

## **STRUCTURAL REPAIR OF CONCRETE**

Effective: March 15, 2006

Revised: October 15, 2011

**Description.** This work shall consist of structurally repairing concrete.

**Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) R1 or R2 Mortar (Note2)	
(c) Normal Weight Concrete (Note 3)	
(d) Shotcrete (High Performance) (Note 4)	
(e) Reinforcement Bars	1006.10
(f) Anchor Bolts	1006.09
(g) Water	1002
(h) Curing Compound (Type I)	1022.01
(i) Cotton Mats	1022.02
(j) Protective Coat	1023.01
(k) Epoxy (Note 5)	1025
(l) Mechanical Bar Splicers	508.06(c)

- Note 1. The concrete shall be Class SI, except the cement factor shall be a minimum 6.65 cwt/cu. yd. (395 kg/cu. m), the coarse aggregate shall be a CA 16, and the strength shall be a minimum 4000 psi (27,500 kPa) compressive or 675 psi (4650 kPa) flexural at 14 days. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump, but the cement factor shall not be reduced. This cement factor restriction shall also apply if a water-reducing admixture is used.
- Note 2. The R1 or R2 mortar shall be from the Department's approved list of Packaged, Dry, Rapid Hardening, Cementitious Materials for Concrete Repairs with coarse aggregate added. The amount of coarse aggregate added to the R1 or R2 Mortar shall be per the manufacturer's recommendations. The coarse aggregate gradation shall be CA 16 from an Aggregate Gradation Control System source or a packaged aggregate meeting Article 1004.02 with a maximum size of 1/2 in. (12.5 mm). The R1 or R2 Mortar and coarse aggregate mixture shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer's recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump.
- Note 3. The packaged concrete mixture shall be from the Department's approved list of Packaged, Dry, Formed, Concrete Repair Mixtures. The materials and preparation of aggregate shall be according to ASTM C 387. Proportioning shall be according to ASTM C 387, except the minimum cement factor shall be 6.65 cwt/cu. yd. (395 kg/cu. m). Cement replacement with fly ash or ground granulated blast-furnace slag shall be according to Section 1020. The coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). The packaged concrete mixture shall comply with the air content and strength requirements for Class SI concrete as indicated in Note 1. Mixing shall be per the manufacturer's recommendations, except the water/cement ratio shall not exceed the value specified for Class SI concrete as indicated in Note 1. A high range water-reducing admixture shall be used to obtain a 5-7 in. (125-175 mm) slump.
- Note 4. A packaged, pre-blended, and dry combination of materials, for the wet-mix shotcrete method shall be provided according to ASTM C 1480. An accelerator is prohibited, except the shotcrete may be modified at the nozzle with a non-chloride accelerator for overhead applications. The shotcrete shall be Type FA or CA, Grade FR, and Class I. The fibers shall be Type III synthetic according to ASTM C 1116.

The packaged shotcrete shall have a maximum water soluble chloride ion content of 0.06 % by weight (mass) of cement. The test shall be performed according to ASTM C 1218, and the hardened shotcrete shall have an age of 28 to 42 days at the time of test. The test shall be performed a minimum of once every two years.

Each individual aggregate used in the packaged shotcrete shall have either a maximum ASTM C 1260 expansion of 0.16 percent or a maximum ASTM C 1293 expansion of 0.040 percent. However, the ASTM C 1260 value may be increased to 0.27 percent for each individual aggregate if the cement total equivalent alkali content ( $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$ ) does not exceed 0.60 percent. As an alternative to these requirements, ASTM C 1567 testing which shows the packaged shotcrete has a maximum expansion of 0.16 percent may be submitted. The ASTM C 1260, C 1293, or C 1567 test shall be performed a minimum of once every two years.

The 7 and 28 day compressive strength requirements in ASTM C 1480 shall not apply. Instead the shotcrete shall obtain a minimum compressive strength of 4000 psi (27,500 kPa) at 14 days.



The packaged shotcrete shall be limited to the following proportions:

The portland cement and finely divided minerals shall be 6.05 cwt/cu. yd. (360 kg/cu. m) to 8.50 cwt/cu. yd. (505 kg/cu. m) for Type FA and 6.05 cwt/cu. yd. (360 kg/cu. m) to 7.50 cwt/cu. yd. (445 kg/cu. m) for Type CA. The portland cement shall not be below 4.70 cwt/cu. yd. (279 kg/cu. m) for Type FA or CA.

The finely divided mineral(s) shall constitute a maximum of 35 percent of the total cement plus finely divided mineral(s).

Class F fly ash is optional and the maximum shall be 20 percent by weight (mass) of cement.

Class C fly ash is optional and the maximum shall be 25 percent by weight (mass) of cement.

Ground granulated blast-furnace slag is optional and the maximum shall be 30 percent by weight (mass) of cement.

Microsilica is required and shall be a minimum of 5 percent by weight (mass) of cement, and a maximum of 10 percent. As an alternative to microsilica, high-reactivity metakaolin may be used at a minimum of 5 percent by weight (mass) of cement, and a maximum of 10 percent.

Fly ash shall not be used in combination with ground granulated blast-furnace slag. Class F fly ash shall not be used in combination with Class C fly ash. Microsilica shall not be used in combination with high-reactivity metakaolin. A finely divided mineral shall not be used in combination with a blended hydraulic cement, except for microsilica or high-reactivity metakaolin.

The water/cement ratio as defined in Article 1020.06 shall be a maximum of 0.42.

The air content as shot shall be 4.0 – 8.0 percent.

Note 5. In addition ASTM C 881, Type IV, Grade 2 or 3, Class A, B, or C may be used.

Equipment. Equipment shall be according to Article 503.03 and the following.

Chipping Hammer – The chipping hammer for removing concrete shall be a light-duty pneumatic or electric tool with a 15 lb. (7 kg) maximum class or less.

Blast Cleaning Equipment – Blast cleaning equipment for concrete surface preparation shall be the abrasive type, and the equipment shall have oil traps.

Hydrodemolition Equipment – Hydrodemolition equipment for removing concrete shall be calibrated, and shall use water according to Section 1002.

High Performance Shotcrete Equipment – The batching, mixing, pumping, hose, nozzle, and auxiliary equipment shall be for the wet-mix shotcrete method, and shall meet the requirements of ACI 506R.

### **Construction Requirements**

**General.** The repair methods shall be either formed concrete repair or shotcrete. The repair method shall be selected by the Contractor with the following rules.

- (a) Rule 1. For formed concrete repair, a subsequent patch to repair the placement point after initial concrete placement will not be allowed. As an example, this may occur in a vertical location located at the top of the repair.
- (b) Rule 2. Formed concrete repair shall not be used for overhead applications.
- (c) Rule 3. Shotcrete shall not be used for column repairs greater than 4 in. (100 mm) in depth, or any repair location greater than 8 in. (205 mm) in depth. The only exception to this rule would be for a horizontal application, where the shotcrete may be placed from above in one lift.
- (d) Rule 4. If formed concrete repair is used for locations that have reinforcement with less than 0.75 in. (19 mm) of concrete cover, the concrete mixture shall contain fly ash or ground granulated blast-furnace slag at the maximum cement replacement allowed.

**Temporary Shoring or Cribbing.** When a temporary shoring or cribbing support system is required, the Contractor shall provide details and computations, prepared and sealed by an Illinois licensed Structural Engineer, to the Department for review and approval. When ever possible the support system shall be installed prior to starting the associated concrete removal. If no system is specified, but during the course of removal the need for temporary shoring or cribbing becomes apparent or is directed by the Engineer due to a structural concern, the Contractor shall not proceed with any further removal work until an appropriate and approved support system is installed.

**Concrete Removal.** The Contractor shall provide ladders or other appropriate equipment for the Engineer to mark the removal areas. Repair configurations will be kept simple, and squared corners will be preferred. The repair perimeter shall be sawed a depth of 1/2 in. (13 mm) or less, as required to avoid cutting the reinforcement. Any cut reinforcement shall be repaired or replaced at the expense of the Contractor. If the concrete is broken or removed beyond the limits of the initial saw cut, the new repair perimeter shall be recut. The areas to be repaired shall have all loose, unsound concrete removed completely by the use of chipping hammers, hydrodemolition equipment, or other methods approved by the Engineer. The concrete removal shall extend along the reinforcement bar until the reinforcement is free of bond inhibiting corrosion. The outermost layer of reinforcement bar within the repair area shall be undercut to a depth of 3/4 in. (19 mm) or the diameter of the reinforcement bar, whichever value is larger. The underlying transverse reinforcement bar shall also be undercut as previously described, unless the reinforcement is not corroded, and the reinforcement bar is encased and well bonded to the surrounding concrete.

If sound concrete is encountered before existing reinforcement bars are exposed, further removal of concrete shall not be performed unless the minimum repair depth is not met.

The repair depth shall be a minimum of 1 in. (25 mm). The substrate profile shall be  $\pm 1/16$  in. ( $\pm 1.5$  mm). The perimeter of the repair area shall have a vertical face.

If a repair is located at the ground line, any excavation required below the ground line to complete the repair shall be included in this work.

The Contractor shall have a maximum of 14 calendar days to complete each repair location with concrete or shotcrete, once concrete removal has started for the repair.

The Engineer shall be notified of concrete removal that exceeds 6 in. (150 mm) in depth, one fourth the cross section of a structural member, more than half the vertical column reinforcement is exposed in a cross section, more than 6 consecutive reinforcement bars are exposed in any direction, within 1.5 in. (38 mm) of a bearing area, or other structural concern. Excessive deterioration or removal may require further evaluation of the structure or installation of temporary shoring and cribbing support system.

Surface Preparation. Prior to placing the concrete or shotcrete, the Contractor shall prepare the repair area and exposed reinforcement by blast cleaning. The blast cleaning shall provide a surface that is free of oil, dirt, and loose material.

If a succeeding layer of shotcrete is to be applied, the initial shotcrete surface and remaining exposed reinforcement shall be free of curing compound, oil, dirt, loose material, rebound (i.e. shotcrete material leaner than the original mixture which ricochets off the receiving surface), and overspray. Preparation may be by lightly brushing or blast cleaning if the previous shotcrete surface is less than 36 hours old. If more than 36 hours old, the surface shall be prepared by blast cleaning.

The repair area and perimeter vertical face shall have a rough surface. Care shall be taken to ensure the perimeter sawcut is roughened. Just prior to concrete or shotcrete placement, saturate the repair area with water to a saturated surface-dry condition. Any standing water shall be removed.

Concrete or shotcrete placement shall be done within 3 calendar days of the surface preparation or the repair area shall be prepared again.

Reinforcement. Exposed reinforcement bars shall be cleaned of concrete and corrosion by blast cleaning. After cleaning, all exposed reinforcement shall be carefully evaluated to determine if replacement or additional reinforcement bars are required.

Reinforcing bars that 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. A mechanical bar splicer shall be used when it is not feasible to provide the minimum bar lap. No welding of bars shall be performed.

Intersecting reinforcement bars shall be tightly secured to each other using 0.006 in. (1.6 mm) or heavier gauge tie wire, and shall be adequately supported to minimize movement during concrete placement or application of shotcrete.

For reinforcement bar locations with less than 0.75 in. (19 mm) of cover, protective coat shall be applied to the completed repair. The application of the protective coat shall be according to Article 503.19, 2nd paragraph, except blast cleaning shall be performed to remove curing compound.

The Contractor shall anchor the new concrete to the existing concrete with 3/4 in. (19 mm) diameter hook bolts for all repair areas where the depth of concrete removal is greater than 8 in. (205 mm) and there is no existing reinforcement extending into the repair area. The hook bolts shall be spaced at 15 in. (380 mm) maximum centers both vertically and horizontally, and shall be a minimum of 12 in. (305 mm) away from the perimeter of the repair. The hook bolts shall be installed according to Section 584.

Repair Methods. All repair areas shall be inspected and approved by the Engineer prior to placement of the concrete or application of the shotcrete.

- (a) Formed Concrete Repair. Falsework shall be according to Article 503.05. Forms shall be according to Article 503.06. Formwork shall provide a smooth and uniform concrete finish, and shall approximately match the existing concrete structure. Formwork shall be mortar tight and closely fitted where they adjoin the existing concrete surface to prevent leakage. Air vents may be provided to reduce voids and improve surface appearance. The Contractor may use exterior mechanical vibration, as approved by the Engineer, to release air pockets that may be entrapped.

The concrete for formed concrete repair shall be a Class SI Concrete, or a packaged R1 or R2 Mortar with coarse aggregate added, or a packaged Normal Weight Concrete at the Contractor's option. The concrete shall be placed and consolidated according to Article 503.07. The concrete shall not be placed when frost is present on the surface of the repair area, or the surface temperature of the repair area is less than 40 °F (4 °C). All repaired members shall be restored as close as practicable to their original dimensions.

Curing shall be done according to Article 1020.13.

If temperatures below 45°F (7°C) are forecast during the curing period, protection methods shall be used. Protection Method I according to Article 1020.13(d)(1), or Protection Method II according to Article 1020.13(d)(2) shall be used during the curing period.

The surfaces of the completed repair shall be finished according to Article 503.15.

- (b) Shotcrete. Shotcrete shall be tested by the Engineer for air content according to Illinois Modified AASHTO T 152. Obtain the sample in a damp, non-absorbent container from the discharge end of the nozzle.

For compressive strength of shotcrete, a 18 x 18 x 3.5 in. (457 x 457 x 89 mm) test panel shall be shot by the Contractor for testing by the Engineer. A steel form test panel shall have a minimum thickness of 3/16 in. (5 mm) for the bottom and sides. A wood form test panel shall have a minimum 3/4 in. (19 mm) thick bottom, and a minimum 1.5 in. (38 mm) thickness for the sides. The test panel shall be cured according to Article 1020.13 (a) (3) or (5) while stored at the jobsite and during delivery to the laboratory. After delivery to the laboratory for testing, curing and testing shall be according to ASTM C 1140.

The method of alignment control (i.e. ground wires, guide strips, depth gages, depth probes, and formwork) to ensure the specified shotcrete thickness and reinforcing bar cover is obtained shall be according to ACI 506R. Ground wires shall be removed after completion of cutting operations. Guide strips and formwork shall be of dimensions and a configuration that do not prevent proper application of shotcrete. Metal depth gauges shall be cut 1/4 in. (6 mm) below the finished surface. All repaired members shall be restored as close as practicable to their original dimensions.

For air temperature limits when applying shotcrete in cold weather, the first paragraph of Article 1020.14(b) shall apply. For hot weather, shotcrete shall not be applied when the air temperature is greater than 90°F (32°C). The applied shotcrete shall have a minimum temperature of 50°F (10°C) and a maximum temperature of 90°F (32°C). The shotcrete shall not be applied during periods of rain unless protective covers or enclosures are installed. The shotcrete shall not be applied when frost is present on the surface of the repair area, or the surface temperature of the repair area is less than 40°F (4°C). If necessary, lighting shall be provided to provide a clear view of the shooting area.

The shotcrete shall be applied according to ACI 506R, and shall be done in a manner that does not result in cold joints, laminations, sandy areas, voids, sags, or separations. In addition, the shotcrete shall be applied in a manner that results in maximum densification of the shotcrete. Shotcrete which is identified as being unacceptable while still plastic shall be removed and re-applied.

The nozzle shall normally be at a distance of 2 to 5 ft. (0.6 to 1.5 m) from the receiving surface, and shall be oriented at right angles to the receiving surface. Exceptions to this requirement will be permitted to fill corners, encase large diameter reinforcing bars, or as approved by the Engineer. For any exception, the nozzle shall never be oriented more than 45 degrees from the surface. Care shall be taken to keep the front face of the reinforcement bar clean during shooting operations. Shotcrete shall be built up from behind the reinforcement bar. Accumulations of rebound and overspray shall be continuously removed prior to application of new shotcrete. Rebound material shall not be incorporated in the work.

Whenever possible, shotcrete shall be applied to the full thickness in a single layer. The maximum thickness shall be 4 in. (100 mm) unless the shotcrete is applied from above on a horizontal surface, or a thicker application is approved by the Engineer. When two or more layers are required, the minimum number shall be used and shall be done in a manner without sagging or separation. A flash coat (i.e. a thin layer of up to 1/4 in. (6 mm) applied shotcrete) may be used as the final lift for overhead applications.

Prior to application of a succeeding layer of shotcrete, the initial layer of shotcrete shall be prepared according to the surface preparation and reinforcement bar cleaning requirements. Upon completion of the surface preparation and reinforcement bar treatment, water shall be applied according to the surface preparation requirements unless the surface is moist. The second layer of shotcrete shall then be applied within 30 minutes.

Shotcrete shall be cut back to line and grade using trowels, cutting rods, screeds or other suitable devices. The shotcrete shall be allowed to stiffen sufficiently before cutting. Cutting shall not cause cracks or delaminations in the shotcrete. For depressions, cut material may be used for small areas. Rebound material shall not be incorporated in the work. For the final finish, a wood float shall be used to approximately match the existing concrete texture. All repaired members shall be restored as close as practicable to their original dimensions.

Contractor operations for curing shall be continuous with shotcrete placement and finishing operations. The Engineer may require modification of operations to ensure satisfactory results are obtained. Cotton mats shall be applied according to Article 1020.13(a)(5) except the exposed layer of shotcrete shall be covered within 10 minutes after finishing, and wet curing shall begin immediately. As an alternative to this method,

Type I curing compound shall be applied according to Article 1020.13(a)(4) within 10 minutes and moist curing with cotton mats shall begin within 3 hours. For overhead applications where the final shotcrete layer has been applied, the Contractor has the option to use Type I curing compound in lieu of the cotton mats. Note 5 of the Index Table in Article 1020.13 shall apply to the membrane curing method. The curing compound shall be applied according to Article 1020.13(a)(4).

When a shotcrete layer is to be covered by a succeeding shotcrete layer within 36 hours, the repair area shall be protected with intermittent hand fogging, or wet curing with either burlap or cotton mats shall begin within 10 minutes. Intermittent hand fogging may be used only for the first hour. Thereafter, wet curing with burlap or cotton mats shall be used until the succeeding shotcrete layer is applied. Intermittent hand fogging may be extended to the first hour and a half if the succeeding shotcrete layer is applied by the end of this time.

The curing period shall be for 7 days, except when there is a succeeding layer of shotcrete. In this instance, the initial shotcrete layer shall be cured until the surface preparation and reinforcement bar treatment is started.

If temperatures below 45°F (7°C) are forecast during the curing period, protection methods shall be used. Protection Method I according to Article 1020.13(d)(1), or Protection Method II according to Article 1020.13(d)(2) shall be used during the curing period

Inspection of Completed Work. The Contractor shall provide ladders or other appropriate equipment for the Engineer to inspect the repaired areas. After curing but no sooner than 28 days after placement of concrete or shooting of shotcrete, the repair shall be examined for conformance with original dimensions, cracks, voids, and delaminations. Sounding for delaminations will be done with a hammer or by other methods determined by the Engineer.

The repaired area shall be removed and replaced, as determined by the Engineer, for nonconformance with original dimensions, surface cracks greater than 0.01 in. (0.25 mm) in width, map cracking with a crack spacing in any direction of 18 in. (0.45 m) or less, voids, or delaminations.

If a nonconforming repair is allowed to remain in place, cracks 0.01 in. (0.25 mm) or less shall be repaired with epoxy according to Section 590. For cracks less than 0.007 in. (2 mm), the epoxy may be applied to the surface of the crack. Voids shall be repaired according to Article 503.15.

Publications and Personnel Requirements. The Contractor shall provide a current copy of ACI 506R to the Engineer a minimum of one week prior to start of construction.

The shotcrete personnel who perform the work shall have current American Concrete Institute (ACI) nozzle men certification for vertical wet and overhead wet applications, except one individual may be in training. This individual shall be adequately supervised by a certified ACI nozzle men as determined by the Engineer. A copy of the nozzle men certificate(s) shall be given to the Engineer.

Method of Measurement. This work will be measured for payment in place and the area computed in square feet (square meters). For a repair at a corner, both sides will be measured.

Basis of Payment. This work will be paid for at the contract unit price per square foot (square meter) for STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN. (125 MM), STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN. (125 MM).

When not specified to be paid for elsewhere, the work to design, install, and remove the temporary shoring and cribbing will be paid for according to Article 109.04.

With the exception of reinforcement damaged by the Contractor during removal, the furnishing and installation of supplemental reinforcement bars, mechanical bar splicers, hook bolts, and protective coat will be paid according to Article 109.04.

#### **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.”

#### **CALCIUM CHLORIDE ACCELERATOR FOR CLASS PP-2 CONCRETE (BDE)**

Effective: April 1, 2012

When using Class PP-2 concrete in Class A, B, or C patches, the Contractor may substitute a calcium chloride accelerator for the non-chloride accelerator.

#### **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.

**CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)**

Effective: June 1, 2010

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term “equipment” refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment’s respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 <sup>1/</sup>	600-749	2002
	750 and up	2006
June 1, 2011 <sup>2/</sup>	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 <sup>2/</sup>	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) *Verified Retrofit Technology List* (<http://www.epa.gov/otaq/retrofit/verif-list.htm>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verde/verdev.htm>); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.



Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices 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 not be grounds for a claim.

#### **Diesel Retrofit Deficiency Deduction**

When the Engineer determines that a diesel retrofit deficiency exists, 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.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment 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 the contract time, waiver of penalties, or be grounds for any claim.

#### **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.

## **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.

## **DIGITAL TERRAIN MODELING FOR EARTHWORK CALCULATIONS (BDE)**

Effective: April 1, 2007

Revise the first and second paragraphs of Article 202.07(b) of the Standard Specifications to read:

“(b) Measured Quantities. Earth and rock excavation will be measured in cubic yards (cubic meters) in their original positions. The volumes will be computed by the method of average end areas using before and after cross sections; or by the method of digital terrain modeling using before and after total station surveys. The volume of any unstable or unsuitable material removed will be measured for payment in cubic yards (cubic meters).

In rock excavation, the Contractor shall strip ledge rock of overburden so that necessary survey shots for measurement may be taken. Vertical measurements shall extend from the surface of the rock to an elevation not more than 6 in. (150 mm) below the subgrade of the proposed pavement structure, as shown on the plans, or to the bottom of the rock where that point is above the subgrade of the proposed pavement structure. Horizontal measurements shall extend not more than 6 in. (150 mm) beyond the slope lines fixed by the Engineer for the work. Boulders and rocks 1/2 cu yd (0.5 cu m) or more in volume will be measured individually and the volume computed from average dimensions taken in three directions.”

Revise the first paragraph of Article 204.07 of the Standard Specifications to read.

“**204.07 Method of Measurement.** Borrow excavation will be measured in cubic yards (cubic meters) in its original position. The volume will be computed by the method of average end areas using before and after cross sections; or by the method of digital terrain modeling using before and after total station surveys.”

Revise the embankment definition of Article 204.07(b) of the Standard Specifications to read:

“Embankment = the volume of fill in its final position computed by the method of average end areas or digital terrain modeling. Both methods will be based upon the existing ground line as shown on the plans, except as noted in (1) and (2) below;”

Revise Article 207.04 of the Standard Specifications to read:

“**207.04 Method of Measurement.** This work will be measured for payment in tons (metric tons) according to Article 311.08(b), or in cubic yards (cubic meters) compacted in place and the volume computed by the method of average end areas or digital terrain modeling by total station measurement.”

Revise the second sentence of the second paragraph of Article 211.07(b) of the Standard Specifications to read:

“The volume will be computed by the method of average end areas or digital terrain modeling by total station measurement.”

**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 **25.00%** of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal; or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's website at [www.dot.il.gov](http://www.dot.il.gov).

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement. The failure of the bidder to comply will render the bid not responsive.

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
  - (1) The names and addresses of DBE firms that will participate in the contract;
  - (2) A description, including pay item numbers, of the work each DBE will perform;
  - (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
  - (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
  - (5) if the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
  - (6) If the contract goal is not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the

Utilization Plan documents sufficient commercially useful DBE work performance to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet

the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.
  - (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
  - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
  - (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
  - (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
    - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith

efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.

- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
  - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
  - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
  - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination.
- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The



Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
  - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
  - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
  - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
  - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement.

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217)785-4611. Telefax number (217)785-1524.
- (b) TERMINATION OR REPLACEMENT. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.
- (c) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
- (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
  - (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
  - (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.
- (d) 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.

#### **ERRATA FOR THE 2012 STANDARD SPECIFICATIONS (BDE)**

Effective: April 1, 2012

- Page 337 Article 505.04. Revise the subparagraph "(i) Match Making." to read "(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 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".

#### **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 <sup>1/</sup> Crushed Concrete
HMA High ESAL Low ESAL	Binder IL-25.0, IL-19.0, or IL-19.0L  SMA Binder	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete <sup>3/</sup>
HMA High ESAL Low ESAL	C Surface and Leveling Binder IL-12.5,IL-9.5, or IL-9.5L  SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag <sup>4/</sup> Crushed Concrete <sup>3/</sup>

Use	Mixture	Aggregates Allowed
HMA High ESAL	D Surface and Leveling Binder IL-12.5 or IL-9.5  SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone (other than Limestone) <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>5/</sup> Crushed Steel Slag <sup>4/ 5/</sup> Crushed Concrete <sup>3/</sup>
		<u>Other Combinations Allowed:</u> <i>Up to...</i>   <i>With...</i>
		25% Limestone   Dolomite
		50% Limestone   Any Mixture D aggregate other than Dolomite
		75% Limestone   Crushed Slag (ACBF) <sup>5/</sup> or Crushed Sandstone
HMA High ESAL	E Surface IL-12.5 or IL-9.5  SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>5/</sup> Crushed Steel Slag <sup>5/</sup> Crushed Concrete <sup>3/</sup>
		No Limestone. <u>Other Combinations Allowed:</u> <i>Up to...</i>   <i>With...</i>
		50% Dolomite <sup>2/</sup>   Any Mixture E aggregate
		75% Dolomite <sup>2/</sup>   Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone
		75% Crushed Gravel or Crushed Concrete <sup>3/</sup>   Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF) <sup>5/</sup> , or Crushed Steel Slag <sup>5/</sup>
HMA High ESAL	F Surface IL-12.5 or IL-9.5  SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination:</u> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>5/</sup> Crushed Steel Slag <sup>5/</sup> No Limestone.
		<u>Other Combinations Allowed:</u> <i>Up to...</i>   <i>With...</i>
		50% Crushed Gravel, Crushed Concrete <sup>3/</sup> , or Dolomite <sup>2/</sup>   Crushed Sandstone, Crushed Slag (ACBF) <sup>5/</sup> , Crushed Steel Slag <sup>5/</sup> , or Crystalline Crushed Stone

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When either slag is used, the blend percentages listed shall be by volume.”

**HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)**

Effective: January 1, 2010

Revised: April 1, 2012

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced ten feet apart longitudinally along the unconfined pavement edge and centered at the random density test location.”

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

“Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4%	91.0%
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0%	90.0%
IL-9.5,IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4%	90.0%
SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%
All Other	Ndesign = 30	93.0 - 97.4%	90.0%”

**IMPACT ATTENUATORS (BDE)**

Effective: November 1, 2003

Revised: January 1, 2012

Add the following to the Standard Specifications:

**“SECTION 643. IMPACT ATTENUATORS**

**643.01 Description.** This work shall consist of furnishing and installing impact attenuators.

**643.02 Materials.** Materials shall be according to the impact attenuator manufacturer’s specifications and the following.

Item	Article/Section
(a) Fine Aggregate (Note 1).....	1003.01
(b) Steel Posts, Structural Shapes, and Plates .....	1006.04
(c) Rail Elements, End Section Plates, and Splice Plates .....	1006.25
(d) Bolts, Nuts, Washers and Hardware .....	1006.25
(e) Hollow Structural Tubing .....	1006.27(b)
(f) Wood Posts and Wood Blockouts .....	1007.01, 1007.02, 1007.06
(g) Preservative Treatment.....	1007.12

Note 1. Fine aggregate shall be FA 1 or FA 2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

**CONSTRUCTION REQUIREMENTS**

**643.03 General.** Impact attenuators shall meet the testing criteria contained in either NCHRP Report 350 or MASH and shall be on the Department’s approved list. Fully redirective and partially redirective attenuators shall be designed for bi-directional impacts.

**643.04 Installation.** Impact attenuators shall be installed according to the manufacturer’s specifications and include all necessary transitions between the impact attenuator and the item to which it is attached. Regrading of slopes or approaches for the installation shall be as shown on the plans.

The design for sand module impact attenuators (orientation and number of modules, sand weights, etc.) shall be as shown on the plans. Bases for sand module impact attenuators will be required. The bases shall be constructed of either portland cement concrete or hot-mix asphalt (HMA). Portland cement concrete bases shall be 6 in. (150 mm) thick and be according to the applicable requirements of Section 424. HMA bases shall be 8 in. (200 mm) thick and be according to the applicable requirements of Section 408. The surface of the base shall be slightly sloped or crowned to facilitate drainage. The perimeter of each module and the specified weight (mass) of sand in each module shall be painted on the surface of the base.

Bases for impact attenuators, other than sand modules, shall be installed when required by the manufacturer. The bases shall be constructed according to the manufacturer’s specifications, on a prepared subgrade. The surface of the base shall be slightly sloped or crowned to facilitate drainage.



**643.05 Method of Measurement.** This work will be measured for payment as each, where each is defined as one complete installation.

Contract quantities for sand module attenuator bases may be accepted according to Article 202.07(a). When measured, sand module attenuator bases will be measured in place and the dimensions used to calculate square yards (square meters) will not exceed those as shown on the plans.

**643.06 Basis of Payment.** This work will be paid for at the contract unit price per each for IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS (FULLY REDIRECTIVE, RESETTABLE); IMPACT ATTENUATORS (SEVERE USE, NARROW); IMPACT ATTENUATORS (SEVERE USE, WIDE); IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE); or IMPACT ATTENUATORS (NON-REDIRECTIVE), of the test level specified.

Sand module impact attenuator bases will be paid for at the contract unit price per square yard (square meter) for ATTENUATOR BASE.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.”

**IMPACT ATTENUATORS, TEMPORARY (BDE)**

Effective: November 1, 2003

Revised: January 1, 2012

Description. This work shall consist of furnishing, installing, maintaining, and removing temporary impact attenuators of the category and test level specified.

Materials. Materials shall be according to the impact attenuator manufacturer’s specifications and the following:

Item	Article/Section
(a) Fine Aggregate (Note 1).....	1003.01
(b) Steel Posts, Structural Shapes, and Plates .....	1006.04
(c) Rail Elements, End Section Plates, and Splice Plates .....	1006.25
(d) Bolts, Nuts, Washers and Hardware .....	1006.25
(e) Hollow Structural Tubing .....	1006.27(b)
(f) Wood Posts and Wood Blockouts .....	1007.01, 1007.02, 1007.06
(g) Preservative Treatment.....	1007.12
(h) Packaged Rapid Hardening Mortar .....	1018.01

Note 1. Fine aggregate shall be FA 1 or FA 2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

CONSTRUCTION REQUIREMENTS

General. Impact Attenuators shall meet the testing criteria contained in either the National Cooperative Highway Research Program (NCHRP) Report 350 or MASH and shall be on the Department’s approved list.

Installation. Impact attenuators shall be installed according to the manufacturer's specifications and include all necessary transitions between the impact attenuator and the item to which it is attached. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Attenuator bases, when required by the manufacturer, shall be constructed on a prepared subgrade according to the manufacturer's specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage.

When water filled attenuators are used between November 1 and April 15, they shall contain anti-freeze according to the manufacturer's recommendations.

Markings. Sand module impact attenuators shall be striped with alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes. There shall be at least two of each stripe on each module.

Other types of impact attenuators shall have a terminal marker applied to their nose and reflectors along their sides.

Maintenance. All maintenance of the impact attenuators shall be the responsibility of the Contractor until removal is directed by the Engineer.

Relocate. When relocation of temporary impact attenuators is specified, they shall be removed, relocated and reinstalled at the new location. The reinstallation requirements shall be the same as those for a new installation.

Removal. When the Engineer determines the temporary impact attenuators are no longer required, the installation shall be dismantled with all hardware becoming the property of the Contractor.

Surplus material shall be disposed of according to Article 202.03. Anti-freeze, when present, shall be disposed of/recycled according to local ordinances.

When impact attenuators have been anchored to the pavement, the anchor holes shall be repaired with rapid set mortar; only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Basis of Payment. This work will be paid for at the contract unit price per each for IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, RESETTABLE); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, NARROW); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, WIDE); or IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) of the test level specified.

Relocation of the devices will be paid for at the contract unit price per each for IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE); IMPACT ATTENUATORS, RELOCATE (SEVERE USE); or IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE); of the test level specified.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

**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)”

**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.”

**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.”

**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.

## **PAYROLLS AND PAYROLL RECORDS (BDE)**

Effective: January 2, 2012

Revise Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

### **"IV. COMPLIANCE WITH THE PREVAILING WAGE ACT**

1. **Prevailing Wages.** All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of three years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department; the Department of Labor; and Federal, State or local law enforcement agencies and prosecutors.
3. **Submission of Payroll Records.** The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor, or an officer, employee or officer thereof, which avers that: (i) he or she has examined the records and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class A misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor.”

#### **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 ENCASUREMENT, 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 <sup>1/</sup>	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 <sup>2/</sup>	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 <sup>2/</sup>	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 <sup>1/</sup>	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 <sup>2/</sup>	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 <sup>2/</sup>	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 (Na<sub>2</sub>O + 0.658K<sub>2</sub>O) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department’s Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will be assigned to limestone or dolomite coarse aggregates. 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		Water / Cement Ratio lb/lb	S l u m p in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)
			cwt/cu yd (3)				Days				
			Min.	Max			3	14	28		
PV	Pavement Base Course	420 or 421 353	5.65 (1) 6.05 (2)	7.05	0.32 - 0.42	2 - 4 (5)	Ty III 3500 (650)	3500 (650)		5.0 - 8.0	CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14
	Base Course Widening	423									
	Driveway Pavement	483									
	Shoulders	662									
	Shoulder Curb										
PP	Pavement Patching Bridge Deck Patching (10)	442					3200 (600) Article 701.17(e)(3)b.				CA 7, CA 11, CA 13, CA 14, or CA 16
	PP-1		6.50 6.20 (Ty III)	7.50 7.20 (Ty III)	0.32 - 0.44	2 - 4	at 48 hours			4.0 - 7.0	
	PP-2		7.35	7.35	0.32 - 0.38	2 - 6	at 24 hours			4.0 - 6.0	
	PP-3		7.35 (Ty III) (8)	7.35 (Ty III) (8)	0.32 - 0.35	2 - 4	at 16 hours			4.0 - 6.0	
	PP-4		6.00 (9)	6.25 (9)	0.32 - 0.50	2 - 6	at 8 hours			4.0 - 6.0	
	PP-5		6.75 (9)	6.75 (9)	0.32 - 0.40	2 - 8	at 4 hours			4.0 - 6.0	
RR	Railroad Crossing	422	6.50 6.20 (Ty III)	7.50 7.20 (Ty III)	0.32 - 0.44	2 - 4	3500 (650) at 48 hours			4.0 - 7.0	CA 7, CA 11, or CA 14
BS	Bridge Superstructure Bridge Approach Slab	503	6.05	7.05	0.32 - 0.44	2 - 4 (5)	4000 (675)			5.0 - 8.0	CA 7, CA 11, or CA 14 (7)
PC	Various Precast Concrete Items Wet Cast Dry Cast	1042	5.65 5.65 (TY III)	7.05 7.05 (TY III)	0.32 - 0.44 0.25 - 0.40	1 - 4 0 - 1	See Section 1042			5.0 - 8.0 N/A	CA7, CA11, CA 13, CA 14, CA 16, or CA 7 & CA 16
PS	Precast Prestressed Members	504	5.65 5.65 (TY III)	7.05 7.05 (TY III)	0.32 - 0.44	1 - 4			Plans	5.0 - 8.0	CA 11 (11), CA 13, CA 14 (11), or CA 16
	Precast Prestressed Piles and Extensions	512							5000		
	Precast Prestressed Sight Screen	639							3500		

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA											
Class of Conc.	Use	Specification Section Reference	Cement Factor		Water / Cement Ratio lb/lb	S l u m p in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)
			cwt/cu yd (3)				Days				
			Min.	Max			3	14	28		
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734 837	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.
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) 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	503 424 511 512 540 542 606 637 734 836 878	5.65 (1) 6.05 (2)	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 5 & CA 11, 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		Water / Cement Ratio kg/kg	S l u m p  mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)
			kg/cu m (3)				Days				
			Min.	Max			3	14	28		
PV	Pavement Base Course Base Course Widening Driveway Pavement Shoulders Shoulder Curb	420 or 421 353 354 423 483 662	335 (1) 360 (2)	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
PP	Pavement Patching Bridge Deck Patching (10)	442					22,100 (4150) Article 701.17(e)(3)b.				
	PP-1		385 365 (Ty III)	445 425 (Ty III)	0.32 - 0.44	50 - 100	at 48 hours			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	385 365 (Ty III)	445 425 (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
BS	Bridge Superstructure 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)	
PC	Various Precast Concrete Items Wet Cast Dry Cast	1042	335 335 (TY III)	418 418 (TY III)	0.32 - 0.44 0.25 - 0.40	25 - 100 0 - 25	See Section 1042			5.0 - 8.0 N/A	CA7, CA11, CA13, CA 14, CA 16, or CA 7 & CA 16
PS	Precast Prestressed Members	504	335 335 (TY III)	418 418 (TY III)	0.32 - 0.44	25 - 100			Plans	5.0 - 8.0	CA 11 (11), CA 13, CA 14 (11), or CA 16
	Precast Prestressed Piles and Extensions	512							34,500		
	Precast Prestressed Sight Screen	639							24,000		

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)											
Class of Conc.	Use	Specification Section Reference	Cement Factor		Water / Cement Ratio kg/kg	S l u m p  mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)
			kg/cu m (3)				Days				
			Min.	Max			3	14	28		
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734 837	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.	
SC	Seal Coat	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	
SI	Structures (except Superstructure) 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	503 424 511 512 540 542 606 637 734 836 878	335 (1) 360 (2)	418	0.32 - 0.44	50 - 100 (5)	24,000 (4500)		5.0 - 8.0	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 7 CA 11, 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 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	Fine Aggregate Or Fine Aggregate Blend		
	ASTM C 1260 Expansion		
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  $\leq 0.16$  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. 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
<b>Cast-in-Place Concrete <sup>11/</sup></b>			
Pavement			
Shoulder	1020.13(a)(1)(2)(3)(4)(5) <sup>3/ 5/</sup>	3	1020.13(c)
Base Course			
Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) <sup>2/</sup>	3	1020.13(c)
Driveway			
Median			
Barrier			
Curb			
Gutter	1020.13(a)(1)(2)(3)(4)(5) <sup>4/ 5/</sup>	3	1020.13(c) <sup>16/</sup>
Curb & Gutter			
Sidewalk			
Slope Wall			
Paved Ditch			
Catch Basin			
Manhole	1020.13(a)(1)(2)(3)(4)(5) <sup>4/</sup>	3	1020.13(c)
Inlet			
Valve Vault			
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) <sup>2/</sup>	3 <sup>12/</sup>	1020.13(c)
Bridge Deck Patching	1020.13(a)(3)(5)	3 or 7 <sup>12/</sup>	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) <sup>4/ 6/</sup>	7	1020.13(d)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) <sup>1/ 7/</sup>	7	1020.13(d)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) <sup>8/</sup>	7	1020.13(d)(1)(2)
Deck			
Bridge Approach Slab	1020.13(a)(5)	7	1020.13(d)(1)(2) <sup>17/</sup>
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) <sup>1/ 7/</sup>	7	1020.13(d)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) <sup>1/</sup>	7	1020.13(d)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) <sup>4/ 6/</sup>	7	1020.13(d)(1)(2) <sup>18/</sup>
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
<b>Precast Concrete <sup>11/</sup></b>			
Bridge Slabs			
Piles and Pile Caps	1020.13(a)(3)(5) <sup>9/ 10/</sup>	As <sup>13/</sup>	9/
Other Structural Members		Required	
All Other Precast Items	1020.13(a)(3)(4)(5) <sup>2/ 9/ 10/</sup>	As <sup>14/</sup>	9/
		Required	
<b>Precast, Prestressed Concrete <sup>11/</sup></b>			
All Items	1020(a)(3)(5) <sup>9/ 10/</sup>	Until Strand Tensioning is Released <sup>15/</sup>	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  $\pm 2$  °F ( $\pm 1$  °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.

## **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 <sup>1/</sup>
Aggregates (Arriving at Plant)	Gradation <sup>2/</sup>	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 <sup>2/</sup>	2,500 cu yd (1,900 cu m) for each gradation number <sup>3/</sup>	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture <sup>4/</sup> : Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pychnometer Jar, or T 255
	Moisture <sup>4/</sup> : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pychnometer Jar, or T 255
Mixture <sup>5/</sup>	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 <sup>1/</sup>			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant <sup>2/</sup>	IL Modified AASHTO Test Method
Pavement, Shoulder, Base Course, Base Course Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump <sup>3/ 4/</sup>	1 per 500 cu yd (400 cu m) or minimum 1/day	T 141 and T 119
	Air Content <sup>3/ 5/</sup> <sub>6/</sub>	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength <sup>7/ 8/</sup> or Flexural Strength <sup>7/ 8/</sup>	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 <sup>9/</sup> , Bridge Deck <sup>9/</sup> , Bridge Deck Overlay <sup>9/</sup> , Superstructure <sup>9/</sup> , Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump <sup>3/ 4/</sup>	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 119
	Air Content <sup>3/ 5/</sup> <sub>6/</sub>	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength <sup>7/ 8/</sup> or Flexural Strength <sup>7/ 8/</sup>	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 <sup>3/</sup>	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141 and T 119
	Air Content <sup>3/ 6/</sup>	As needed to control production	T 141 And T 152 or T 196
	Compressive Strength <sup>7/ 8/</sup> or Flexural Strength <sup>7/ 8/</sup>	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 <sup>1/</sup>			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Concrete Formed Mat <sup>10/</sup> Revetment Miscellaneous Items, Incidental Items	Slump <sup>3/ 4/</sup>	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 119
	Air Content <sup>3/ 5/ 6/</sup>	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength <sup>7/ 8/</sup> or Flexural Strength <sup>7/ 8/</sup>	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 <sup>3/</sup>	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 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 <sup>1/</sup>
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 <sup>1/</sup>
Plant	Gradation of aggregates stored in stockpiles or bins <sup>2/</sup>	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 <sup>2/</sup> and Air Content <sup>2/3/</sup>	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 <sup>2/</sup>	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 (RAP) (BDE)**

Effective: January 1, 2007

Revised: January 1, 2012

Revise Section 1031 of the Standard Specifications to read:

**“SECTION 1031. RECLAIMED ASPHALT PAVEMENT**

**1031.01 Description.** Reclaimed asphalt pavement (RAP) is from the material produced by cold milling or crushing of 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.

**1031.02 Stockpiles.** The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. “Homogeneous Surface”).

Prior to milling, the Contractor shall request the District to provide verification of the quality of the RAP to clarify appropriate stockpile.

- (a) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, 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 used in.

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)

- (b) 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.
- (c) 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 or other expansive material as determined by the Department.
- (d) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, 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 or other expansive material as determined by the Department.
- (e) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Non-Quality”.

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

**1031.03 Testing.** When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable  $G_{mm}$ . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous/Conglomerate	Conglomerate "D" Quality
1 in. (25 mm)		± 5 %
1/2 in. (12.5 mm)	± 8 %	± 15 %
No. 4 (4.75 mm)	± 6 %	± 13 %
No. 8 (2.36 mm)	± 5 %	
No. 16 (1.18 mm)		± 15 %
No. 30 (600 μm)	± 5 %	
No. 200 (75 μm)	± 2.0 %	± 4.0 %
Asphalt Binder	± 0.4 % <sup>1/</sup>	± 0.5 %
$G_{mm}$	± 0.03	

1/ The tolerance for FRAP shall be ± 0.3 %.

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

**1031.04 Quality Designation of Aggregate in RAP/FRAP.**

- (a) The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (1) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL), or HMA (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
- (2) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
- (3) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
- (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) The aggregate quality of FRAP shall be determined as follows.

- (1) 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 according to Article 1031.04(b)(2).
- (2) Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications.”

**1031.05 Use of RAP/FRAP in HMA.** The use of RAP/FRAP shall be a Contractor’s option when constructing HMA in all contracts. The use of RAP/FRAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.
- (c) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. RAP/FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 in. (10 mm).
- (d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.
- (e) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, conglomerate, or conglomerate DQ.
- (f) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table below for a given N Design.

Max RAP Percentage

HMA Mixtures <sup>1/, 3/</sup>	Maximum % RAP		
	Ndesign	Binder/Leveling Binder	Surface
30	30	30	10
50	25	15	10
70	15 / 25 <sup>2/</sup>	10 / 15 <sup>2/</sup>	10
90	10	10	10
105	10	10	10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the amount of RAP shall not exceed 50% of the mixture.
- 2/ Value of Max % RAP if homogeneous RAP stockpile of IL-9.5 RAP is utilized.
- 3/ When RAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275 °F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when RAP exceeds 25 percent (i.e. 26 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

(g) When the Contractor chooses the FRAP option, the percentage of FRAP shall not exceed the amounts indicated in the table below for a given N Design.

(1) Level 1 Maximum FRAP Percentage.

HMA Mixtures <sup>1/, 2/</sup>	Level 1 - Maximum % FRAP		
	Ndesign	Binder/Leveling Binder	Surface
30	35	35	10
50	30	25	10
70	25	20	10
90	20	15	10
105	10	10	10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N30, the amount of FRAP shall not exceed 50 percent of the mixture.
- 2/ When FRAP exceeds 20 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275 °F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP exceeds 25 percent (i.e. 26 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the maximum FRAP shall be 20 percent. When the FRAP usage in SMA exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).
- 4/ For IL-4.75 mix the amount of minus #4 fine fraction FRAP shall not exceed 20 percent. When the FRAP usage in IL-4.75 exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

(2) Level 2 Maximum FRAP percentage.

HMA Mixtures <sup>1/, 2/</sup>	Level 1 - Maximum % FRAP		
	Ndesign	Binder/Leveling Binder	Polymer Modified <sup>3/, 4/</sup>
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 amount of FRAP shall not exceed 50 percent of the mixture.
- 2/ When FRAP exceeds 20 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275 °F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP exceeds 25 percent (i.e. 26 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the maximum FRAP shall be 20 percent. When the FRAP usage in SMA exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).
- 4/ For IL-4.75 mix the amount of minus #4 fine fraction FRAP shall not exceed 30 percent. When the FRAP usage in IL-4.75 exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

**1031.06 HMA Mix Designs.** At the Contractor’s option, HMA mixtures may be constructed utilizing RAP/FRAP material meeting the above detailed requirements.

FRAP mix designs exceeding the Level 1 FRAP percentages shall be tested prior to submittal for verification, according to Illinois Modified AASHTO T324 (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	10,000	1/2 (12.5)
PG58-XX	10,000	1/2 (12.5)

RAP/FRAP designs shall be submitted for volumetric verification. If additional RAP/FRAP stockpiles are tested and found that no more than 20 percent of the results, as defined under “Testing” herein, are outside of the control tolerances set for the original RAP/FRAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP stockpiles may be used in the original mix design at the percent previously verified.



**1031.07 HMA Production.** Mixture production where the FRAP 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 T324 and shall meet the requirements specified herein. FRAP mix production shall not exceed 1500 tons (1350 metric tons) or one days 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 FRAP mixture conformance is demonstrated prior to start of mix production for the contract.

The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP/FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and either switch to the virgin aggregate design or submit a new RAP/FRAP design.

HMA plants utilizing RAP/FRAP shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAP/FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.
- (8) Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) RAP/FRAP weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram).
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

**1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders.** The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

### **RECLAIMED ASPHALT SHINGLES (RAS) (BDE)**

Effective: January 1, 2012

Description. Reclaimed asphalt shingles (RAS) meeting the requirements herein will be permitted in all HMA mixtures used for overlay applications only. RAS shall not be used in full-depth HMA pavement. When RAS is used in conjunction with Reclaimed Asphalt Pavement (RAP), the RAP shall be according to the special provision, "Reclaimed Asphalt Pavement (RAP)"

Definitions. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable materials, 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.

- (a) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
- (b) 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).

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 3 years.

Testing. RAS shall be sampled and tested during stockpiling.

For testing during stockpiling, washed extraction, and testing for unacceptable materials shall be run 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 tests are required for stockpiles less than 1000 tons (900 metric tons). Once a  $\leq 1000$  ton (900 metric ton), five-test stockpile has been established it shall be sealed. Additional incoming RAS 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 field sample shall be split to obtain two samples. 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 procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

Evaluation of Test Results. All of the 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)	$\pm 5\%$
No. 16 (1.18 mm)	$\pm 5\%$
No. 30 (600 $\mu\text{m}$ )	$\pm 4\%$
No. 200 (75 $\mu\text{m}$ )	$\pm 2.0\%$
Asphalt Binder Content	$\pm 1.5\%$

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content, or if the percent unacceptable materials exceeds 0.5 percent by weight of material retained on the # 4 (4.75 mm) sieve, the RAS shall not be used in Department projects. All test data and acceptance ranges shall be sent to the District for evaluation.

Use of RAS in HMA. Type 1 or Type 2 RAS may be used alone or in conjunction with Reclaimed Asphalt Pavement (RAP) in all HMA mixtures up to a maximum of 5.0 percent by weight of total mix.

- (a) Level 1 asphalt binder replacement. The maximum Level 1 RAS or RAS/RAP blend usage will be dictated by the Level 1 – Maximum Asphalt Binder Replacement (MABR) table listed below.

HMA Mixtures <sup>1/, 2/</sup>	Level 1 – Maximum Asphalt Binder Replacement, %		
	Binder/Leveling Binder	Surface	Polymer Modified <sup>3/, 4/</sup>
30	35	35	10
50	30	25	10
70	25	20	10
90	20	15	10
105	10	10	10

- 1/ For HMA shoulder and stabilized subbase (HMA “All Other”) N-30, the maximum binder replacement shall be 50 percent.
- 2/ When the asphalt binder replacement exceeds 20 percent for all mixtures, except for SMA and IL-4.75, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 25 percent asphalt binder replacement would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the maximum asphalt binder replacement shall be 20 percent. When the binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to PG70-28).
- 4/ For IL-4.75 mix the maximum asphalt binder replacement shall not exceed 20 percent. When the asphalt binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

(b) Level 2 asphalt binder replacement. The maximum Level 2 RAS or RAS/RAP blend usage will be dictated by the Level 2 – MABR table listed below.

HMA Mixtures <sup>1/, 2/</sup>	Level 2 – Maximum Asphalt Binder Replacement, %		
	Binder/Leveling Binder	Surface	Polymer Modified <sup>3/, 4/</sup>
Ndesign			
30	40	40	10
50	40	30	10
70	30	20	10
90	30	20	10
105	30	15	10

- 1/ For HMA shoulder and stabilized subbase (HMA “All Other”) N-30, the maximum binder replacement shall be 50 percent.
- 2/ When the asphalt binder replacement exceeds 20 percent for all mixtures, except for SMA and IL-4.75, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 25 percent asphalt binder replacement would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the maximum asphalt binder replacement shall be 20 percent. When the binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to PG70-28).
- 4/ For IL-4.75 mix the maximum asphalt binder replacement shall not exceed 30 percent. When the asphalt binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

HMA Mix Designs. RAS and RAS/RAP designs shall be submitted for volumetric verification. 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.

RAS and RAS/RAP mix designs with asphalt binder replacements exceeding the Level 1 – MABR limits specified herein, shall be tested prior to submittal for verification, according to Illinois Modified AASHTO T324 (Hamburg Wheel). RAS and RAS/RAP mixtures exceeding the Level 1 MABR limits shall meet the following requirements.

Asphalt Binder Grade	# Repetitions	Maximum Rut Depth in. (mm)
PG76-XX	20,000	1/2 (12.5)
PG70-XX	15,000	1/2 (12.5)
PG64-XX	10,000	1/2 (12.5)
PG58-XX	10,000	1/2 (12.5)

HMA Production. Mixture production, where the RAS and RAS/RAP asphalt binder replacement exceeds the Level 1 MABR, 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 Illinois Modified AASHTO T324 and shall meet the requirements specified herein. RAS and RAS/RAP 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 RAS and RAS/RAP plant produced mixture conformance is demonstrated prior to start of mix production for a State contract.

RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within  $\pm 0.5$  percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

When producing HMA containing RAS, a positive duct control system shall be utilized.

HMA plants utilizing RAS shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAS material as a percent of the total mix to the nearest 0.1 percent.
- (8) Aggregate and RAS moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS are printed in wet condition.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral Filler weight to the nearest pound (kilogram).
- (5) RAS weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram).
- (7) Residual asphalt binder in the 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 will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

**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.”

**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.

**SHOULDER RUMBLE STRIPS (BDE)**

Effective: January 1, 2012

Revise Article 642.05 of the Standard Specifications to read:

“**642.05 Basis of Payment.** This work will be paid for at the contract unit price per foot (meter) for SHOULDER RUMBLE STRIPS, 8 INCH (200 MM) or SHOULDER RUMBLE STRIPS, 16 INCH, (400 MM).’

**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.

**SURFACE TESTING OF PAVEMENTS (BDE)**

Effective: April 1, 2002

Revised: January 1, 2007

**Hot-Mix Asphalt (HMA) Overlays**

Revise Article 406.03(h) of the Standard Specifications to read:

“(h) Pavement Surface Test Equipment ..... 1101.10”

Revise Article 406.11 of the Standard Specifications to read:

“**406.11 Surface Tests.** The finished surface of the pavement shall be tested for smoothness within three days of paving. Testing shall be performed in the presence of the Engineer.

Prior to testing, a copy of the approval letter and recorded settings from the Profile Equipment Verification (PEV) Program shall be submitted to the Engineer; and all objects and debris shall be removed from the pavement.

(



a) Test Sections/Equipment.

- (1) High-Speed Mainline Pavement. High-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed greater than 45 mph. These sections shall be tested using a profile testing device.
- (2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed of 45 mph or less. These sections shall be tested using a profile testing device.
- (3) Miscellaneous Pavement. Miscellaneous pavement shall consist of:
  - a. pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1000 ft (300 m) and pavement within the superelevation transition of such curves;
  - b. pavement on vertical curves having a length of less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grades greater than or equal to three percent, as may occur on urban ramps or other constricted-space facilities;
  - c. the first or last 15 ft (4.5 m) of a pavement section where the Contractor is not responsible for the adjoining surface;
  - d. intersections;
  - e. variable width pavements;
  - f. side street returns;
  - g. crossovers;
  - h. connector pavement from mainline pavement expansion joint to the bridge approach pavement;
  - i. bridge approach pavement; and
  - j. other miscellaneous pavement surfaces (i.e. a turn lane) as determined by the Engineer.

Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge set to a 3/8 in. (10 mm) tolerance.

(b) Lots/Sublots. Mainline pavement test sections will be divided into lots and sublots.

- (1) Lots. A lot will be defined as a continuous strip of pavement 1 mile (1600 m) long and one lane wide. When the length of a continuous strip of pavement is less than 1 mile (1600 m), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length.
- (2) Sublots. Lots will be divided into 0.1 mile (160 m) sublots. A partial subplot greater than or equal to 250 ft (76 m) resulting from an interruption in the pavement will be subject to the same evaluation as a whole subplot. Partial sublots less than 250 ft (76 m) shall be included with the previous subplot for evaluation purposes.

(c) Testing Procedure. One wheel track shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to the edge of the lane away from traffic. A guide shall be used to maintain the proper distance.

The profile trace generated shall have stationing indicated every 500 ft (150 m) at a minimum. Both ends of the profile trace shall be labeled with the following information: contract number, beginning and ending stationing, which direction is up on the trace, which direction the data was collected, and the device operator name(s). The top portion of the Department supplied form, "Profile Report of Pavement Smoothness" shall be completed and secured around the trace roll.

Although surface testing of intermediate lifts will not be required, they may be performed at the Contractor's option. When this option is chosen, the testing shall be performed and the profile traces shall be generated as described above.

The Engineer may perform his/her own testing at any time for monitoring and comparison purposes.

- (d) Trace Reduction and Bump Locating Procedure. All traces shall be reduced. Traces produced by a mechanical recorder shall be reduced using an electronic scanner and computer software. This software shall calculate the profile index of each subplot in in./mile (mm/km) and indicate any high points (bumps) in excess of 0.30 in. (8 mm) with a line intersecting the profile on the printout. Computerized recorders shall provide the same information.

The profile index of each track, average profile index of each subplot, average profile index of the lot and locations of bumps shall be recorded on the form.

All traces and reports shall be provided within two working days of completing the testing to the Engineer for the project file. Traces from either a computerized profile testing device or analysis software used with a manual profile testing device shall display the settings used for the data reduction. The Engineer will compare these settings with the approved settings from the PEV Program. If the settings do not match, the results will be rejected and the section shall be retested/reanalyzed with the appropriate settings.

The Engineer will use the results of the testing to evaluate paving methods and equipment. If the average profile index of a lot exceeds 40.0 in./mile (635 mm/km) for high-speed mainline pavement or 65.0 in./mile (1025 mm/km) for low-speed mainline pavement, the paving operation will be suspended until corrective action is taken by the Contractor.

- (e) Corrective Work. All bumps in excess of 0.30 in. (8 mm) in a length of 25 ft (8 m) or less shall be corrected. If the bump is greater than 0.50 in. (13 mm), the pavement shall be removed and replaced. The minimum length of pavement to be removed shall be 3 ft (900 mm).
- (1) High-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 30.0 to 40.0 in./mile (475 to 635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace. Any subplot having a profile index greater than 40.0 in./mile (635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace, or replaced at the Contractor's option.
  - (2) Low-Speed Mainline Pavement. Any subplot having a profile index within the range of, greater than 45.0 to 65.0 in./mile (710 to 1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace. Any subplot having a profile index greater than 65.0 in./mile (1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace, or replaced at the Contractor's option.
  - (3) Miscellaneous Pavement. Surface variations which exceed the 3/8 in. (10 mm) tolerance will be marked by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed using either an approved grinding device consisting of multiple saws or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area squared normal to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the subplot(s) shall be retested. The Contractor shall furnish the profile tracing(s) and the completed form(s) to the Engineer within two working days after corrections are made. If the profile index and/or bumps still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

- (f) **Smoothness Assessments.** Assessments will be paid to or deducted from the Contractor for each subplot of mainline pavement, per the Smoothness Assessment Schedule. Assessments will be based on the average profile index of each subplot prior to performing any corrective work unless the Contractor has chosen to remove and replace the subplot. For sublots that are replaced, assessments will be based on the profile index determined after replacement.

Assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.

SMOOTHNESS ASSESSMENT SCHEDULE (HMA Overlays)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less	15.0 (240) or less	+\$150.00
>6.0 (95) to 10.0 (160)	>15.0 (240) to 25.0 (400)	+\$80.00
>10.0 (160) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$300.00

Smoothness assessments will not be applied to miscellaneous pavement sections.”

**Hot-Mix Asphalt (HMA) Pavement (Full-Depth)**

Revise Article 407.09 of the Standard Specifications to read:

**“407.09 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

SMOOTHNESS ASSESSMENT SCHEDULE (Full-Depth HMA)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less		+\$800.00
>6.0 (95) to 11.0 (175)	15.0 (240) or less	+\$550.00
>11.0 (175) to 17.0 (270)	>15.0 (240) to 25.0 (400)	+\$350.00
>17.0 (270) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$500.00"

Delete the third paragraph of Article 407.12 of the Standard Specifications.

### Portland Cement Concrete Pavement

Revise Article 420.10 of the Standard Specifications to read:

**420.10 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The finished surface of the pavement shall be tested for smoothness once the pavement has attained a flexural strength of 550 psi (3800 kPa) or a compressive strength of 3000 psi (20,700 kPa).

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.18 at no additional cost to the Department.

For pavement that is corrected by removal and replacement, the minimum length to be removed shall meet the requirements of either Class A or Class B patching.

SMOOTHNESS ASSESSMENT SCHEDULE (PCC)		
High-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less		+\$1200.00
>6.0 (95) to 11.0 (175)	15.0 (240) or less	+\$950.00
>11.0 (175) to 17.0 (270)	>15.0 (240) to 25.0 (400)	+\$600.00
>17.0 (270) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$750.00"

Delete the fourth paragraph of Article 420.20 of the Standard Specifications.

## Testing Equipment

Revise Article 1101.10 of the Standard Specifications to read:

**“1101.10 Pavement Surface Test Equipment.** Required surface testing and analysis equipment and their jobsite transportation shall be provided by the Contractor.

- (a) 16 ft (5 m) Straightedge. The 16 ft (5 m) straightedge shall consist of a metal I-beam mounted between two wheels spaced 16 ft (5 m) between the axles. Scratcher bolts which can be easily and accurately adjusted, shall be set at the 1/4, 1/2, and 3/4 points between the axles. A handle suitable for pushing and guiding shall be attached to the straightedge.
- (b) Profile Testing Device. The profile testing device shall have a decal displayed to indicate it has been tested through the Profile Equipment Verification (PEV) Program administered by the Department.

- (1) California Profilograph. The California Profilograph shall be either computerized or manual and have a frame 25 ft (8 m) in length supported upon multiple wheels at either end. The profile shall be recorded from the vertical movement of a wheel attached to the frame at mid point.

The California Profilograph shall be calibrated according to the manufacturer's recommendations and California Test 526. All calibration traces and calculations shall be submitted to the Engineer for the project file.

- (2) Inertial Profiler. The inertial profiler shall be either an independent device or a system that can be attached to another vehicle using one or two non-contact sensors to measure the pavement profile. The inertial profiler shall be capable of performing a simulation of the California Profilograph to provide results in the Profile Index format.

The inertial profiler shall be calibrated according to the manufacturer's recommendations. All calibration traces and calculations shall be submitted to the Engineer for the project file.

- (3) Trace Analysis. The Contractor shall reduce/evaluate these traces using a 0.00 in. (0.0 mm) blanking band and determine a Profile Index in in./mile (mm/km) for each section of finished pavement surface. Traces produced using a computerized profile testing device will be evaluated without further reduction. When using a manual profile testing device, the Contractor shall provide an electronic scanner, a computer, and software to reduce the trace. All analysis equipment (electronic scanner, computerized recorder, etc.) shall be able to accept 0.00 in. (0.0 mm) for the blanking band.

All traces from pavement sections tested with the profile testing device shall be recorded on paper with scales of 300:1 longitudinally and 1:1 vertically. Equipment and software settings of the profile testing device and analysis equipment shall be set to those values approved through the PEV Program.

The Engineer may retest the pavement at any time to verify the accuracy of the equipment.”

### **TEMPORARY EROSION AND SEDIMENT CONTROL (BDE)**

Effective: January 1, 2012

Revise the first paragraph of Article 280.04(f) of the Standard Specifications to read:

“(f) Temporary Erosion Control Seeding. This system consists of seeding all erodible/bare areas to minimize the amount of exposed surface area. Seed bed preparation will not be required if the surface of the soil is uniformly smooth and in a loose condition. Light disking shall be done if the soil is hard packed or caked. Erosion rills greater than 1 in. (25 mm) in depth shall be filled and area blended with the surrounding soil. Fertilizer nutrients will not be required.”

Delete the last sentence of Article 280.08(e) of the Standard Specifications.

### **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.”

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### **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.

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 non-execution 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."

#### **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<sub>P</sub> = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).  
BPI<sub>L</sub> = Bituminous Price Index, as published by the Department for the month prior to the letting, \$/ton (\$/metric ton).  
%AC<sub>V</sub> = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC<sub>V</sub> 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<sub>V</sub> and undiluted emulsified asphalt will be considered to be 65% AC<sub>V</sub>.  
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<sub>V</sub>.

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<sub>mb</sub> = 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<sub>L</sub> and BPI<sub>P</sub> 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:** \_\_\_\_\_

**FUEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)**

Effective: April 1, 2009

Revised: July 1, 2009

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name and sign and date the form shall make this contract exempt of fuel cost adjustments for all categories of work. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.

General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and work added by adjusted unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Added work paid for by time and materials will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.

(5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units

Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton
C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

Metric Units

Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times FUF \times Q$$

- Where: CA = Cost Adjustment, \$  
 FPI<sub>P</sub> = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)  
 FPI<sub>L</sub> = Fuel Price Index, as published by the Department for the month prior to the letting, \$/gal (\$/liter)  
 FUF = Fuel Usage Factor in the pay item(s) being adjusted  
 Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

**Progress Payments.** Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

**Final Quantities.** Upon completion of the work and determination of final pay quantities, an adjustment will be prepared to reconcile any differences between estimated quantities previously paid and the final quantities. The value for the balancing adjustment will be based on a weighted average of  $FPI_P$  and  $Q$  only for those months requiring the cost adjustment. The cost adjustment will be applicable to the final measured quantities of all applicable pay items.

**Basis of Payment.** Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the  $FPI_L$  and  $FPI_P$  in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$



Return With Bid

**ILLINOIS DEPARTMENT  
OF TRANSPORTATION**

**OPTION FOR  
FUEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of fuel cost adjustments in all categories. Failure to indicate "Yes" for any category of work at the time of bid will make that category of work exempt from fuel cost adjustment. After award, this form, when submitted shall become part of the contract.

**Contract No.:** \_\_\_\_\_

**Company Name:** \_\_\_\_\_

**Contractor's Option:**

Is your company opting to include this special provision as part of the contract plans for the following categories of work?

- |  |     |                          |
|--|-----|--------------------------|
| Category A Earthwork.                          | Yes | <input type="checkbox"/> |
| Category B Subbases and Aggregate Base Courses | Yes | <input type="checkbox"/> |
| Category C HMA Bases, Pavements and Shoulders  | Yes | <input type="checkbox"/> |
| Category D PCC Bases, Pavements and Shoulders  | Yes | <input type="checkbox"/> |
| Category E Structures                          | Yes | <input type="checkbox"/> |

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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



**Storm Water Pollution Prevention Plan**

Route	<u>F.A.I 64 / F.A.P. 998 / F.A.I 70</u>	Marked Rte.	<u>Interstate 64, Interstate 70</u>
Section	<u>82-1-R(A), 82-1-R(B)</u>	Project No.	<u>D-98-058-08</u>
County	<u>St. Clair</u>	Contract No.	<u>76C52</u>

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.

Omer Osman  
 Print Name  
Deputy Director of Highways Region Five Engineer  
 Title  
Illinois Department of Transportation  
 Agency

  
 Signature  
2/6/12  
 Date

**I. Site Description:**

A. Provide a description of the project location (include latitude and longitude):

This improvement consists of the construction of Ramps 70E64E, 55S70W, 70E55N and retaining wall (SN 082-W310); the reconstruction of Ramps 64W55N, 64W55S, 55N64E, O and P; the resurfacing of WB and EB I-64, NB and SB I-55, and Ramp 64W55S. The gross length of improvement is 43,646.53 feet (8.274 miles) and the net length of the improvement is 43,646.53 feet (8.274 miles) all of which is located in the city of East St. Louis and in St. Clair County, Illinois.

Longitude: 90° 08' 16.87" W  
 Latitude: 38° 37' 38.02"

B. Provide a description of the construction activity which is the subject of this plan:

This improvement consists of the construction of Ramps 70E64E, 55S70W, 70E55N and retaining wall (SN 082-W310); the reconstruction of Ramps 64W55N, 64W55S, 55N64E, O and P; the resurfacing of WB and EB I-64, NB and SB I-55 Ramp 64W55S. The work also includes drainage, lighting, signing, traffic control and protection, pavement markings, deep wells and all incidental and collateral work necessary to complete the improvements as shown on the plans and as described herein.

C. Provide the estimated duration of this project:

17 months

D. The total area of the construction site is estimated to be 33.18 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 18.33 acres.

- E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.70

- F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:

The soil stratigraphy consists generally of silty clay fill with cinders and brick fragments underlain by silty clay/silty loam, underlain in turn by sandy loam and fine- to medium- grained sand.

Silty Clay - Poorly drained with low to moderate susceptibility to erosion

Silty Loam - Poorly and moderately drained with moderate to high susceptibility to erosion

Sand and Sandy Loam - Well drained, essentially cohesionless and highly erodible

- G. Provide an aerial extent of wetland acreage at the site:

None

- H. Provide a description of potentially erosive areas associated with this project:

The potentially critical erosive areas are along embankments and ditches where the side slopes are 3:1 or steeper. This condition is typical along I-55, I-64, and all ramps due to existing conditions and right-of-way constraints. Also, all locations where stormwater runoff exits the proposed drainage system via flared end section should be considered potentially erosive.

- 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):

The nature and purpose of land disturbing activities on this project are to construct Ramps 70E64E, 55S70W, 70E55N and retaining wall (SN 082-W310); to reconstruct Ramps 64W55N, 64W55S, 55N64E, O and P; and to resurface WB and EB I-64, NB and SB I-55 Ramp 64W55S. Ditches and embankments will be constructed to accommodate the new infrastructure. The potentially critical erosive areas are along embankments and ditches where the side slopes are 3:1 or steeper. This condition is typical along I-55, I-64, and all ramps. Also, all locations where stormwater runoff exits the proposed drainage system via flared end section should be considered potentially erosive. There are no scheduled neighboring activities that will affect the soil erosion and sediment control plans and no off-site land disturbing activities.

- 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:

Metro East Sanitary District (MESD)

- 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:

Cahokia Creek

- 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.

None. Project site to be completely re-graded and vegetation re-established.

- 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
- 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 checked="" type="checkbox"/> Solid Waste Debris        | <input type="checkbox"/> Other (specify)   |
| <input type="checkbox"/> Paints                               | <input type="checkbox"/> Other (specify)   |
| <input type="checkbox"/> Solvents                             | <input type="checkbox"/> Other (specify)   |
| <input 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 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 checked="" type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips                      | <input type="checkbox"/> Sodding                                       |
| <input checked="" 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 checked="" type="checkbox"/> Temporary Mulching                | <input type="checkbox"/> Other (specify)                               |
| <input checked="" type="checkbox"/> Permanent Seeding                 | <input type="checkbox"/> Other (specify)                               |

Describe how the stabilization practices listed above will be utilized during construction:

1. Preservation of Mature Vegetation: Mature vegetation shall be preserved as specified in the contract and at the direction of the Engineer.
2. Protection of Trees: Trees shall be protected as specified in the contract and at the direction of the Engineer.
3. Temporary Erosion Control Seeding: This item will be applied to all bare areas every seven days to minimize the amount of exposed surface areas. Earth stockpiles shall be temporarily seeded if they are to remain unused for more than 14 days. Within the construction limits, areas which may be susceptible to erosion as determined by the Engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion. Bare and sparsely vegetated ground in highly erodible areas as determined by the Engineer shall be temporarily seeded at the beginning of construction where no construction activities are expected within seven days.
4. Temporary Mulching: Mulch as applied to temporary erosion control seeding shall be by the method specified in the contract and at the direction of the Engineer. Mulch will be paid separately and shall conform to Section 251 of the Standard Specifications.
5. Permanent Seeding: Seeding, Class 2 will be installed per IDOT specifications.
6. Erosion Control Blanket / Mulching: Erosion control blankets will be installed over fill slopes and in high velocity areas (i.e. ditches) that have been brought to final grade and seeded to protect slopes from erosion and allow seeds to germinate. Mulch, Method 2 will be applied in relatively flat areas to protect the disturbed areas and prevent further erosion.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

Permanent Stabilization – All areas disturbed by construction will be stabilized with permanent seeding immediately following the finished grading. Erosion control blankets will be installed over slopes 3:1 (H:V) or steeper which have been brought to final grade, topsoiled, and have been seeded to protect the slopes from rill and gully erosion and allow seed to germinate properly. Mulch, Method 2 will be used on relatively flat areas.

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 checked="" type="checkbox"/> Perimeter Erosion Barrier     | <input type="checkbox"/> Rock Outlet Protection                       |
| <input checked="" type="checkbox"/> Temporary Ditch Check         | <input checked="" 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 checked="" type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders                              |
| <input type="checkbox"/> Turf Reinforcement Mats                  | <input checked="" type="checkbox"/> Other (specify) Earth Ditch Berms |
| <input type="checkbox"/> Permanent Check Dams                     | <input type="checkbox"/> Other (specify)                              |
| <input type="checkbox"/> Permanent Sediment Basin                 | <input type="checkbox"/> Other (specify)                              |
| <input type="checkbox"/> Aggregate Ditch                          | <input type="checkbox"/> Other (specify)                              |
| <input checked="" type="checkbox"/> Paved Ditch                   | <input type="checkbox"/> Other (specify)                              |

Describe how the structural practices listed above will be utilized during construction:

1. Perimeter Erosion Barrier: Silt fences will be placed along the limits of construction in an effort to contain silt and runoff from leaving the site. The barrier will be constructed at the beginning of construction.
2. Temporary Ditch Checks: Ditch checks will be placed in swales where runoff velocity is high. Temporary ditch checks shall be located at every two foot fall/rise in ditch grade, and constructed in accordance with Section 280 of the Standard Specifications. Straw bales, hay bales, perimeter erosion barrier, and silt fence will not be permitted for temporary or permanent ditch checks. Ditch checks shall be composed of aggregate (if specified), erosion control blanket, or turf reinforcement mat.
3. Storm Drain Inlet Protection: Inlet and pipe protection will be provided for storm sewers and culverts. Sediment filters will be placed in all inlets, catch basins and manholes during construction and will be cleaned on a regular basis.
4. Paved Ditch: Paved ditches will be provided in areas where a large amount of runoff will drain toward a permanent barrier (i.e. barrier wall or retaining wall) as the design deems necessary. Paved ditches will be dimensioned in accordance with the most recent revision of IDOT Highway Standard No. 606401, and as directed in the plans.
5. Riprap: Stone riprap with filter fabric will be used as protection at the discharge end of all culvert end sections and as inlet/outlet protection to prevent scouring at the end of pipes and prevent downstream erosion.
6. Earth Ditch Berms: Earth ditch berms will be provided in ditches where runoff velocity is high and the ditch depth is sufficient to be utilized for detention. Earth ditch berms shall be located at every two foot fall/rise in ditch grade, and installed according to IDOT standards. Pipes of variable diameters will be installed for conveyance with each earth ditch berm. Pipe diameters to be used at each earth ditch berm are specified in the contract plans.
7. Stabilized Construction Exits: Stabilized Construction Exits or Entrances will be provided at locations as necessary for Contractor access. The entrance shall be maintained in a condition which shall prevent tracking or flowing of sediment onto Public-Right-Of-Way. Periodic Inspection and needed maintenance shall be provided after heavy use and each rainfall event.

As soon as reasonable access is available to all locations where water drains away from the project, inlet and pipe protection, and perimeter erosion barrier shall be installed as called out in this plan and directed by the Engineer.

All erosion control products furnished shall be specifically recommended by the manufacturer for the use specified in the erosion control plan prior to the approval and use of the product. The Contractor shall submit to the Engineer a notarized certification by the producer stating the intended use of the product and that the physical properties required for this application are met or exceeded. The contractor shall provide manufacturer installation procedures to facilitate the Engineer in construction inspection.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Once the construction is completed and the vegetation has been established, the perimeter barrier and storm drain inlet protection will be removed and areas disturbed by the removal will be stabilized with seeding and mulching. Riprap will remain in place.

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:

Stormwater detention is provided in the proposed ditches by using earth ditch berms. The total storage volume achieved within the project limits is 0.52 ac-ft.

Other controls include:

- a. Vehicle Entrances and Exits: Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways. The Contractor will provide the Resident Engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

- b. Material delivery, storage, and use: The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:

\* All products delivered to the project site must be properly labeled.

\* Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.

\* A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.

\* Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.

\* Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each contractor is to inform his/her employees and the Resident Engineer of this location.

- c. Stockpile Management: BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as, but not limited to, Portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:

\* Perimeter Erosion Barrier

\* Temporary Seeding

\* Temporary Mulch

- \* Plastic Covers
- \* Soil Binders
- \* Storm Drain Inlet Protection

The Contractor will provide the Resident Engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

d. Waste Disposal: No materials, including building materials, shall be discharged into waters of the State, except as authorized by a Section 404 permit.

e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or Local water disposal, sanitary sewer or septic system regulations.

f. The Contractor shall provide a written and graphic plan to the Resident Engineer identifying where each of the above areas will be located and how they are to be managed.

4. **Approved State or Local Laws:** The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

All management practices, controls, and other provisions provided in this plan are in accordance with "IDOT Standard Specification for Road and Bridge Construction and the Illinois Urban Manual."

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 manufacturer's specifications.

1. Seeding: All erodible bare earth will be temporarily seeded on a weekly basis to minimize the amount of erodible surface within the contract limits.
2. Perimeter erosion barrier: Sediment will be removed if the integrity of the fencing is in jeopardy and any fencing knocked down will be repaired immediately.
3. Erosion Control Blanket/Mulching: Any areas that fail will be repaired immediately.
4. Protection of trees/temporary tree protection: Any protective measures which are knocked down will be repaired immediately.
5. Ditch Checks: Sediment will be removed if the integrity of the ditch check is in jeopardy. Any ditch checks which fail will be repaired or replaced immediately.

All maintenance of erosion control systems will be the responsibility of the contractor until construction is complete and accepted by IDOT after final inspection. All locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically.

Inspection of these areas shall be made at least once every seven days and within 24 hours of the end of each 0.5 inches or greater rainfall, or an equivalent snowfall. The project shall additionally be inspected by the Construction Field Engineer on a bi-weekly basis to determine that erosion control efforts are in place and effective and if other erosion control work is necessary.

### 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](mailto:epa.swnoncomp@illinois.gov), telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Attn: Compliance Assurance Section  
1021 North Grand East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

### V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



## **PROJECT LABOR AGREEMENT - QUARTERLY EMPLOYMENT REPORT**

Public Act 97-0199 requires the Department to submit quarterly reports regarding the number of minorities and females employed under Project Labor Agreements. To assist in this reporting effort, the Contractor shall provide a quarterly workforce participation report for all minority and female employees working under the project labor agreement of this contract. The data shall be reported on Construction Form BC 820, Project Labor Agreement (PLA) Workforce Participation Quarterly Reporting Form available on the Department's website <http://www.dot.il.gov/const/conforms.html>.

The report shall be submitted no later than the 15<sup>th</sup> of the month following the end of each quarter (i.e. April 15 for the January – March reporting period). The form shall be emailed to [DOT.PLA.Reporting@illinois.gov](mailto:DOT.PLA.Reporting@illinois.gov) or faxed to (217) 524-4922.

Any costs associated with complying with this provision shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.



Illinois Department of Transportation  
**PROJECT LABOR AGREEMENT**

This Project Labor Agreement (“PLA”) is entered into this \_\_\_\_\_ day of \_\_\_\_\_, by and between the Illinois Department of Transportation (“IDOT” or “Department”) in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades Council made signatory hereto by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of itself and each of its affiliated members (individually and collectively, the “Union”). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT’s Prime Contractor and each of its relevant subcontractors of whatever tier (“Subcontractor” or “Subcontractors”) on Project Name (hereinafter, the “Project”).

**ARTICLE 1 - INTENT AND PURPOSES**

- 1.1. This PLA is entered into in furtherance of Illinois Executive Order No. 2010-03 and P.A. 097-0199. It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays or other disruptions to the prosecution of the work.
- 1.2. As a condition of the award of the contract for performance of work on the Project, IDOT's Prime Contractor and each of its Subcontractors shall be required to sign a “Contractor Letter of Assent”, in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company or entity that does not agree in writing to become bound by the terms of this PLA prior to commencing such work.
- 1.3. It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The Parties hereto also agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.
- 1.4. In the event of a variance or conflict, whether explicit or implicit, between the terms and conditions of this PLA and the provisions of any other applicable national, area, or local collective bargaining agreement, the terms and conditions of this PLA shall supersede and control.

For any work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors, and for any instrument calibration work and loop checking performed under the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, the preceding sentence shall apply only with respect to Articles I, II, V, VI, and VII.

- 1.5. Subject to the provisions of paragraph 1.4 of this Article, it is the parties' intent to respect the provisions of any other collective bargaining agreements that may now or hereafter pertain, whether between the Prime Contractor and one or more of the Unions or between a Subcontractor and one or more of the Unions. Accordingly, except and to the extent of any contrary provision set forth in this PLA, the Prime Contractor and each of its Subcontractors agrees to be bound and abide by the terms of the following in order of precedence: (a) the applicable collective bargaining agreement between the Prime Contractor and one or more of the Unions made signatory hereto; (b) the applicable collective bargaining agreement between a Subcontractor and one or more of the Unions made signatory hereto; or (c) the current applicable area collective bargaining agreement for the relevant Union that is the agreement certified by the Illinois Department of Labor for purposes of establishing the Prevailing Wage applicable to the Project. The Union will provide copies of the applicable collective bargaining agreements pursuant to part (c) of the preceding sentence to the Prime Contractor. Assignments by the Contractors amongst the trades shall be consistent with area practices; in the event of unresolved disagreements as to the propriety of such assignments, the provisions of Article VI shall apply.
- 1.6. Subject to the limitations of paragraphs 1.4 and 1.5 of this Article, the terms of each applicable collective bargaining agreement as determined in accordance with paragraph 1.5 are incorporated herein by reference, and the terms of this PLA shall be deemed incorporated into such other applicable collective bargaining agreements only for purposes of their application to the Project.
- 1.7. To the extent necessary to comply with the requirements of any fringe benefit fund to which the Prime Contractor or Subcontractor is required to contribute under the terms of an applicable collective bargaining agreement pursuant to the preceding paragraph, the Prime Contractor or Subcontractor shall execute all "Participation Agreements" as may be reasonably required by the Union to accomplish such purpose; provided, however, that such Participation Agreements shall, when applicable to the Prime Contractor or Subcontractor solely as a result of this PLA, be amended as reasonably necessary to reflect such fact. Upon written notice from any applicable fringe benefit fund, IDOT will withhold from the Prime Contractor payment of any delinquencies arising from this Project.
- 1.8. In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

## **ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS**

- 2.1 The term Construction Work as used herein shall include all “construction, prosecution, completion, or repair” work performed by a “laborer or mechanic” at the “site of the work” for the purpose of “building” the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5.
- 2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.
- 2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.
- 2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre-fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.
- 2.5 Unions commit to furnishing qualified and skilled craft persons as required by the Prime Contractor and its Subcontractors in fulfillment of their obligations to complete the Project. In order to promote the long-term development of a skilled and knowledgeable work force, the parties are encouraged to utilize apprentices to the maximum extent permitted by the applicable collective bargaining agreement.
- 2.6 The parties are mutually committed to promoting a safe working environment for all personnel at the job site. It shall be the responsibility of each employer to which this PLA applies to provide and maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.
- 2.7 The use or furnishing of alcohol or drugs and the conduct of any other illegal activity at the job-site is strictly prohibited. The parties shall take every practical measure consistent with the terms of applicable collective bargaining agreements to ensure that the job-site is free of alcohol and drugs.
- 2.8 All parties to this PLA agree that they shall not discriminate against any employee based on race, creed, color, national origin, union activity, age, or gender as required by all applicable federal, state, and local laws.
- 2.9 The Parties hereto agree that engineering consultants and materials testing employees, to the extent subject to the terms of this PLA, shall be fully expected to objectively and responsibly perform their duties and obligations owed to the Department without regard to the potential union affiliation of such employees or of other employees on the Project.

### **ARTICLE III - ADMINISTRATION OF AGREEMENT**

- 3.1 In order to assure that all parties have a clear understanding of the PLA and to promote harmony, a post-award pre-job conference will be held among the Prime Contractor, all Subcontractors and Union representatives prior to the start of any Construction Work on the Project. No later than the conclusion of such pre-job conference, the parties shall, among other matters, provide to one another contact information for their respective representatives (including name, address, phone number, facsimile number, e-mail). Nothing herein shall be construed to limit the right of the Department to discuss or explain the purpose and intent of this PLA with prospective bidders or other interested parties prior to or following its award of the job.
- 3.2 Representatives of the Prime Contractor and the Unions shall meet as often as reasonably necessary following award until completion of the Project to assure the effective implementation of this PLA.
- 3.3 Not less than once per month, Prime Contractor and all Subcontractors shall make available in writing to the Unions a Project status report that shall include, though not necessarily be limited to, planned activities for the next 30 day period and estimated numbers of employees by craft required for the next 30 day period. The purpose of this Project status report is to promote effective workforce planning and to facilitate resolution of any potential jurisdictional or other problems.
- 3.4 Not later than the earlier of (a) five business days following the pre-job conference, or (b) commencement of Construction Work, the Unions and Prime Contractor (on behalf of itself and all its subcontractors of whatever tier) shall confer and jointly designate a slate of three (3) permanent arbitrators (each a "Permanent Arbitrator") for the purpose of hearing disputes pursuant to Articles V and VII of this PLA. The slate of Permanent Arbitrators shall be selected from among the following individuals: Thomas F. Gibbons, Robert Perkovich, Byron Yaffee, and Glenn A. Zipp. In the event that the Unions and Prime Contractor are not able to agree on a full slate of three Permanent Arbitrators, the Department, after consultation with the Unions and Prime Contractor, shall designate such additional Permanent Arbitrators as may be necessary to establish the full slate. A single Permanent Arbitrator shall be selected from the slate of three on a rotating basis to adjudicate each arbitrable matter as it arises. In the event a Permanent Arbitrator is not available to adjudicate a particular matter in the order of rotation, the arbitration assignment shall pass to the next available Permanent Arbitrator.

### **ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS**

- 4.1 The standard work day for Construction Work on the Project shall be an established consecutive eight (8) hour period between the hours of 7:00 a.m. and 5:00 p.m. with one-half hour designated as unpaid period for lunch. The standard work week shall be five (5) consecutive days of work commencing on Monday. Starting time shall be established at the pre-job conference, and shall be applicable to all craft employees on the Project unless otherwise expressly agreed in writing. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate.

If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.

- 4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.
- 4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.
- 4.4 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, employment begins and ends at the Project site; employees shall be at their place of work at the starting time; and employees shall remain at their place of work until quitting time.
- 4.5 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, there shall be no limit on production by workmen, no restrictions on the full use of tools or equipment, and no restrictions on efficient use of manpower or techniques of construction other than as may be required by safety regulations.
- 4.6 The parties recognize that specialized or unusual equipment may be installed on the Project. In such cases, the Union recognizes the right of the Prime Contractor or Subcontractor to involve the equipment supplier or vendor's personnel in supervising the setting up of the equipment, making modifications and final alignment, and performing similar activities that may be reasonably necessary prior to and during the start-up procedure in order to protect factory warranties. The Prime Contractor or Subcontractor shall notify the Union representatives in advance of any work at the job-site by such vendor personnel in order to promote a harmonious relationship between the equipment vendor's personnel and other Project employees.
- 4.7 For the purpose of promoting full and effective implementation of this PLA, authorized Union representatives shall have access to the Project job-site during scheduled work hours. Such access shall be conditioned upon adherence to all reasonable visitor and security rules of general applicability that may be established for the Project site at the pre-job conference or from time to time thereafter.

## **ARTICLE V - GRIEVANCE AND ARBITRATION PROCEDURES**

- 5.1 Except as provided in Articles VI or VII, it is specifically agreed among the parties that any grievance or dispute arising out of the interpretation or application of this PLA shall be settled by means of the expedited arbitration process set forth in Paragraph 5.2 below. No such grievance or dispute shall be recognized unless called to the attention of the Prime Contractor and relevant Subcontractor by the Union or to the Union by the Prime Contractor or relevant Subcontractor within five (5) working days after the alleged violation was committed or discovered by the grieving party.

- 5.2 Grievances shall be settled according to the following procedure:
- 5.2.A. Step 1. The dispute shall be referred to the Steward of the craft union involved and a representative of the Prime Contractor and relevant Subcontractor at the job-site.
  - 5.2.B. Step 2. In the event that the Steward and the contractors' representatives at the job-site cannot reach agreement within two (2) working days after a meeting is arranged and held, the matter shall be referred to the Union Business Manager and to executive representatives of the Prime Contractor and relevant Subcontractor.
  - 5.2.C. Step 3. In the event the dispute is not resolved within five (5) working days after completion of Step 2, the relevant parties shall request a Permanent Arbitrator as determined in accordance with paragraph 3.4 of this PLA, who shall, within ten (10) working days, hear the grievance and make a written decision. Such decisions shall be final and binding on all parties. The parties shall each pay the expense of their own representative. The expense of the Permanent Arbitrator shall be divided equally between (1) the Prime Contractor and/or relevant Subcontractor, and (2) the involved Union.
- 5.3 Any failure of a party to comply fully with such final and binding decision of the Permanent Arbitrator may result in removal of the non-complying party from the site, in a holdback from the Prime Contractor or Subcontractor of any amounts awarded, or in such other relief as the Department may reasonably determine is necessary to promote final resolution of the dispute.
- 5.4 In the event any dispute or grievance should arise, the parties expressly agree that it shall be resolved without occurrence of any strike, work stoppage, slow-down or other prohibited activities as provided in Article VII of this PLA. Individuals or parties violating this section shall be subject to immediate discharge or other discipline.

#### **ARTICLE VI - JURISDICTIONAL DISPUTES**

- 6.1 As used in this Agreement, the term "jurisdictional dispute" shall be defined as any dispute, difference or disagreement involving the assignment of particular work to one class or craft of employees rather than to a different class or craft of employees, regardless of that Contractor's contractual relationship to any other employer, contractor, or organization on the site.
- 6.2 It is agreed by and between the parties to this Agreement that any and all jurisdictional disputes shall be resolved in the following manner; each of the steps hereinafter listed shall be initiated by the parties in sequence as set forth:
- (a) Negotiation by and between the Local Business Representative of the disputing Union and Employer shall take place within two (2) business days. Business days are defined as Monday through Friday excluding contract holidays. Such negotiations shall be pursued until it is apparent that the dispute cannot be resolved at the local level.

- (b) The International Representatives of the disputing Union shall meet or confer and attempt to resolve said dispute. This meeting shall take place within two (2) business days. Business days are defined as Monday through Friday excluding contract holidays.
- (c) The parties to the Jurisdictional Dispute shall submit the dispute directly to an Arbitrator after complying with paragraph (2b) above. The parties shall meet with the Arbitrator within three (3) business days. Business days are defined as Monday through Friday excluding contract holidays. An Arbitrator will be selected based on availability from the slate of permanent Arbitrators. The Arbitrator's bench decision will be given the day of the hearing and will be final and legally binding on this project only. The Arbitrator's bench decision will be implemented without delay. The cost of Arbitration will be shared equally by the disputing parties. Any party to the dispute can require that a "long form" written decision be provided from the Arbitrator, however the cost of the "long form" written decision will be the responsibility of the party making the request.

Notes:

- A jurisdictional dispute may be submitted based upon a pre-job assignment.
  - If any party to the jurisdictional disputes does not fully comply with the steps and time limits with each step, then the party in non-compliance will lose by "automatic default".
  - Time limits at any step can be extended if all parties to the jurisdictional dispute mutually agree in writing.
  - All parties to a jurisdictional dispute can mutually agree to waive the time limits in steps (a) and (b) and proceed directly to an expedited arbitration hearing.
- (d) In rendering his decision, the Arbitrator shall determine:
- (1) First whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between the National or International Unions to the dispute governs;
  - (2) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider whether there is a previous decision of record governing the case;
  - (3) If the Arbitrator finds that a previous decision of record governs the case, the Arbitrator shall apply the decision of record in rendering his decision except under the following circumstances. After notice to the other parties to the dispute prior to the hearing that it intends to challenge the decision of record, if a trade challenging the decision of record is able to demonstrate that the recognized and established prevailing practice in the locality of the work has been contrary to the applicable decision of record, and that historically in that locality the work in dispute has not been performed by the other craft or crafts, the Arbitrator may rely on such prevailing practice rather than the decision of record.

If the craft relying on the decision of record demonstrates that it has performed the work in dispute in the locality of the job, then the Arbitrator shall apply the decision of record in rendering his decision. If the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wagers or by the use of vertical agreements, the Arbitrator shall rely on the decision of record rather than the prevailing practice in the locality.

- (4) If no decision of record is applicable, the Arbitrator shall then consider the established trade practice in the industry and prevailing practice in the locality; and
- (5) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interest of the consumer or the past practice of the employer shall not be ignored.

The Arbitrator shall set forth the basis for his decision and shall explain his findings regarding the applicability of the above criteria. If lower-ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the job in dispute.

- (6) Agreements of record are applicable only to the party's signatory to such agreements. Decisions of record are applicable to all trades.
- (7) The Arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an Arbitrator.

6.3 The signatory parties to this Agreement agree that jurisdictional disputes cannot and shall not interfere with the efficient and continuous operations required for the successful application of this Agreement. In the event a dispute arises, the Contractor's assignment shall be followed until the dispute is resolved.

6.4 Equipment or material delivered to the job site will be unloaded promptly without regard to jurisdictional disputes which will be handled as per the provisions of this Agreement. The Contractor will supply the Union with delivery schedules, allowing as much time as possible to insure the appropriate crafts will be available to unload the materials or equipment.

6.5 All signatory affiliates agree that upon request, a representative shall be assigned without delay to attempt a settlement in the event of a question on assignments.

## **ARTICLE VII - WORK STOPPAGES AND LOCKOUTS**

7.1 During the term of this PLA, no Union or any of its members, officers, stewards, employees, agents or representatives shall instigate, support, sanction, maintain, or participate in any strike, picketing, walkout, work stoppage, slow down or other activity that interferes with the routine and timely prosecution of work at the Project site or at any other contractor's or supplier's facility that is necessary to performance of work at the Project site.



Hand billing at the Project site during the designated lunch period and before commencement or following conclusion of the established standard workday shall not, in itself, be deemed an activity that interferes with the routine and timely prosecution of work on the Project.

- 7.2 Should any activity prohibited by paragraph 7.1 of this Article occur, the Union shall undertake all steps reasonably necessary to promptly end such prohibited activities. No Union complying with its obligations under this Article shall be liable for acts of employees for which it has no responsibility or for the unauthorized acts of employees it represents. Any employee who participates in or encourages any activity prohibited by paragraph 7.1 shall be immediately suspended from all work on the Project for a period equal to the greater of (a) 60 days; or (b) the maximum disciplinary period allowed under the applicable collective bargaining agreement for engaging in comparable unauthorized or prohibited activity.
- 7.3 During the term of this PLA, the Prime Contractor and its Subcontractors shall not engage in any lockout at the Project site of employees covered by this Agreement.
- 7.4 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.
- 7.5 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.6 of this Article.
- 7.6 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:
  - 7.6.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to Article III of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.
  - 7.6.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not before twenty-four (24) hours after the written notice to all parties involved as required above.
  - 7.6.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.

7.6.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.

7.6.E Such Award may be enforced by any court of competent jurisdiction upon the filing of the Award and such other relevant documents as may be required. Facsimile or other hardcopy written notice of the filing of such enforcement proceedings shall be given to the other relevant parties. In a proceeding to obtain a temporary order enforcing the Permanent Arbitrator's Award as issued under this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Permanent Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

- 7.7 Individuals found to have violated the provisions of this Article are subject to immediate termination. In addition, IDOT reserves the right to terminate this PLA as to any party found to have violated the provisions of this Article.
- 7.8 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.
- 7.9 The fees and expenses of the Permanent Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

#### **ARTICLE VIII – MISCELLANEOUS**

- 8.1 If any Article or provision of this PLA shall be declared invalid, inoperative or unenforceable by operation of law or by final non-appealable order of any tribunal of competent jurisdiction, such provision shall be deemed severed or limited, but only to the extent required to render the remaining provisions of this PLA enforceable consistent with the intent of the parties. The remainder of this PLA or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.
- 8.2 The term of this PLA shall commence as of and from the date of the notice of award to the Prime Contractor and shall end upon final acceptance by IDOT of all work on the Project by the parties hereto.
- 8.3 This PLA may not be changed or modified except by the subsequent written agreement of the parties. All parties represent that they have the full legal authority to enter into this PLA. This PLA may be executed by the parties in one or more counterparts.

- 8.4 Any liability arising out of this PLA shall be several and not joint. IDOT shall not be liable to any person or other party for any violation of this PLA by any other party, and no Contractor or Union shall be liable for any violation of this PLA by any other Contractor or Union.
- 8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

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**Execution Page**

**Illinois Department of Transportation**

\_\_\_\_\_  
William R. Frey, Interim Director of Highways

\_\_\_\_\_  
Matthew R. Hughes, Director - Finance & Administration

\_\_\_\_\_  
Ellen Schanzle-Haskins, Chief Counsel

\_\_\_\_\_  
Ann L. Schneider, Secretary

\_\_\_\_\_  
(Date)

**Illinois AFL-CIO Statewide Project Labor Agreement Committee, representing the local unions listed below:**

\_\_\_\_\_

\_\_\_\_\_  
(Date)

**List Union Locals:**

**\*\* RETURN WITH BID \*\***

Exhibit A – Contractor Letter of Assent

\_\_\_\_\_  
(Date)

To All Parties:

In accordance with the terms and conditions of the contract for Construction Work on [ ], this Letter of Assent hereby confirms that the undersigned Prime Contractor or Subcontractor agrees to be bound by the terms and conditions of the Project Labor Agreement established and entered into by the Illinois Department of Transportation in connection with said Project.

It is the understanding and intent of the undersigned party that this Project Labor Agreement shall pertain only to the identified Project. In the event it is necessary for the undersigned party to become signatory to a collective bargaining agreement to which it is not otherwise a party in order that it may lawfully make certain required contributions to applicable fringe benefit funds, the undersigned party hereby expressly conditions its acceptance of and limits its participation in such collective bargaining agreement to its work on the Project.

\_\_\_\_\_  
(Authorized Company Officer)

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

**\*\* RETURN WITH BID \*\***

## ILLINOIS DEPARTMENT OF LABOR

### PREVAILING WAGES FOR DEŽ4 =2 :C COUNTY EFFECTIVE APRIL 2012

The Prevailing rates of wages are included in the Contract proposals which are subject to Check Sheet #5 of the Supplemental Specifications and Recurring Special Provisions. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and Check Sheet #5 of the Contract, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at <http://www.state.il.us/agency/idol/> or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.

# Saint Clair County Prevailing Wage for April 2012

Trade Name	RG	TYP	C	Base	FRMAN	*M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
=====	==	===	=	=====	=====	=====	===	===	=====	=====	=====	=====
ASBESTOS ABT-GEN		BLD		28.800	29.300	1.5	1.5	2.0	5.550	10.35	0.000	0.800
ASBESTOS ABT-MEC		BLD		29.160	30.160	1.5	1.5	2.0	6.700	2.750	0.000	0.000
BOILERMAKER		BLD		31.500	34.000	1.5	1.5	2.0	7.070	18.73	1.000	0.350
BRICK MASON		BLD		28.790	30.640	1.5	1.5	2.0	7.500	9.430	2.000	0.400
CARPENTER		ALL		33.880	35.380	1.5	1.5	2.0	6.300	6.250	0.000	0.400
CEMENT MASON		ALL		31.000	32.000	1.5	1.5	2.0	8.750	11.00	0.000	0.200
CERAMIC TILE FNSHER		BLD		25.520	0.000	1.5	1.5	2.0	5.900	5.110	0.000	0.470
ELECTRIC PWR EQMT OP		ALL		34.800	0.000	1.5	2.0	2.0	5.850	9.750	0.000	0.260
ELECTRIC PWR GRNDMAN		ALL		25.980	0.000	1.5	2.0	2.0	4.370	7.280	0.000	0.190
ELECTRIC PWR LINEMAN		ALL		40.020	41.950	1.5	2.0	2.0	6.720	11.21	0.000	0.300
ELECTRIC PWR TRK DRV		ALL		28.410	0.000	1.5	2.0	2.0	4.780	7.950	0.000	0.210
ELECTRICIAN		ALL		36.510	38.700	1.5	1.5	2.0	7.210	7.490	0.000	0.640
ELECTRONIC SYS TECH		BLD		29.920	31.670	1.5	1.5	2.0	3.200	7.400	0.000	0.250
ELEVATOR CONSTRUCTOR		BLD		43.345	48.760	2.0	2.0	2.0	11.03	11.96	2.600	0.000
FLOOR LAYER		BLD		29.080	29.830	1.5	1.5	2.0	6.300	6.250	0.000	0.400
GLAZIER		BLD		32.780	0.000	2.0	2.0	2.0	9.020	10.80	2.630	0.310
HT/FROST INSULATOR		BLD		36.760	37.760	1.5	1.5	2.0	7.550	10.76	0.000	0.500
IRON WORKER		ALL		31.000	33.000	1.5	1.5	2.0	7.110	12.35	0.000	0.420
LABORER	N	ALL		28.300	28.800	1.5	1.5	2.0	5.550	10.35	0.000	0.800
LABORER	S	ALL		26.310	26.810	1.5	1.5	2.0	5.550	12.34	0.000	0.800
MACHINIST		BLD		43.160	45.160	1.5	1.5	2.0	7.980	8.950	0.000	0.000
MARBLE FINISHERS		BLD		25.520	0.000	1.5	1.5	2.0	5.900	5.110	0.000	0.470
MARBLE MASON		BLD		28.790	30.640	1.5	1.5	2.0	7.500	9.430	2.000	0.400
MILLWRIGHT		ALL		33.880	35.380	1.5	1.5	2.0	6.300	6.250	0.000	0.400
OPERATING ENGINEER		BLD	1	33.650	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	2	32.520	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	3	28.040	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	4	28.100	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	5	27.770	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	6	34.200	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	7	34.500	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	8	34.780	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		BLD	9	35.650	36.650	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	1	32.150	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	2	31.020	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	3	26.540	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	4	26.600	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	5	26.270	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	6	32.700	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	7	33.000	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	8	33.280	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
OPERATING ENGINEER		HWY	9	34.150	35.150	1.5	1.5	2.0	8.400	16.50	0.000	1.000
PAINTER		BLD		29.250	30.750	1.5	1.5	2.0	5.000	7.920	0.000	0.600
PAINTER		HWY		30.450	31.950	1.5	1.5	2.0	5.000	7.920	0.000	0.600
PAINTER OVER 30FT		BLD		30.250	31.750	1.5	1.5	2.0	5.000	7.920	0.000	0.600
PAINTER PWR EQMT		BLD		30.250	31.750	1.5	1.5	2.0	5.000	7.920	0.000	0.600
PAINTER PWR EQMT		HWY		31.450	32.950	1.5	1.5	2.0	5.000	7.920	0.000	0.600
PILEDRIVER		ALL		33.880	35.380	1.5	1.5	2.0	6.300	6.250	0.000	0.400
PIPEFITTER	NW	BLD		36.000	38.000	1.5	1.5	2.0	6.690	8.000	0.000	0.750
PIPEFITTER	SE	BLD		35.350	37.850	1.5	1.5	2.0	7.500	5.400	0.000	0.575
PLASTERER		BLD		30.250	31.250	1.5	1.5	2.0	8.750	8.300	0.000	0.050
PLUMBER	NW	BLD		35.150	37.650	1.5	1.5	2.0	6.000	6.600	0.000	0.400
PLUMBER	SE	BLD		35.350	37.850	1.5	1.5	2.0	7.500	5.400	0.000	0.575
ROOFER		BLD		28.650	30.650	1.5	1.5	2.0	8.150	6.650	0.000	0.200
SHEETMETAL WORKER		ALL		31.690	33.190	1.5	1.5	2.0	7.130	6.730	1.910	0.360
SPRINKLER FITTER		BLD		37.830	40.830	2.0	2.0	2.0	8.550	10.35	0.000	0.850
TERRAZZO FINISHER		BLD		31.240	0.000	1.5	1.5	2.0	5.900	2.730	0.000	0.130
TERRAZZO MASON		BLD		32.530	32.830	1.5	1.5	2.0	5.900	4.980	0.000	0.140

TRUCK DRIVER	ALL	1	30.460	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	ALL	2	30.890	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	ALL	3	31.120	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	ALL	4	31.380	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	ALL	5	32.200	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	O&C	1	24.370	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	O&C	2	24.710	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	O&C	3	24.900	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	O&C	4	25.100	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250
TRUCK DRIVER	O&C	5	25.760	0.000	1.5	1.5	2.0	10.05	4.775	0.000	0.250

Legend:

M-F>8 (Overtime is required for any hour greater than 8 worked each day, Monday through Friday.)

OSA (Overtime is required for every hour worked on Saturday)

OSH (Overtime is required for every hour worked on Sunday and Holidays)

H/W (Health & Welfare Insurance)

Pensn (Pension)

Vac (Vacation)

Trng (Training)

## Explanations

### ST. CLAIR COUNTY

LABORERS (NORTH) - The area bounded by Route 159 to a point south of Fairview Heights and west-southwest to Route 3 at Monroe County line.

PLUMBERS & PIPEFITTERS (SOUTHEAST) - That part of the county bordered by Rt. 50 on the North and West including Belleville.

PLUMBERS (NORTHWEST) - Towns of Aloraton, Brooklyn, Cahokia, Caseyville, Centreville, Dupo, East Carondelet, E. St. Louis, Fairview Heights, French Village, National City, O'Fallon, Sauget, and Washington Park.

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

### EXPLANATION OF CLASSES



ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

#### CERAMIC TILE FINISHER AND MARBLE FINISHER

The handling, at the building site, of all sand, cement, tile, marble or stone and all other materials that may be used and installed by [a] tile layer or marble mason. In addition, the grouting, cleaning, sealing, and mixing on the job site, and all other work as required in assisting the setter. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

#### ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

#### OPERATING ENGINEER - BUILDING

GROUP I. Cranes, Dragline, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines or Backfiller, Cherrypickers, Overhead Cranes, Roller - Steam or Gas, Concrete Pavers, Excavators, Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, Derrick-Type Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Tournapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than Derrick Type), Mud Jacks, or Well Drilling Machines, Boring Machines or Track Jacks, Mixers, Conveyors (Two), Air Compressors (Two), Water Pumps regardless of size (Two), Welding Machines (Two), Siphons or Jets (Two), Winch Heads or Apparatuses (Two), Light Plants (Two), All Tractors regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (One), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, self-propelled concrete saws of all types and sizes with their attachments, gob-hoppers, excavators

all sizes, the repair and greasing of all diesel hammers, the operation and set-up of bidwells, water blasters of all sizes and their clutches, hydraulic jacks where used for hoisting, operation of log skidders, iceolators used on and off of pipeline, condor cranes, bow boats, survey boats, bobcats and all their attachments, skid steer loaders and all their attachments, creter cranes, batch plants, operator (all sizes), self propelled roto mills, operation of conveyor systems of any size and any configuration, operation, repair and service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, Nail launchers when mounted on a machine or self-propelled, operation of con-cover machines, and all Operators except those listed below).

GROUP II. Assistant Operators.

GROUP III. Air Compressors (One), Water Pumps, regardless of Size (One), Waterblasters (one), Welding Machine (One), Mixers (One Bag), Conveyor (One), Siphon or Jet (One), Light Plant (One), Heater (One), Immobile Track Air (One), and Self Propelled Walk-Behind Rollers.

GROUP IV. Asphalt Spreader Oilers, Fireman on Whirlies and Heavy Equipment Oilers, Truck Cranes, Dredges, Monigans, Large Cranes - (Over 65-ton rated capacity) Concrete Plant Oiler, Blacktop Plant Oiler, and Creter Crane Oiler (when required).

GROUP V. Oiler.

GROUP VI. Operators on equipment with Booms, including jibs, 100 feet and over, and less than 150 feet long.

GROUP VII. Operators on equipment with Booms, including jibs, 150 feet and over, and less than 200 feet long.

GROUP VIII. Operators on Equipment with Booms, including jibs, 200 feet and over; Tower Cranes; and Whirlie Cranes.

GROUP IX. Master Mechanic

OPERATING ENGINEERS - Highway

GROUP I. Cranes, Dragline, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines or Backfiller, Cherrypickers, Overhead Cranes, Roller - Steam or Gas, Concrete Pavers, Excavators, Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, Derrick-Type Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Tournapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than Derrick Type), Mud Jacks, Well Drilling Machines, Boring Machines, Track Jacks, Mixers, Conveyors (Two), Air Compressors (Two), Water Pumps regardless of size (Two), Welding Machines (Two), Siphons or Jets (Two), Winch Heads or Apparatuses (Two), Light Plants (Two), All Tractors regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (One), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, self-propelled concrete saws

of all types and sizes with their attachments, gob-hoppers, excavators all sizes, the repair and greasing of all diesel hammers, the operation and set-up of bidwells, water blasters of all sizes and their clutches, hydraulic jacks where used for hoisting, operation of log skidders, iceolators used on and off of pipeline, condor cranes, bow boats, survey boats, bobcats and all their attachments, skid steer loaders and all their attachments, creter cranes, batch plants, operator (all sizes), self propelled roto mills, operation of conveyor systems of any size and any configuration, operation, repair and service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, Nail launchers when mounted on a machine or self-propelled, operation of con-cover machines, and all Operators (except those listed below).

GROUP II. Assistant Operators.

GROUP III. Air Compressors (One), Water Pumps, regardless of Size (One), Waterblasters (one), Welding Machine (One), Mixers (One Bag), Conveyor (One), Siphon or Jet (One), Light Plant (One), Heater (One), Immobile Track Air (One), and Self Propelled Walk-Behind Rollers.

GROUP IV. Asphalt Spreader Oilers, Fireman on Whirlies and Heavy Equipment Oilers, Truck Cranes, Dredges, Monigans, Large Cranes - (Over 65-ton rated capacity) Concrete Plant Oiler, Blacktop Plant Oiler, and Creter Crane Oiler (when required).

GROUP V. Oiler.

GROUP VI. Operators on equipment with Booms, including jibs, 100 feet and over, and less than 150 feet long.

GROUP VII. Operators on equipment with Booms, including jibs, 150 feet and over, and less than 200 feet long.

GROUP VIII. Operators on Equipment with Booms, including jibs, 200 feet and over; Tower Cranes; and Whirlie Cranes.

GROUP IX. Mechanic

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vactor trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while

employed on hazardous waste work.  
TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

#### TERRAZZO FINISHER

The handling of all materials used for Mosaic and Terrazzo work including preparing, mixing by hand, by mixing machine or transporting of pre-mixed materials and distributing with shovel, rake, hoe, or pail, all kinds of concrete foundations necessary for Mosaic and Terrazzo work, all cement terrazzo, magnesite terrazzo, Do-O-Tex terrazzo, epoxy matrix ter-razzo, exposed aggregate, rustic or rough washed for exterior or interior of buildings placed either by machine or by hand, and any other kind of mixture of plastics composed of chips or granules when mixed with cement, rubber, neoprene, vinyl, magnesium chloride or any other resinous or chemical substances used for seamless flooring systems, and all other building materials, all similar materials and all precast terrazzo work on jobs, all scratch coat used for Mosaic and Terrazzo work and sub-bed, tar paper and wire mesh (2x2 etc.) or lath. The rubbing, grinding, cleaning and finishing of same either by hand or by machine or by terrazzo resurfacing equipment on new or existing floors. When necessary finishers shall be allowed to assist the mechanics to spread sand bed, lay tarpaper and wire mesh (2x2 etc.) or lath. The finishing of cement floors where additional aggregate of stone is added by spreading or sprinkling on top of the finished base, and troweled or rolled into the finish and then the surface is ground by grinding machines.

#### Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

#### LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the

classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.