

INSTRUCTIONS

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

PREQUALIFICATION

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

WHO CAN BID ?

Bids will be accepted from only those companies that request and receive written Authorization to Bid from IDOT's Central Bureau of Construction. This does not apply to Small Business Set-Asides.

REQUESTS FOR AUTHORIZATION TO BID

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

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

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

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

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

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

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

BID SUBMITTAL GUIDELINES AND CHECKLIST

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

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

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

STANDARD GUIDELINES FOR SUBMITTING BIDS

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

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

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

Cover page (the sheet that has the item number on it) **followed by your bid (the Pay Items)**. If you are using special software or CBID to generate your schedule of prices, do not include the blank pages of the schedule of prices that came with the proposal package.

Page 4 (Item 9) – Check “YES” if you will use a subcontractor(s). Include the subcontractor(s) name, address, general type of work to be performed and the dollar amount (if over \$50,000). If you will use subcontractor(s) but are uncertain who or the dollar amount; check “YES” but leave the lines blank.

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

Page 10 (Paragraph K) – (Not applicable to federally funded projects) List the Union Local Name and number or certified training programs that you have in place. **Your bid will not be read if this is not completed.** Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.

Page 11 (Paragraph L) - A copy of your State Board of Elections certificate of registration is no longer required with your bid.

Page 11 (Paragraph M) – Indicate if your company has hired a lobbyist in connection with the job for which you are submitting the bid proposal.

Page 12 (Paragraph C) – This is a work sheet to determine if a completed Form A is required. It is not part of the form and you do not need to make copies for each Form A that is filled out.

Pages 14-17 (Form A) – One Form A (4 pages) is required for each applicable person in your company. Copies of the Forms can be used and only need to be changed when the financial information changes. The certification signature and date must be original for each letting. Do not staple the forms together.

If you answered “NO” to all of the questions in Paragraph C (page 12), complete the first section (page 14) with your company information and then sign and date the Not Applicable statement on page 17.

Page 18 (Form B) - If you check “YES” to having other current or pending contracts it is acceptable to use the phrase, “See Affidavit of Availability on file”. **Ownership Certification** (at the bottom of the page) - Check N/A if the Form A you submitted accounts for 100 percent of the company ownership. Check YES if any percentage of ownership falls outside of the parameters that require reporting on the Form A. Checking NO indicates that the Form A you submitted is not correct and you will be required to submit a revised Form A.

Page 20 (Workforce Projection) – Be sure to include the Duration of the Project. It is acceptable to use the phrase “Per Contract Specifications”.

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

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

The Bid Letting is now available in streaming Audio/Video from the IDOT Web Site. A link to the stream will be placed on the main page of the current letting on the day of the Letting. The stream will not begin until 10 AM. The actual reading of the bids does not begin until approximately 10:20 AM.

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

QUESTIONS: pre-letting up to execution of the contract

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

QUESTIONS: following contract execution

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

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RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting November 9, 2012

NOTICE TO PROSPECTIVE BIDDERS

This proposal can be used for bidding purposes by only those companies that request and receive written AUTHORIZATION TO BID from IDOT's Central Bureau of Construction. This does not apply to Small Business Set-Asides.

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL

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



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 63738
COOK County
Section 08-00094-00-PV (Schaumburg)
Route FAU 2556 (Walnut Lane)
Project M-9003(494)
District 1 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

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

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)

Page intentionally left blank

RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____

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

**Contract No. 63738
COOK County
Section 08-00094-00-PV (Schaumburg)
Project M-9003(494)
Route FAU 2556 (Walnut Lane)
District 1 Construction Funds**

Work consists of pavement removal, earth excavation, construction of storm sewers, watermain, sanitary sewer force main, full-depth HMA pavement combination curb and gutter, PCC parking lane, sidewalks, street lighting improvements and landscaping; project limits are Bode Road to Golf Road (IL 58) located in the Village of Schaumburg.

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

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

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

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

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

Check box Yes
 Check box No

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

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

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
COOK	031	01	08-00094-00-PV (SCHAUMBURG)	M-9003/494/000	FAU 2556

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2000120	T-ACERX FREM AB 2-1/2	EACH	4.000 X	=		=	
A2002920	T-CELTIS OCCID 2-1/2	EACH	2.000 X	=		=	
A2004520	T-GINKGO BIL PS 2-1/2	EACH	2.000 X	=		=	
A2005020	T-GYMNOCOLA DIO 2-1/2	EACH	2.000 X	=		=	
A2008517	T-ULMUS JAP X WIL 2.5	EACH	3.000 X	=		=	
B2006320	T-SYRG RT IS TF 2-1/2	EACH	6.000 X	=		=	
C2C078G3	S-ROSA X KNOCK OUT 3G	EACH	10.000 X	=		=	
C2003424	S-HYDRA ARBOR AN 2'	EACH	8.000 X	=		=	
K0012990	P PL ORNAMENT T GAL P	UNIT	70.000 X	=		=	
K0029634	WEED CONTR PRE-EM GRN	POUND	5.000 X	=		=	
K1001988	IRRIGATION SYSTEM SPL	L SUM	1.000 X	=		=	
K1005481	SHRED BARK MULCH 3	SQ YD	226.000 X	=		=	
LR420010	PCC PVMT SPL	SQ YD	23.000 X	=		=	
XX001047	VALVE VAULTS ABANDON	EACH	14.000 X	=		=	
XX002136	PRESSURE CONNECTION	EACH	2.000 X	=		=	

FAU 2556
 08-00094-00-PV (SCHAUMBURG)
 COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63738

ECMS002 DTGECM03 ECMR003 PAGE 2
 RUN DATE - 10/04/12
 RUN TIME - 183142

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX003848	GYP SUM PLACEMENT	POUND	162.000 X	=		=	
XX005224	GATE VL/VLT COMP	EACH	12.000 X	=		=	
XX006159	MEDIAN SOIL MIX F & P	CU YD	43.000 X	=		=	
XX007021	PED ACT CRSS WARN SYS	EACH	1.000 X	=		=	
XX007184	RPZ BKFL PREV 1.5 T1	EACH	1.000 X	=		=	
XX008734	FORCEMAIN ABANDONED	L SUM	1.000 X	=		=	
X0327006	ROADWAY LT POLE IO	EACH	1.000 X	=		=	
X0327036	BIKE PATH REM	SQ YD	39.000 X	=		=	
X0839900	SAN SEW REMOV 6	FOOT	22.000 X	=		=	
X2130010	EXPLOR TRENCH SPL	FOOT	290.000 X	=		=	
X4022000	TEMP ACCESS- COM ENT	EACH	10.000 X	=		=	
X4023000	TEMP ACCESS- ROAD	EACH	8.000 X	=		=	
X4201600	PCC PAVT VAR DP	SQ YD	40.000 X	=		=	
X4230800	PCC DRIVEWAY PVT 8 SP	SQ YD	605.000 X	=		=	
X5610650	WATER MAIN ABANDONED	L SUM	1.000 X	=		=	

FAU 2556
 08-00094-00-PV (SCHAUMBURG)
 COOK

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63738

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 RUN DATE - 10/04/12
 RUN TIME - 183142

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X5620035	WAT SER CONN 1 1/2	EACH	1.000 X	=		=	
X6060048	COMB CC&G TB6.18 SPL	FOOT	57.000 X	=		=	
X6064200	COMB CC&G TB6.12 SPL	FOOT	535.000 X	=		=	
X7010216	TRAF CONT & PROT SPL	L SUM	1.000 X	=		=	
X7030030	WET REF TEM TAPE T3 4	FOOT	2,564.000 X	=		=	
X7030055	WET REF TEM TPE T3 24	FOOT	59.000 X	=		=	
X7200105	SIGN PANEL T1 SPL	SQ FT	162.000 X	=		=	
X8440116	RELOC EX LT UNIT SPL	EACH	8.000 X	=		=	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X	=		=	
Z0030850	TEMP INFO SIGNING	SQ FT	168.000 X	=		=	
Z0033028	MAINTAIN LIGHTING SYS	CAL MO	9.000 X	=		=	
Z0056608	STORM SEW WM REQ 12	FOOT	743.000 X	=		=	
Z0056610	STORM SEW WM REQ 15	FOOT	87.000 X	=		=	
Z0056612	STORM SEW WM REQ 18	FOOT	91.000 X	=		=	
Z0056616	STORM SEW WM REQ 24	FOOT	199.000 X	=		=	

FAU 2556
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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
Z0056620	STORM SEW WM REQ 30	FOOT	60.000 X	=	=	=	=
Z0056622	STORM SEW WM REQ 36	FOOT	44.000 X	=	=	=	=
Z0056800	SAN SEW 6	FOOT	22.000 X	=	=	=	=
Z0057000	SAN SEW 10	FOOT	2,021.000 X	=	=	=	=
Z0062456	TEMP PAVEMENT	SQ YD	2,862.000 X	=	=	=	=
Z0076600	TRAINEES	HOUR	500.000 X	=	0.80	=	400.00
Z0076604	TRAINEES TPG	HOUR	500.000 X	=	10.00	=	5,000.00
20100110	TREE REMOV 6-15	UNIT	106.000 X	=	=	=	=
20100210	TREE REMOV OVER 15	UNIT	220.000 X	=	=	=	=
20101000	TEMPORARY FENCE	FOOT	2,320.000 X	=	=	=	=
20101100	TREE TRUNK PROTECTION	EACH	58.000 X	=	=	=	=
20101200	TREE ROOT PRUNING	EACH	58.000 X	=	=	=	=
20101300	TREE PRUN 1-10	EACH	23.000 X	=	=	=	=
20101350	TREE PRUN OVER 10	EACH	35.000 X	=	=	=	=
20200100	EARTH EXCAVATION	CU YD	4,032.000 X	=	=	=	=

FAU 2556
 08-00094-00-PV (SCHAUMBURG)
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63738

ECMS002 DTGECM03 ECMR003 PAGE 5
 RUN DATE - 10/04/12
 RUN TIME - 183142

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20201200	REM & DISP UNS MATL	CU YD	500.000 X	=		=	
20400800	FURNISHED EXCAVATION	CU YD	1,231.000 X	=		=	
20800150	TRENCH BACKFILL	CU YD	4,418.000 X	=		=	
21001000	GEOTECH FAB F/GR STAB	SQ YD	1,575.000 X	=		=	
21101615	TOPSOIL F & P 4	SQ YD	6,896.000 X	=		=	
21101805	COMPOST F & P 2	SQ YD	60.000 X	=		=	
25000400	NITROGEN FERT NUTR	POUND	85.000 X	=		=	
25000500	PHOSPHORUS FERT NUTR	POUND	85.000 X	=		=	
25000600	POTASSIUM FERT NUTR	POUND	85.000 X	=		=	
25200110	SODDING SALT TOLERANT	SQ YD	6,896.000 X	=		=	
25200200	SUPPLE WATERING	UNIT	207.000 X	=		=	
28000250	TEMP EROS CONTR SEED	POUND	142.000 X	=		=	
28000400	PERIMETER EROS BAR	FOOT	578.000 X	=		=	
28000510	INLET FILTERS	EACH	82.000 X	=		=	
30300001	AGG SUBGRADE IMPROVE	CU YD	500.000 X	=		=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
30300112	AGG SUBGRADE IMPR 12	SQ YD	14,108.000	X	=		
31101180	SUB GRAN MAT B 2	SQ YD	2,865.000	X	=		
31101200	SUB GRAN MAT B 4	SQ YD	343.000	X	=		
31101500	SUB GRAN MAT B 7	SQ YD	773.000	X	=		
31101810	SUB GRAN MAT B 12	SQ YD	6.000	X	=		
40600100	BIT MATLS PR CT	GALLON	7,502.000	X	=		
40600300	AGG PR CT	TON	25.000	X	=		
40600895	CONSTRUC TEST STRIP	EACH	2.000	X	=		
40701861	HMA PAVT FD 9	SQ YD	12,503.000	X	=		
42001200	PAVEMENT FABRIC	SQ YD	836.000	X	=		
42001300	PROTECTIVE COAT	SQ YD	4,946.000	X	=		
42300200	PCC DRIVEWAY PAVT 6	SQ YD	773.000	X	=		
42400200	PC CONC SIDEWALK 5	SQ FT	19,996.000	X	=		
42400800	DETECTABLE WARNINGS	SQ FT	528.000	X	=		
44000100	PAVEMENT REIM	SQ YD	16,877.000	X	=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
44000200	DRIVE PAVEMENT REM	SQ YD	295.000 X	=		=	
44000500	COMB CURB GUTTER REM	FOOT	5,266.000 X	=		=	
44000600	SIDEWALK REM	SQ FT	18,562.000 X	=		=	
550A0050	STORM SEW CL A 1 12	FOOT	66.000 X	=		=	
550A0090	STORM SEW CL A 1 18	FOOT	277.000 X	=		=	
550A0340	STORM SEW CL A 2 12	FOOT	135.000 X	=		=	
550A0360	STORM SEW CL A 2 15	FOOT	648.000 X	=		=	
550A0380	STORM SEW CL A 2 18	FOOT	331.000 X	=		=	
550A0430	STORM SEW CL A 2 30	FOOT	91.000 X	=		=	
550A0450	STORM SEW CL A 2 36	FOOT	16.000 X	=		=	
55100300	STORM SEWER REM 8	FOOT	50.000 X	=		=	
55100400	STORM SEWER REM 10	FOOT	182.000 X	=		=	
55100500	STORM SEWER REM 12	FOOT	144.000 X	=		=	
55100700	STORM SEWER REM 15	FOOT	86.000 X	=		=	
55100900	STORM SEWER REM 18	FOOT	100.000 X	=		=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
55101600	STORM SEWER REM 36	FOOT	60.000 X	=		=	
56103000	D I WATER MAIN 6	FOOT	193.000 X	=		=	
56103100	D I WATER MAIN 8	FOOT	286.000 X	=		=	
56103200	D I WATER MAIN 10	FOOT	2,330.000 X	=		=	
56106400	ADJ WATER MAIN 8	FOOT	100.000 X	=		=	
56106500	ADJ WATER MAIN 10	FOOT	100.000 X	=		=	
56106600	ADJ WATER MAIN 12	FOOT	100.000 X	=		=	
56200400	WATER SERV LINE 1 1/4	FOOT	64.000 X	=		=	
56200500	WATER SERV LINE 1 1/2	FOOT	10.000 X	=		=	
56400500	FIRE HYDNPTS TO BE REM	EACH	6.000 X	=		=	
56400820	FIRE HYD W/AUX V & VB	EACH	4.000 X	=		=	
60107600	PIPE UNDERDRAINS 4	FOOT	654.000 X	=		=	
60200805	CB TA 4 DIA T8G	EACH	1.000 X	=		=	
60201105	CB TA 4 DIA T11F&G	EACH	3.000 X	=		=	
60201110	CB TA 4 DIA T11V F&G	EACH	4.000 X	=		=	

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 SCHEDULE OF PRICES
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 RUN DATE - 10/04/12
 RUN TIME - 183142

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60201330	CB TA 4 DIA T23F&G	EACH	6.000 X	=	=	=	=
60207905	CB TC T11F&G	EACH	5.000 X	=	=	=	=
60207915	CB TC T11V F&G	EACH	12.000 X	=	=	=	=
60218400	MAN TA 4 DIA T1F CL	EACH	7.000 X	=	=	=	=
60221100	MAN TA 5 DIA T1F CL	EACH	4.000 X	=	=	=	=
60223800	MAN TA 6 DIA T1F CL	EACH	1.000 X	=	=	=	=
60236200	INLETS TA T8G	EACH	1.000 X	=	=	=	=
60236800	INLETS TA T11F&G	EACH	4.000 X	=	=	=	=
60236825	INLETS TA T11V F&G	EACH	3.000 X	=	=	=	=
60237460	INLETS TA T23F&G	EACH	1.000 X	=	=	=	=
60255500	MAN ADJUST	EACH	5.000 X	=	=	=	=
60265700	VV ADJUST	EACH	1.000 X	=	=	=	=
60500040	REMOV MANHOLES	EACH	3.000 X	=	=	=	=
60500050	REMOV CATCH BAS	EACH	3.000 X	=	=	=	=
60500060	REMOV INLETS	EACH	14.000 X	=	=	=	=

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63738

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60600605	CONC CURB TB	FOOT	14.000 X	=		=	
60603800	COMB CC&G TB6.12	FOOT	4,754.000 X	=		=	
60604400	COMB CC&G TB6.18	FOOT	1,204.000 X	=		=	
60605000	COMB CC&G TB6.24	FOOT	134.000 X	=		=	
60605900	COMB CC&G TB9.12	FOOT	132.000 X	=		=	
60619600	CONC MED TSB6.12	SQ FT	80.000 X	=		=	
60624600	CORRUGATED MED	SQ FT	95.000 X	=		=	
67000400	ENGR FIELD OFFICE A	CAL MO	12.000 X	=		=	
67100100	MOBILIZATION	L SUM	1.000 X	=		=	
70106800	CHANGEABLE MESSAGE SN	CAL MO	12.000 X	=		=	
70300100	SHORT TERM PAVT MKING	FOOT	725.000 X	=		=	
70300220	TEMP PVT MK LINE 4	FOOT	12,392.000 X	=		=	
70300260	TEMP PVT MK LINE 12	FOOT	32.000 X	=		=	
70300280	TEMP PVT MK LINE 24	FOOT	898.000 X	=		=	
70301000	WORK ZONE PAVT MK REM	SQ FT	5,394.000 X	=		=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
72400100	REMOV SIN PAN ASSY TA	EACH	31.000 X	=		=	
72400500	RELOC SIN PAN ASSY TA	EACH	10.000 X	=		=	
72800100	TELES STL SIN SUPPORT	FOOT	437.000 X	=		=	
72900100	METAL POST TY A	FOOT	65.000 X	=		=	
78000100	THPL PVT MK LTR & SYM	SQ FT	715.000 X	=		=	
78000200	THPL PVT MK LINE 4	FOOT	9,989.000 X	=		=	
78000400	THPL PVT MK LINE 6	FOOT	1,206.000 X	=		=	
78000600	THPL PVT MK LINE 12	FOOT	338.000 X	=		=	
78000650	THPL PVT MK LINE 24	FOOT	184.000 X	=		=	
78008210	POLYUREA PM T1 LN 4	FOOT	1,171.000 X	=		=	
78008230	POLYUREA PM T1 LN 6	FOOT	223.000 X	=		=	
78100300	REPLACEMENT REFLECTOR	EACH	16.000 X	=		=	
78300100	PAVT MARKING REMOVAL	SQ FT	2,171.000 X	=		=	
78300200	RAISED REF PVT MK REM	EACH	43.000 X	=		=	
80400100	ELECT SERV INSTALL	EACH	1.000 X	=		=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
80400200	ELECT UTIL SERV CONN	L SUM	1.000 X	5,000	00	5,000	00
81028200	UNDRGRD C GALVS 2	FOOT	562.000 X				
81028210	UNDRGRD C GALVS 2 1/2	FOOT	171.000 X				
81028240	UNDRGRD C GALVS 4	FOOT	48.000 X				
81603111	UD2#8#8G XLPUSE 1.25P	FOOT	2,770.000 X				
81702400	EC C XLP USE 3-1C 2	FOOT	195.000 X				
82102150	LUM SV HOR MT 150W	EACH	3.000 X				
82500350	LT CONT BASEM 240V100	EACH	1.000 X				
83000198	LT P A 25MH 10MA	EACH	3.000 X				
83600200	LIGHT POLE FDN 24D	FOOT	22.000 X				
83600352	LP F M 11.5BC 8 5/8X6	EACH	2.000 X				
84500110	REMOV LIGHTING CONTR	EACH	1.000 X				
84500120	REMOV ELECT SERV INST	EACH	1.000 X				
84500130	REMOV LTG CONTR FDN	EACH	1.000 X				
87602000	PED PUSHBUTTON POST	EACH	2.000 X				

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
89502300	REM ELCBL FR CON	FOOT	1,760.000 X				

TOTAL \$

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

RETURN WITH BID

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

I. GENERAL

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

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

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for the CPO to void the contract, and may result in the suspension or debarment of the bidder or subcontractor. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

II. ASSURANCES

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

A. Conflicts of Interest

1. The Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

RETURN WITH BID

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

B. Negotiations

1. The Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

C. Inducements

1. The Code provides:

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

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

D. Revolving Door Prohibition

1. The Code provides:

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

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

E. Reporting Anticompetitive Practices

1. The Code provides:

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

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

F. Confidentiality

1. The Code provides:

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

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

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G. Insider Information

1. The Code provides:

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

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

III. CERTIFICATIONS

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

A. Bribery

1. The Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

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

B. Felons

1. The Code provides:

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

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

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C. Debt Delinquency

1. The Code provides:

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

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

D. Prohibited Bidders, Contractors and Subcontractors

1. The Code provides:

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

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

E. Section 42 of the Environmental Protection Act

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

F. Educational Loan

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

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

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

G. Bid-Rigging/Bid Rotating

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

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

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

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

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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.

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J. Disclosure of Business Operations in Iran

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

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

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

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

Check the appropriate statement:

/ ___ / Company has no business operations in Iran to disclose.

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

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

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

NA-FEDERAL

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

RETURN WITH BID

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

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

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

The undersigned business entity certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. If the business entity is required to register, the CPO shall verify that it is in compliance on the date the bid or proposal is due. The CPO shall not accept a bid or proposal if the business entity is not in compliance with the registration requirements.

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

M. Lobbyist Disclosure

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

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

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

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

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

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

Or

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

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

RETURN WITH BID

IV. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form. **The current annual salary of the Governor is \$177,412.00.**

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

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

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

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

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

RETURN WITH BID

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

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

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

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

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Financial Information & Potential Conflicts of Interest Disclosure

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

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

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

DISCLOSURE OF FINANCIAL INFORMATION

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

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

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

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

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

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

RETURN WITH BID

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

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

Yes ___ No ___

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

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

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

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

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

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

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

RETURN WITH BID

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

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

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

3. Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH BID

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

Completed by: _____ Date _____
Signature of Individual or Authorized Representative

NOT APPLICABLE STATEMENT

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

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

_____ Date _____
Signature of Authorized Representative

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Financial Related Information Disclosure

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

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

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature of Authorized Representative, Date

OWNERSHIP CERTIFICATION

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

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

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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

RETURN WITH BID

**Contract No. 63738
COOK County
Section 08-00094-00-PV (Schaumburg)
Project M-9003(494)
Route FAU 2556 (Walnut Lane)
District 1 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____ Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

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

RETURN WITH BID

ADDITIONAL FEDERAL REQUIREMENTS

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

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

RETURN WITH BID

**Contract No. 63738
COOK County
Section 08-00094-00-PV (Schaumburg)
Project M-9003(494)
Route FAU 2556 (Walnut Lane)
District 1 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 _____

(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW)

Attest _____
Signature _____
Business Address _____

(IF A JOINT VENTURE)

Corporate Name _____
By _____
Signature of Authorized Representative _____
Typed or printed name and title of Authorized Representative _____

Attest _____
Signature _____
Business Address _____

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



Item No. _____

Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

_____ as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in the bid proposal under "Proposal Guaranty" in effect on the date of the Invitation for Bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

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

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

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

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

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

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By _____ (Signature & Title)

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

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
County of _____

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

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

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

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

My commission expires _____

Notary Public

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

Electronic Bid Bond ID# _____

Company / Bidder Name _____

Signature and Title _____



PROPOSAL ENVELOPE



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

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

**Contract No. 63738
COOK County
Section 08-00094-00-PV (Schaumburg)
Project M-9003(494)
Route FAU 2556 (Walnut Lane)
District 1 Construction Funds**



Illinois Department of Transportation

SUBCONTRACTOR DOCUMENTATION

Public Acts 96-0795, 96-0920, and 97-0895 enacted substantial changes to the provisions of the Code (30 ILCS 500). Among the changes are provisions affecting subcontractors. The Contractor awarded this contract will be required as a material condition of the contract to implement and enforce the contract requirements applicable to subcontractors that entered into a contractual agreement with a total value of \$50,000 or more with a person or entity who has a contract subject to the Code and approved in accordance with article 108.01 of the Standard Specifications for Road and Bridge Construction.

If the Contractor seeks approval of subcontractors to perform a portion of the work, and approval is granted by the Department, the Contractor shall provide a copy of the subcontract to the Illinois Department of Transportation's CPO upon request within 15 calendar days after execution of the subcontract.

Financial disclosures required pursuant to Sec. 50-35 of the Code must be submitted for all applicable subcontractors. The subcontract shall contain the certifications required to be made by subcontractors pursuant to Article 50 of the Code. This Notice to Bidders includes a document incorporating all required subcontractor certifications and disclosures for use by the Contractor in compliance with this mandate. The document is entitled State Required Ethical Standards Governing Subcontractors.

RETURN WITH SUBCONTRACT

STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

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

The certifications hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed should the Department approve the subcontractor. The CPO may terminate or void the contract approval if it is later determined that the bidder or subcontractor rendered a false or erroneous certification. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

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

A. Bribery

1. The Code provides:

Section 50-5. Bribery.

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

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

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

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

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

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

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

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

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

B. Felons

1. The Code provides:

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

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

RETURN WITH SUBCONTRACT

C. Debt Delinquency

1. The Code provides:

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

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

D. Prohibited Bidders, Contractors and Subcontractors

1. The Code provides:

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

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

E. Section 42 of the Environmental Protection Act

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

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

Name of Subcontracting Company

Authorized Officer

Date

RETURN WITH SUBCONTRACT
SUBCONTRACTOR DISCLOSURES

I. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the subcontracting entity or its parent entity, whichever is less, unless the subcontractor is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

If the subcontractor is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a subcontractor is not subject to Federal 10K reporting, the subcontractor must determine if any individuals are required by law to complete a financial disclosure form. To do this, the subcontractor should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the **NOT APPLICABLE STATEMENT** on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the subcontracting company. Note: These questions are for assistance only and are not required to be completed.

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

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

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

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form.

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.

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

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

Yes ___ No ___

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

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

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

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

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

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

3 Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH SUBCONTRACT

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

Completed by: _____ Date _____
Signature of Individual or Authorized Officer

NOT APPLICABLE STATEMENT

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

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

_____ Date _____
Signature of Authorized Officer

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B
Subcontractor: Other Contracts & Financial Related Information Disclosure

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

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

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature box with fields: Signature of Authorized Officer, Date

OWNERSHIP CERTIFICATION

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

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

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



- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m. November 9, 2012. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 63738
COOK County
Section 08-00094-00-PV (Schaumburg)
Project M-9003(494)
Route FAU 2556 (Walnut Lane)
District 1 Construction Funds**

Work consists of pavement removal, earth excavation, construction of storm sewers, watermain, sanitary sewer force main, full-depth HMA pavement combination curb and gutter, PCC parking lane, sidewalks, street lighting improvements and landscaping; project limits are Bode Road to Golf Road (IL 58) located in the Village of Schaumburg.

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the
Illinois Department of Transportation

Ann L. Schneider,
Secretary

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2012

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

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec.

Page No.

No Supplemental Specifications this year.

CHECK SHEET
RECURRING SPECIAL PROVISIONS

Adopted January 1, 2012

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

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

CHECK SHEET
LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

Adopted January 1, 2012

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

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LRS 1	Reserved	89
LRS 2	<input checked="" type="checkbox"/> Furnished Excavation (Eff. 1-1-99) (Rev. 1-1-07)	90
LRS 3	<input checked="" type="checkbox"/> Work Zone Traffic Control Surveillance (Eff. 1-1-99) (Rev. 1-1-10).....	91
LRS 4	<input checked="" type="checkbox"/> Flaggers in Work Zones (Eff. 1-1-99) (Rev. 1-1-07).....	92
LRS 5	<input type="checkbox"/> Contract Claims (Eff. 1-1-02) (Rev. 1-1-07).....	93
LRS 6	<input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals (Eff. 1-1-02) (Rev. 1-1-12).....	94
LRS 7	<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals (Eff. 1-1-02) (Rev. 1-1-12).....	100
LRS 8	Reserved	106
LRS 9	<input type="checkbox"/> Bituminous Surface Treatments (Eff. 1-1-99) (Rev. 1-1-11).....	107
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LRS 11	<input type="checkbox"/> Employment Practices (Eff. 1-1-99)	109
LRS 12	<input type="checkbox"/> Wages of Employees on Public Works (Eff. 1-1-99) (Rev. 1-1-10).....	111
LRS 13	<input type="checkbox"/> Selection of Labor (Eff. 1-1-99) (Rev. 1-1-12).....	112
LRS 14	<input type="checkbox"/> Paving Brick and Concrete Paver Pavements and Sidewalks (Eff. 1-1-04) (Rev. 1-1-09).....	113
LRS 15	<input type="checkbox"/> Partial Payments (Eff. 1-1-07)	116
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LR SD12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR SD406		<input type="checkbox"/> Safety Edge	April 1, 2011	
LR 102-1		<input type="checkbox"/> Protests on Local Lettings	Jan. 1, 2007	Jan. 2, 2012
LR 102-2		<input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals	Jan. 1, 2001	Jan. 2, 2012
LR 102-3		<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals	Jan. 1, 2001	Jan. 2, 2012
LR 105	164	<input checked="" type="checkbox"/> Cooperation with Utilities	Jan. 1, 1999	Jan. 1, 2007
LR 107-2		<input type="checkbox"/> Railroad Protective Liability Insurance for Local Lettings	Mar. 1, 2005	Jan. 1, 2006
LR 107-4	167	<input checked="" type="checkbox"/> Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-7		<input type="checkbox"/> Wages of Employees on Public Works	Jan. 1, 1999	Jan. 1, 2012
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 109		<input type="checkbox"/> Equipment Rental Rates	Jan. 1, 2012	
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Bituminous Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Apr. 1, 2012
LR 400-2		<input type="checkbox"/> Bituminous Surface Plant Mix (Class B)	Jan. 1, 2008	
LR 400-3		<input type="checkbox"/> Hot In-Place Recycling (HIR) – Surface Recycling	Jan. 1, 2012	
LR 400-4		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Emulsified Asphalt	June 1, 2012	
LR 400-5		<input type="checkbox"/> Cold In-Place Recycling (CIR) With Emulsified Asphalt	June 1, 2012	
LR 400-6		<input type="checkbox"/> Cold In Place Recycling (CIR) with Foamed Asphalt	June 1, 2012	
LR 400-7		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Foamed Asphalt	June 1, 2012	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-1		<input type="checkbox"/> Surface Profile Milling of Existing, Recycled or Reclaimed Flexible Pavement	Apr. 1, 2012	Jun. 1, 2012
LR 403-2		<input type="checkbox"/> Bituminous Hot Mix Sand Seal Coat	Aug. 1, 1969	Jan. 1, 2007
LR 406		<input type="checkbox"/> Filling HMA Core Holes with Non-shrink Grout	Jan. 1, 2008	
LR 420		<input type="checkbox"/> PCC Pavement (Special)	May 12, 1964	Jan. 2, 2007
LR 442		<input type="checkbox"/> Bituminous Patching Mixtures for Maintenance Use	Jan. 1, 2004	Jun. 1, 2007
LR 451		<input type="checkbox"/> Crack Filling Bituminous Pavement with Fiber-Asphalt	Oct. 1, 1991	Jan. 1, 2007
LR 503-1		<input type="checkbox"/> Furnishing Class SI Concrete	Oct. 1, 1973	Jan. 1, 2002
LR 503-2		<input type="checkbox"/> Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		<input type="checkbox"/> Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		<input type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1000-1		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures	June 1, 2012	
LR 1000-2		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures	June 1, 2012	
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		<input type="checkbox"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1032-2		<input type="checkbox"/> Multigrade Cold Mix Asphalt	Jan. 1, 2007	Feb. 1, 2007
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the November 9, 2012 Letting

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

<u>File Name</u>	<u>Pg #</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80240		Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099		Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80275	168	X Agreement to Plan Quantity	Jan. 1, 2012	
80274		Aggregate Subgrade Improvement	April 1, 2012	Aug 1, 2012
80192		Automated Flagger Assistance Device	Jan. 1, 2008	
80173	169	X Bituminous Materials Cost Adjustments	Nov. 2, 2006	Jan. 1, 2012
80241		Bridge Demolition Debris	July 1, 2009	
80276		Bridge Relief Joint Sealer (NOTE: This special provision was previously named "Concrete Joint Sealer")	Jan. 1, 2012	Aug 1, 2012
50261		Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481		Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491		Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531		Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80291		Calcium Chloride Accelerator for Class PP-2 Concrete	April 1, 2012	
80292		Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	
80198		Completion Date (via calendar days)	April 1, 2008	
80199		Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293		Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	
80294		Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 feet	April 1, 2012	
80277		Concrete Mix Design - Department Provided	Jan 1, 2012	
80261	172	X Construction Air Quality – Diesel Retrofit	June 1, 2010	
80237	175	X Construction Air Quality – Diesel Vehicle Emissions Control	April 1, 2009	Jan. 2, 2012
80239	177	X Construction Air Quality – Idling Restrictions	April 1, 2009	
80177		Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
80029	179	X Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80272		Drainage and Inlet Protection Under Traffic	April 1, 2011	Jan. 1, 2012
80296	189	X Errata for the 2012 Standard Specifications	April 1, 2012	Aug 1, 2012
80228	190	X Flagger at Side Roads and Entrances	April 1, 2009	
80265	191	X Friction Aggregate	Jan. 1, 2011	
80229	195	X Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80303		Granular Materials	Nov. 1, 2012	
80304		Grooving for Recessed Pavement Markings	Nov. 1, 2012	
80169		High Tension Cable Median Barrier	Jan. 1, 2007	April 1, 2009
80246	199	X Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80109		Impact Attenuators	Nov. 1, 2003	Jan. 1, 2012
80110		Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2012
80045		Material Transfer Device	June 15, 1999	Jan. 1, 2009
80203	201	X Metal Hardware Cast into Concrete	April 1, 2008	Jan. 1, 2012
80297		Modified Urethane Pavement Marking	April 1, 2012	
80165		Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80253		Movable Traffic Barrier	Jan. 1, 2010	Jan. 1, 2012
80231	202	X Pavement Marking Removal	April 1, 2009	
80298		Pavement Marking Tape Type IV	April 1, 2012	
80254	203	X Pavement Patching	Jan. 1, 2010	
80022	204	X Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80290		Payrolls and Payroll Records	Jan. 2, 2012	
80278		Planting Woody Plants	Jan. 1, 2012	Aug 1, 2012
80305		Polyurea Pavement Markings	Nov. 1, 2012	
80279	206	X Portland Cement Concrete	Jan. 1, 2012	
80299		Portland Cement Concrete Inlay or Overlay	April 1, 2012	
80280	246	X Portland Cement Concrete Sidewalk	Jan. 1, 2012	

<u>File Name</u>	<u>Pg #</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80300		Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	
80218		Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2012
80219		Preventive Maintenance – Cape Seal	Jan. 1, 2009	April 1, 2012
80220		Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	April 1, 2012
80221		Preventive Maintenance – Slurry Seal	Jan. 1, 2009	April 1, 2012
80281	247	X Quality Control/Quality Assurance of Concrete Mixtures	Jan. 1, 2012	
34261		Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157		Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
80306		Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS) (NOTE: The Special Provisions "Reclaimed Asphalt Pavement (RAP)" and "Reclaimed Asphalt Shingles (RAS)" were combined to create this special provision.	Nov. 1, 2012	
80283		Removal and Disposal of Regulated Substances	Jan. 1, 2012	
80224		Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	Jan. 1, 2012
80271		Safety Edge	April 1, 2011	
80307		Seeding	Nov. 1, 2012	
80152		Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	April 1, 2012
80132	260	X Self-Consolidating Concrete for Precast and Precast Prestressed Products	July 1, 2004	April 1, 2012
80284		Shoulder Rumble Strips	Jan. 1, 2012	
80285	262	X Sidewalk, Corner or Crosswalk Closure	Jan. 1, 2012	
80127	263	X Steel Cost Adjustment	April 2, 2004	April 1, 2009
80255		Stone Matrix Asphalt	Jan. 1, 2010	Jan. 1, 2012
80143	267	X Subcontractor Mobilization Payments	April 2, 2005	April 1, 2011
80075		Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
80308		Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Nov. 1, 2012	
80286	268	X Temporary Erosion and Sediment Control	Jan. 1, 2012	
80225		Temporary Raised Pavement Marker	Jan. 1, 2009	
80256		Temporary Water Filled Barrier	Jan. 1, 2010	Jan. 1, 2012
80301		Tracking the Use of Pesticides	Aug 1, 2012	
80287		Type G Inlet Box	Jan. 1, 2012	
80273	269	X Traffic Control Deficiency Deduction	Aug. 1, 2011	
20338	270	X Training Special Provisions	Oct. 15, 1975	
80270		Utility Coordination and Conflicts	April 1, 2011	Jan. 1, 2012
80288	273	X Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2012
80302	279	X Weekly DBE Trucking Reports	June 2, 2012	
80289		Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071		Working Days	Jan. 1, 2002	

The following special provisions have been deleted from use:

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

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

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

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

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

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

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2012 (hereinafter referred to as the "Standard Specifications"); the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways"; the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids; the "American Standards for Nursery Stock", 2004 edition; and the "Supplemental Specifications and Recurring Special Provisions", adopted January 1, 2012, indicated on the Check Sheet included herein; and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

FAU 2556 (Walnut Lane)
Project No. M-9003(494)
Section: 08-00094-00-PV
Cook County, Illinois
Contract No. 63738

Location of Project

This project is located on Walnut Lane in the Village of Schaumburg. The project limits are Bode Road to the south and Golf Road to the north. The project has a total gross and net length of 2,519.15 feet (0.477 miles).

Description of Project

The work consists of earth excavation, pavement removal, construction of storm sewers, watermain, and sanitary sewer forcemain, HMA binder and surface course, combination concrete curb and gutter, pcc parking lane construction, relocation of street lighting, thermoplastic pavement markings, sodding, and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

Completion Date Plus Working Days

Revise Article 108.05 (b) of the Standard Specifications as follows:

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on November 29, 2013 except as specified herein.

The Contractor will be allowed to complete all tree and shrub planting, clean-up work and punch list items within 10 working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be

completed within the working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

Article 108.09 or the Special Provision for "Failure to Complete the Work on Time", if included in this contract, shall apply to both the completion date and the number of working days.

Maintenance of Roadways

Effective: September 30, 1985

Revised: November 1, 1996

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".

Status of Utilities to be Adjusted

Effective: January 30, 1987

Revised: July 1, 1994

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

Name of Utility	Type	Location	Estimated Dates for Start and Completion of Relocation or Adjustments
AT&T Distribution Thomas Folin 1000 Commerce Drive Oakbrook, IL 60523 630-573-6477 tf1858@att.com	Underground telephone cable and duct	West side of Walnut Lane and crossing beneath Walnut Lane	During construction
Comcast Tom Munar 688 Industrial Drive Elmhurst, IL 60126 630-600-6316	Underground cable tv	Crossings at Sta. 105+50, 118+50, and 123+50	During construction
ComEd David Schacht 2 Lincoln Centre, 8 th Floor Oakbrook Terrace, IL 60181-4260 630-437-2129 David.Schacht@comed.com	Underground electric	6 roadway crossing beneath Walnut Lane	Relocation anticipated to be complete by the end of November 2012

<p>NICOR Constance Lane 1844 Ferry Road Naperville, IL 60563 630-388-3830 clane@aglresources.com</p>	<p>Underground natural gas</p>	<p>6" mainline on west side of Walnut Lane 2" laterals crossing beneath Walnut Lane</p>	<p>During construction</p>
<p>Wide Open West (WOW) Brian Hurd 1030 National Pkwy Schaumburg, IL 600173 630-523-1264 bhurd@wideopenwest.com</p>	<p>Underground cable TV</p>	<p>Crossing beneath Walnut Lane</p>	<p>During construction</p>

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

Concrete Washout Facility

Description. The Contractor shall take sufficient precautions to prevent pollution of streams, lakes, reservoirs, and wetlands with fuels, oils, bitumens, calcium chloride, or other harmful materials according to Article 107.23 of the "Standard Specifications".

General. To prevent pollution by residual concrete and/or the by-product of washing out the concrete trucks, concrete washout facilities shall be constructed and maintained on any project which includes cast-in-place concrete items. The concrete washout shall be constructed, maintained, and removed according to this special provision.

The concrete washout facility shall be constructed on the job site in accordance with Illinois Urban Manual practice standard for Temporary Concrete Washout Facility (Code 954). The Contractor may elect to use a pre-fabricated portable concrete washout structure. The Contractor shall submit a plan for the concrete washout facility, to the Engineer for approval, a minimum of 10 calendar days before the first concrete pour. The working concrete washout facility shall be in place before any delivery of concrete to the site. The Contractor shall ensure that all concrete washout activities are limited to the designated area.

The concrete washout facility shall be located no closer than 50 feet from any environmentally sensitive areas, such as water bodies, wetlands, and/or other areas indicated on the plans. Adequate signage shall be placed at the washout facility and elsewhere as necessary to clearly indicate the location of the concrete washout facility to the operators of concrete trucks.

The concrete washout facility shall be adequately sized to fully contain the concrete washout needs of the project. The contents of the concrete washout facility shall not exceed 75% of the facility capacity. Once the 75% capacity is reached, concrete placement shall be discontinued until the facility is cleaned out. Hardened concrete shall be removed and properly disposed of outside the right-of-way. Slurry shall be allowed to evaporate, or shall be removed and properly disposed of outside the right-of-way. The Contractor shall immediately replace damaged basin liners or other washout facility components to prevent leakage of concrete waste from the washout facility. Concrete washout facilities shall be inspected by the Contractor after each use. Any and all spills shall be reported to the Engineer and cleaned up immediately. The Contractor shall remove the concrete washout facility when it is no longer needed.

Basis of Payment. This work will not be paid for separately, but shall be included in the cost of the concrete work items included in the contract.

Coarse Aggregate for Backfill, Trench Backfill and Bedding (D-1)

Effective: November 1, 2011

This work shall be according to Section 1004.05 of the Standard Specifications except for the following:

Reclaimed Asphalt Pavement (RAP) maybe blended with gravel, crushed gravel, crushed stone crushed concrete, crushed slag, chats, crushed sand stone or wet bottom boiler slag. The RAP materials shall be crushed and screened. Unprocessed RAP grindings will not be permitted. The RAP shall be uniformly graded and shall pass the 1.0 in. (25 mm) screen. When RAP is blended with any of the coarse aggregate listed above, the blending shall be done mechanically with calibrated feeders. The feeders shall have an accuracy of ± 2.0 percent of the actual quantity of material delivered. The final blended product shall not contain more than 40 percent by weight RAP.

The coarse aggregate listed above shall meet CA 6 and CA 10 gradations prior to being blended with the processed and uniformly graded RAP.

Aggregate Subgrade Improvement (D-1)

Effective: February 22, 2012

Revised: August 1, 2012

Add the following Section to the Standard Specifications:

"SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

303.01 Description. This work shall consist of constructing an aggregate subgrade improvement.

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.06
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2)	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01 or CS 02 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01 or CS 02 are used in lower lifts.

303.03 Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

303.04 Soil Preparation. The stability of the soil shall be according to the Department's Subgrade Stability Manual for the aggregate thickness specified.

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradations CS 01 or CS 02 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When Reclaimed Asphalt Pavement (RAP) is used, it shall be crushed and screened where 100 percent is passing the 1 1/2 in. (37.5 mm) sieve and being well graded. RAP that has been fractionated to size will not be permitted for use in capping. Capping aggregate will not be required when the aggregate subgrade improvement is used as a cubic yard pay item for undercut applications.

303.07 Compaction. All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

303.08 Finishing and Maintenance of Aggregate Subgrade Improvement. The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

303.09 Method of Measurement. This work will be measured for payment according to Article 311.08.

303.10 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.

Add the following to Section 1004 of the Standard Specifications:

“ **1004.06 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.
 - (1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 in. (300 mm) shall be CS 01.

The coarse aggregate gradation for total subgrade thickness more than 12 in. (300 mm) shall be CS 01 or CS 02.

COARSE AGGREGATE SUBGRADE GRADATIONS						
Grad No.	Sieve Size and Percent Passing					
	8"	6"	4"	2"	#4	#200
CS 01	100	97 ±	90 ±	45 ±	20 ±	5 ± 5

		3	10	25	20	
CS 02		100	80 ± 10	25 ± 15		

COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)						
Grad No.	Sieve Size and Percent Passing					
	200 mm	150 mm	100 mm	50 mm	4.75 mm	75 µm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20	5 ± 5
CS 02		100	80 ± 10	25 ± 15		

(2) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.”

Reclaimed Asphalt Pavement and Shingles (D-1)

Effective: January 1, 2012

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND SHINGLES

1031.01 Description. RAP is reclaimed asphalt pavement resulting from cold milling and crushing of an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

RAS is reclaimed asphalt shingles resulting from the processing and grinding of either preconsumer or post consumer shingles.

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 (BMPR) Memorandum *Reclaimed Asphalt Shingle (RAS) Sources*, by weight of RAS. All RAS used shall come from a BMPR approved processing facility.

RAS shall meet either Type 1 or Type 2 requirements as specified herein.

- (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).

1031.02 Stockpiles. The Contractor shall construct individual, sealed RAP or RAS stockpiles meeting one of the following definitions. No additional RAP or RAS shall be

added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and Processed FRAP) shall be identified by signs indicating the type as listed below (i.e. "crushed natural aggregate, ACBF and steel slag, crystalline structure or Type 2 RAS", etc...).

- (a) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #4 (4.75mm) and ½ in. (12.5mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the RAP will be used in.
- (b) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, Superpave (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 inch single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.
- (c) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. 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 HMA shoulders, bituminous stabilized subbases or Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed or processed (FRAP DQ) 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, plant cleanout etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

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. However, a RAS source may submit a written request to the Department for approval to blend

mechanically a specified ratio of type 1 RAS with type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval.

The Engineer's written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and 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.

1031.03 Testing. When used in HMA, the RAS/RAP/FRAP shall be sampled and tested either during processing or after stockpiling.

(a) RAS shall be sampled and tested as follows:

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 1000 ton (900 metric ton) thereafter. A minimum of five tests are required for stockpiles less than 1000 ton (900 metric ton). Once a \leq 1000 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.

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 μ m)	\pm 4%
No. 200 (75 μ m)	\pm 2.0 %
Asphalt Binder Content	\pm 1.5 %

(b)RAP/FRAP shall be sampled and tested as follows:

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.

All of the RAP/FRAP extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable (for slag) G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAP or FRAP	Conglomerate "D" Quality RAP
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 μ m)	± 5 %	
No. 200 (75 μ m)	± 2.0 %	± 4.0 %
Asphalt Binder	± 0.4 % ^{1/}	± 0.5 %
G_{mm}	± 0.03 ^{2/}	

- 1/ The tolerance for FRAP shall be ± 0.3 %
 2/ for slag and steel slag

Before extraction, each field sample whether, RAS, RAP or FRAP, 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.

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 RAS, RAP or FRAP shall not be used in HMA unless the RAS, RAP or 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, when testing for RAP or FRAP, 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, Fractionated RAP, Restricted FRAP, Conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the 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 note (2) herein:
 - (2) Fractionated RAP 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. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of "B" quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

1031.05 Use of RAS, RAP or FRAP in HMA. The use of RAS, RAP or FRAP shall be a Contractor's option when constructing HMA in all contracts.

The use of RAS shall be as follows:

Type 1 or Type 2 RAS may be used alone or in conjunction with, Fractionated Reclaimed Asphalt Pavement (FRAP) or Reclaimed Asphalt Pavement (RAP), in all HMA mixtures up to a maximum of 5.0 percent by weight of total mix.

Reclaimed asphalt shingles (RAS) meeting Type 1 or Type 2 requirements will be permitted in all HMA mixtures for overlay applications. RAS will also be permitted in all Low ESAL full depth pavement and ALL other Mixtures (Stabilized Subbase and shoulder HMA). RAS shall not be used in full depth HMA High ESAL main line pavement.

The use of RAP/FRAP shall be as follows:

- (a) Coarse Aggregate Size (after extraction), The coarse aggregate in all RAP or FRAP shall be equal to or less than the 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 and Restricted FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall 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 inch.
- (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, 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 RAP, Restricted FRAP, Conglomerate, or Conglomerate DQ.

When the Contractor chooses the RAP option, the percentage of virgin asphalt binder replaced by the asphalt binder from the RAP shall not exceed the percentages indicated in the table below for a given N Design:

Max Asphalt Binder Replacement RAP Only
 Table 1

HMA Mixtures ^{1/, 3/} Ndesign	Maximum % Asphalt Binder replacement (ABR)		
	Binder/Leveling Binder	Surface	Polymer Modified
30L	25	15	10
50	25	15	10

70	15	10	10
90	10	10	10
105	10	10	10

1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.

2/ When the asphalt binder replacement exceeds 15 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent binder replacement would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

When the Contractor chooses either the RAS or FRAP option, the percent binder replacement shall not exceed the amounts indicated in the tables below for a given N Design.

Max Asphalt Binder Replacement RAS or FRAP
 Table 2

HMA Mixtures <i>1/, 2/</i>	Level 1 - Maximum % ABR			
	Ndesign	Binder/Leveling Binder	Surface	Polymer <i>3/, 4/</i> Modified
30L		35	30	15
50		30	25	15
70		30	20	15
90		20	15	15
105		20	15	15

1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.

2/ When the asphalt binder replacement exceeds 15 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 binder replacement will require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

3/ For SMA, when the FRAP option is used, the maximum ABR is 15 percent. When the RAS option is used, the maximum ABR is 20 percent. When the asphalt binder replacement 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, when the FRAP option is used, the maximum ABR is 15 percent. When the RAS option is used, the maximum ABR is 20 percent. When the RAS option is used, a maximum of 5 percent RAS by weight of the mix, shall be permitted. When the ABR in the IL-4.75 exceeds 15 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 16 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

When the Contractor chooses the RAS with FRAP combination, the percent asphalt binder replacement shall split equally between the RAS and the FRAP, and the total replacement shall not exceed the amounts indicated in the tables below for a given N Design.

Max Asphalt Binder Replacement RAS and FRAP Combination
 Table 3

HMA Mixtures <i>1, 2/</i>	Level 2 - Maximum % ABR		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified <i>3/, 4/</i>
30L	40	40	20
50	40	30	20
70	40	30	20
90	40	30	20
105	40	30	20

1/ For HMA "All Other" (shoulder and stabilized subbase) N- 30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.

2/ When the binder replacement exceeds 15 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 binder replacement will require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

3/ For SMA, 20 percent ABR from RAS maybe combined with a maximum of 10 percent ABR from FRAP. When the asphalt binder replacement 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, a 20 percent ABR from RAS maybe combined with a maximum of 20 percent ABR from FRAP. When the asphalt binder replacement in the IL-4.75 exceeds 15 percent, the high and low

virgin asphalt binder grade shall each be reduced by one grade (i.e. 16 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. All HMA mixtures will be required to be tested, prior to submittal for Department verification, according to Illinois Modified AASHTO T324 (Hamburg Wheel) and shall meet the following requirements:

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG76-XX	20,000	12.5
PG70-XX	20,000	12.5
PG64-XX	10,000	12.5
PG58-XX	10,000	12.5

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.

For IL 4.75 mm Designs (N-50) the maximum rut depth is 9.0 mm at 15,000 repetitions.

1031.07 HMA Production. All HMA mixtures shall be sampled within the first 500 tons on the first day of production or during start up, 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. The production of such mixture, shall not exceed 1,500 tons or one days production, which ever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture is demonstrated prior to start of mix production for the contract.

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 RAS, RAP and FRAP 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 RAS, RAP and FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAS, RAP or FRAP and either switch to the virgin aggregate design or submit a new RAS, RAP or FRAP design.

HMA plants utilizing RAS, RAP and 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 RAS, RAP and 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 RAS, RAP and FRAP material as a percent of the total mix to the nearest 0.1 percent.
 - (8) When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
 - (9) Accumulated mixture tonnage.
 - (10) Dust removed (accumulated to the nearest 0.1ton)
 - (11) Aggregate RAS, RAP and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS, 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) RAS, RAP and FRAP weight to the nearest pound (kilogram).
 - (6) Virgin asphalt binder weight to the nearest pound (kilogram).
 - (7) Residual asphalt binder in the RAS, RAP and 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 or FRAP 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. (37.5mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded, FRAP, or single sized will not be accepted for use as Aggregate Surface Course and Aggregate Shoulders."

Fine Aggregate for Hot-Mix Asphalt (HMA) (D-1)

Effective: May 1, 2007

Revised: January 1, 2012

Revise Article 1003.03 (c) of the Standard Specifications to read:

- "(c) Gradation. The fine aggregate gradation for all HMA shall be FA1, FA 2, FA 20, FA 21 or FA 22. When Reclaimed Asphalt Pavement (RAP) is incorporated in the HMA design, the use of FA 21 Gradation will not be permitted.

Bituminous Prime Coat for Hot-Mix Asphalt Pavement (Full Depth) (D-1)

Effective: May 1, 2007

Revise Article 407.06(b) of the Standard Specifications to read:

"A bituminous prime coat shall be applied between each lift of HMA according to Article 406.05(b) at a rate of 0.02 to 0.05 gal/sq yd (0.1 to 0.2 L/sq m), the exact rate to be determined by the Engineer."

Revise the second paragraph of Article 407.12 of the Standard Specifications to read:

"Prime Coat will be paid for at the contract unit price per gallon (liter) or per ton (metric ton) for BITUMINOUS MATERIALS (PRIME COAT)."

Detectable Warnings

Description. This work shall consist of constructing sidewalk curb ramps with detectable warnings in compliance with the Americans with Disabilities Act, Accessibility Guidelines (ADAAG). Work shall be according to Section 424 of the Standard Specifications except as modified herein.

Materials. The detectable warnings shall consist of an area of truncated domes that provide both visual and tactile cues to pedestrians who are about to enter into traffic. The warning area shall be as shown on the applicable Highway Standards.

This work shall require placement of a red, preformed, cast in place detectable warning system. The locations where the cast in place detectable warning system will be utilized will be determined in the field by the Engineer or representative of the Engineer. The system to be used shall be the Armor-Tile Tactile System, manufactured by Engineered Plastics Incorporated, Williamsville, New York, or approved equal.

Basis of Payment. This work shall be paid for at the contract unit price per square foot of the preformed, cast in place panel for DETECTABLE WARNINGS, which price shall be payment in full for all labor, materials, and equipment necessary to complete this item. The surrounding concrete sidewalk will be paid as PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH.

Ductile Iron Water Main

Description The Contractor shall furnish and install the proposed water main of the diameter specified at the locations shown on the plans or as directed by the Engineer. The water main shall include excavation, granular bedding, installation of the water main, testing and chlorination of the water main, backfill and compaction of the trench and all incidental items required for a complete and operational water main.

Materials Water main pipe, unless otherwise specified shall be of the following materials:

Ductile iron pipe shall conform to AWWA specifications C151-65. Pipe shall be furnished in nominal eighteen foot (18') laying lengths.

Ductile iron pipe shall be bituminous coated cement mortar lined as specified in section 51-8.2 of AWWA specification C151-65, class 52. The ductile iron pipe shall be coated on the outside as specified in section 15.8.1 with the exceptions that the thickness of the coating shall be an average of two (2) to four (4) mils and a minimum of two (2) mils. Each pipe shall have the weight and class designation conspicuously painted on it. In addition, the manufacturer's mark and year in which the pipe was made shall be distinctly cast or stamped on the bell.

All fittings shall be connected to sections of water main pipe by means of a positive restrained joint consisting of mechanical joints with retainer gland, or Megalug or approved equal joints. Fittings shall be ductile iron meeting requirements of ANSI/AWWA C153/A21.10 and ANSI/AWWA C111/A21.11.

Water main Joints - Sections of water main pipe shall be connected by means of slip joints, consisting of bells cast integrally with the pipe, which have interior angular recesses conforming to the shape and dimension of a rubber sealing gasket. The interior dimension of which is such that it will admit the insertion of the spigot end of the joining pipe in a manner that will compress the gasket tightly between the bell of the

pipe and the inserted spigot, thus securing the gasket and sealing the joint. Such slip joints shall be of the following makes or type or its equivalent:

Super Belltite - as supplied by Griffin

Fastite - as supplied by American Cast Iron Pipe Co.

Tyton - as supplied by the U.S. Pipe and Foundry Co, or the Clow Valve Co.

The lubricant used in conjunction with the push-on joints shall be of material that is recommended by the suppliers specified above, or an acceptable commercially processed animal fat or vegetable shortening.

Mechanical joint pipe shall meet the requirement of ASA specification A-U 11. Bolting materials shall meet the requirements of the manufacturer.

Construction Methods The water main shall be installed as detailed on the plans and in accordance with the applicable provisions of the Standard Specifications for Water and Sewer Main Construction in Illinois. The water main shall be installed to the grades shown on the plans and shall have a nominal minimum depth of cover of five feet six inches (5'-6"). The excavation for the water main should be made using trench equipment or other suitable excavating equipment. The trench for the pipe shall be excavated at least twelve inches (12") wider than the external diameter of the pipe and not more than eighteen inches (18") wider than the diameter of the pipe at the top of the pipe.

Bell holes of sufficient depth shall be provided across the bottom of the trench to accommodate the bell of the pipe to provide sufficient room for joint making and to ensure bearing for the pipe.

Where a firm foundation is not found to exist for the bottom of the trench at the required depth, due to soft, spongy or other unsuitable soil, such unsuitable soil shall be removed for the full width of the trench and replaced with well compacted unwashed gravel or an equal substitute thereof, or crushed stone if such compacted material proved unsatisfactory. The cost of this work shall not be paid for separately, but shall be included in the pay item DUCTILE IRON WATER MAIN.

Sheeting and bracing shall be placed in the trench, as may be necessary, for the safety of the work and public, for the protection of the workmen, adjacent properties, or structures and for the proper installation of the work.

Sheeting and/or bracing shall be progressively removed as the backfill is placed in such a manner as to prevent the caving in of the sides of the trench or excavation and to prevent damage to the work.

Sheeting which is placed for the protection of the public, adjacent to properties or structures, shall not be removed until the backfill has been placed and thoroughly compacted. While sheeting is being withdrawn, all vacancies shall be carefully filled with sand free from silt and compacted.

The Contractor shall keep the trench free from water while the water main is being placed and until the pipe joint has been sealed to the satisfaction of the Engineer.

Granular bedding shall be placed along the entire length of all water main from four (4) inches below the water main to a point level with the top of the water main. Material shall be class I in accordance with ASTM 2321. The bedding material shall be incidental to the water main. The filling shall be carried up evenly on both sides. Care shall be taken that no rock, frozen material, or other hard substances are placed in contact with the pipe. The pipe shall then be covered at least eighteen inches (18") with clean, dry material.

If the excavation has been made deeper than necessary, the water main shall be laid at the lower depth, and no additional cost shall be charged for the extra excavation, trench backfill, or for subsequent adjustments to fire hydrants, valve vaults or house services. All excavated materials not needed for backfilling the trenches shall be disposed of by the Contractor.

The Contractor shall not backfill above the top of the pipe, until grade, alignment and the pipe joints have been made available for checking by the Engineer.

Unless otherwise directed, all trenches and excavations shall be backfilled as soon as possible and the work shall be prosecuted expeditiously after it has commenced.

The remainder of the trench shall be backfilled by using the material originally excavated from the trench to a height slightly above the original elevation of the ground. Trenches constructed in open cut across or within two feet (2') of any existing or proposed pavements, existing driveway and sidewalks, shall be backfilled to subgrade with Trench Backfill.

After backfill is completed all trenches shall be compacted by jetting and watersoaking in accordance with Section 20-2.21B of the Standard Specifications for Water and Sewer Main Construction in Illinois, or by other approved methods set forth in said Standard Specifications.

Where possible, the water main must be laid at least 10 feet horizontally from any sewer. In the event this is not possible, less than 10 feet is permissible provided the water main invert is at least 18 inches above the crown of the sewer in a separate trench, or on a shelf of undisturbed earth in the same trench.

Where proper clearance, as described above, is not possible to obtain, the sewer must be of ductile iron or PVC-SDR-26 pipe pressure tested to the maximum expected surcharge head to assure watertightness before backfilling. This work, if required, will be paid for as STORM SEWER REMOVAL, of the size required and STORM SEWER (WATER MAIN REQUIREMENTS), of the size and type required.

Where a water main must cross a sanitary service or sewer, the invert of the water main shall be a minimum of 18 inches above the crown of the sewer for at least 10 feet each side of the crossing.

Where proper vertical separation is not obtainable or the water main must pass under a sewer, the sewer must be of ductile iron or PVC-SDR-26 pipe or installed in a 1/4" steel

pipe or PVC-SDR-26 casing pipe for a minimum distance of 10 feet each side of the crossing. In making such crossing, a length of water main pipe shall be centered over the sewer so that the joints will be equidistant from the sewer. Where the water main must cross under a sewer, a vertical separation of 18 inches must be maintained between the pipes, along with the means to support larger sized sewer lines to prevent their settling and breaking the water main.

Separation from sewers shall conform to Sections 41-2.01B through 41-2.01D of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Sixth Edition.

Water in the trench shall be removed during pipe laying and jointing operations. Provisions shall be made to prevent floating of the pipe. Trench water shall not be allowed to enter the pipe at any time.

Adequate provisions shall be made for safely storing and protecting all water pipe prior to the actual installation in the trench. Care shall be taken to prevent damage to the pipe castings, both inside and out. Provisions shall be made to keep the inside of the pipe clean throughout its storage period and to keep mud and/or debris from being deposited therein. All pipe shall be thoroughly cleaned on the inside before laying. Proper equipment shall be used for the safe handling, conveying and laying of the pipe. All pipe shall be carefully lowered into the trench, piece by piece, by means of suitable tools or equipment, in such a manner as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main material be dropped or dumped into the trench.

The pipe shall be inspected for defects. All lumps, blisters and excess coal tar coating shall be removed from the ends of each pipe, and the inside of the bell.

When connecting joints, all portions of the joining materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the joint shall be in accordance with the manufacturer's installation instructions. During the construction and until joining operations are complete, the open ends of all pipes shall be at all times protected and sealed with temporary water tight plugs. Unless otherwise specified, all water mains shall be laid with a minimum depth of five and one-half (5-1/2) feet, measured from the established grade shown on the drawings to the top of the pipe.

The entire section of the pipe shall be pushed forward to seat the spigot end into the bell. After the section of pipe is inserted into the bell (when joining pipe to mechanical joint fittings) the gasket shall then be pressed into place within the bell, being careful to have the gasket evenly located around the entire joint.

The cutting of pipe for inserting valves, fitting or closure pieces shall be done in a neat and workmanlike manner without damage to cement lining and so as to leave a smooth end at right angles to the axis of the pipe.

When machine cutting is not available for cutting pipe twenty inches (20") in diameter or larger, the electric arc cutting method will be permitted, using a carbon or steel rod.

Only qualified and experienced workmen shall be used on this work. The flame cutting of pipe by means of an oxyacetylene torch shall not be allowed.

When the proposed water main is connected to the existing water main at a new connection point, the existing tee shall be abandoned by capping. Work shall include all materials and labor required for capping the existing water main prior to placing the water main back in service. Included in this item are the costs of excavating, blocking and installing a cap or plug on the water main. All caps or plugs shall be ductile iron or cast iron designed to fit water main of the size indicated on the plans with mechanical joints rated 250 psi per AWWA C110/ANSI 21.10. All caps or plugs shall have retainer glands and thrust blocking installed to keep them in place. Thrust blocks shall be poured Class SI concrete of the dimensions shown on the details in, and in accordance with the provisions of, the Standard Specifications for Water and Sewer Main Construction in Illinois. When poured, care shall be taken so that the cement does not interfere with access to joints or with hydrant drainage.

Pressure Testing and Disinfection of Water Main When a stretch of pipe and appurtenances have been completed the Contractor shall furnish proper appliances and facilities for testing and draining the same, without injury to the work or surrounding territory. He shall test by filling the pipe with clean water under a minimum hydrostatic pressure of one hundred fifty (150) pounds per square inch for not less than one hour and not more than six (6) hours. Water for making tests shall be furnished by the Contractor at his expense. All testing shall be in conformance with Sections 41-2.13 and 41-2.14 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," Sixth Edition. The section of water main shall pass if the pressure loss in the pipe is not greater than fifteen (15) pounds per square inch during the first hour of the test.

Each section of pipe to be tested, as determined by the Engineer, shall be slowly filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe in a satisfactory manner. The pump pipe connection and all necessary apparatus including gauges and meter shall be furnished by the Contractor. Before applying the specified test pressure, all air shall be expelled from the pipe. To accomplish this, taps shall be made, if necessary at point of highest elevation and afterward tightly plugged. Any cracked or defective pipes, fitting, valves, or hydrants discovered in consequence of this pressure test shall be removed and replaced by the Contractor with sound material and the test shall be repeated until satisfactory to the Engineer. Provisions of AWWA C-600 and C-603, where applicable, shall apply.

The Contractor shall notify the Schaumburg Public Works Department (847-923-6612) a minimum of forty eight (48) hours in advance to schedule this test. In no instance shall the Contractor draw water from an existing water main or operate any valves on an existing water main without the express permission of the Public Works Department.

After completion of the pressure test the Contractor shall conduct a leakage test to determine the quantity of water lost by leakage under the specified test pressure. "Test pressure" is defined as the maximum operating pressure of the section under test and is based on the elevation of the lowest point in the line or section under test corrected to the elevation of the test gauge. Applicable provision of AWWA C-600 and C-603 shall

apply. Duration of each leakage test shall be a minimum of one hour in addition to the pressure test period. Allowable leakage in gallons per hour for ductile iron water main shall not be greater than the values contained in Section 151 of the Village of Schaumburg Code of Ordinance.

Any defects, cracks or leakage that may develop or may be discovered, either in the joints or in the body of the castings, shall be promptly repaired by the Contractor at his own expense.

Prior to chlorination, the main shall be flushed as thoroughly as possible with the water pressure and outlets available. Flushing shall be done after the pressure test is made. It must be understood that such flushing removes only the lighter solids and cannot be relied upon to remove heavy material allowed to get into the main during laying. If no hydrant is installed at the end of the main, a tap should be provided large enough to effect a velocity in the main of at least 2.5 feet per second.

Sterilization: The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension or any valved section of it and through a corporation stop in the top of the newly laid pipe. The water injector for delivering the chlorine bearing water into the pipe should be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension.

Water from the existing distribution system or other source of supply shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least fifty (50) ppm, or enough to meet the requirements during the retention period. A convenient method of determining the rate of flow of water into the line to be treated is to start with the line full of water and measure the rate of discharge at a hydrant with a Pitot tube. Great flexibility is made possible by providing a series of orifices to give good gauge readings at high and low flows.

Valves shall be manipulated so that the strong chlorine solution in the line being treated will not flow back into the line supplying the water.

Treated water shall be retained in the pipe long enough to destroy all spore forming bacteria. This retention period should be at least twenty four (24) hours. After the chlorine treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative points should be at least ten (10) ppm.

In the process of chlorinating newly laid pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinating agent.

Final Flushing And Testing: Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water, throughout its length shall, upon test, be approved as safe water by the department of public works. This quality of water delivered by the new main should continue for a period of at least two (2) consecutive full days as demonstrated by laboratory examination of samples taken from a tap located and installed in such a way as to

prevent outside contamination. Samples should never be taken from an unsterilized hose or from a fire hydrant, because such samples seldom meet current bacteriological standards.

(1) Repetition Of Procedures: Should the initial treatment fail to result in the conditions specified, the chlorination procedure shall be repeated until such results are obtained.

(2) Sampling Tap: Three-quarter inch (3/4") bronze corporation cocks shall be installed in all water mains at intervals not exceeding one thousand feet (1,000').

The contractor must notify the public works department at least forty eight (48) hours in advance to arrange for appropriate pressure testing and water samplings. The contractor is to provide the public works department with sampling bottles at the time of sampling. All samples will be sent to the Cook County department of health or to a state of Illinois approved testing lab for analysis.

Method of Measurement Water main (of the diameters specified) will be measured per foot in place. Water mains shall be measured along the center line of the water main from the center of the valve to the center of the valve, fittings, or end of the pipe.

Basis of Payment Payment for water main shall be made at the contract unit price per foot for DUCTILE IRON WATER MAIN of the appropriate diameter. Payment shall be full compensation for excavation, removal of existing water main in conflict with the proposed water main, capping existing tees, bedding, installation of water main, backfill, thrust blocking, bends, fittings, jetting, pressure testing, chlorination, and all labor, materials, equipment and incidentals as shown on the plans and as specified herein to construct a complete and operational water main except as noted below.

Payment for Trench Backfill shall be made at the contract unit price bid per cubic yard for TRENCH BACKFILL.

Restoration of sidewalk, driveways and landscaping shall be measured for payment under their respective bid items. Granular bedding as specified shall be included to the cost of the water main.

Non-Pressure Connection

Description. This work shall consist of the connection of new water main and fire hydrant leads to existing water main that can be shut down.

Materials. Water main and fitting shall conform to the special provisions for Ductile Iron Water Main. The work includes ductile iron pipe (of the diameter of the existing watermain) and fittings. Trench backfill shall meet the requirement for CA-6 listed in Article 1004.01.

Construction Requirements. Connections shall be accomplished by the use of mechanical joint fittings and lengths of pipe to make the most direct vertical and horizontal adjustment necessary to complete the connection. This may include cut-ins

to the existing main or connections to existing valves or fittings. This work will require water to be shut off, which shall be coordinated with the Village's maintenance personnel. The new main shall be disinfected in accordance with the DUCTILE IRON WATER MAIN special provision.

When connecting a new fire hydrant location is on the opposite side of the existing water main, the existing tee on the main shall be rotated to the opposite side of the main.

Basis of Payment. This work will not be measured for payment but shall be included in the contract unit price for DUCTILE IRON WATER MAIN, which price shall include all labor, equipment, water main fittings, disinfection, testing, backfill and thrust blocking required to make the connection.

Adjusting Water Main

Description. This work shall consist of adjusting existing water mains when directed by the Engineer where they are in conflict with the proposed storm sewer or sanitary sewer. This item shall only be used on the existing watermain and shall not be allowed for adjusting the proposed watermain.

All materials used in adjusting the existing water mains shall meet the requirements of the special provision "Ductile Iron Water Main". All adjustment in the line or grade of the existing water main shall be approved by the Engineer.

All materials, labor, and equipment necessary to adjust the water main shall be on hand before shutdown and cutting of the existing main. The Contractor shall take every precaution to hold the interruption of service to a minimum.

A minimum clearance of eighteen inches (18") shall be maintained between the adjusted main and improvement for which the adjustment was made. A downward adjustment will be required unless 5.5' of cover can be maintained for an upward adjustment or as approved by the Engineer.

Adequate precautions shall be taken to prevent contaminants from entering the existing main. The inside surface of all new materials used in the adjustment shall be cleaned of all foreign materials and swabbed with a solution of efficient bactericide before assembly. The adjusted section shall then be flushed with potable water.

Thrust blocking of Class SI concrete shall also be placed where required and as directed by the Engineer.

Forty-eight (48) hours prior to shutting down the existing main for the adjustments, the facility owner and all users that will be affected shall be notified in writing. The Contractor shall distribute notices of the shut down to the residents affected. The Contractor shall cooperate with the local agency personnel to locate valves necessary to isolate the work area. All valves will be operated by personnel from the owning agency.

Basis of Payment. This work will be paid for at the contract unit price per foot for ADJUSTING WATERMAIN of the size specified. This price shall include the cost of all excavation, materials, pipe, adapters, joint materials, fittings, blocking, backfill, trench backfill, removal and disposal of existing main, and all work and equipment necessary to make a complete and finished installation.

Water Service Line, 1 1/4"

Description. This work shall consist of removing the existing water service lines and b-box and the tapping and installation of new water service line and b-box from the new water main to the b-box shut-off as shown on the plans.

Materials. Service lines shall meet the diameter of the existing service line or otherwise be a minimum 1-1/4" internal diameter Type K copper tubing, soft temper for underground service, conforming to ASTM B-88 and B-251. Corporation stops shall be Mueller H-15000 or approved equal; tapping saddles shall be compatible with the corporation stop. Curb stops shall be Mueller H-15154 or approved equal; the service box (a.k.a., b-box) shall be Mueller H-10302 or approved equal.

All water services shall have a minimum of 5'6" of cover over the service. At the time of construction, all water services shall be left completely exposed until the Village of Schaumburg Water Division (847.923.6612) has inspected same.

Twenty-four hours' notice is required for such inspection. At the time the inspection is made, a representative of the Contractor shall be present. The Contractor shall give 24 hours' notice to the Water Division (847.923.6612) of the Village, before any water main is to be tapped. At the time the tap is made, a representative of the Contractor shall be present.

Connection of new curb stop to the existing service line leading to the residence shall be in accordance with Subsections 41-2.10 through 41-2.12 of the latest edition of the *Standard Specifications for Sewer and Water Main Construction in Illinois*. Unless the pavement or sidewalk has been removed by other operations, the service line shall be augured in lieu of open cutting. The abandoned service line shall be removed and capped at the main.

Any excavation, shoring and backfill required to install this item shall be included.

Trench backfill shall be in accordance with section 208 of the Standard Specifications but shall be included in the cost of this item.

Measurement. Water service line (of the diameters specified) will be measured per foot in place. The length measured will include stops, fittings, and valves.

Basis of Payment. This work shall be paid for at the contract unit price per foot for WATER SERVICE LINE, 1-1/4", which price shall include all labor, excavation, backfill, materials, equipment, connections and adjustments, and trench backfill as directed by

the Engineer necessary to complete the work. Any dewatering or sheeting required to do the work as specified shall not be paid for separately but will be incidental to the contract unit price of the item.

Fire Hydrants to be Removed

Description This work shall consist of the removal of existing fire hydrants, auxiliary valve and capping the downstream end of the valve at location shown on the Plans. When directed by the Engineer and the existing main has been removed from service, this work is to be accomplished to which the fire hydrant is attached.

This work shall conform to the applicable sections of the Standard Specifications for Water and Sewer Main Construction in Illinois. When a proposed fire hydrant is shown to be installed to replace the existing fire hydrant using the existing tee on the watermain, the Contractor shall remove the fire hydrant, auxiliary valve and valve box, and the watermain from the auxiliary valve to the existing tee.

When a proposed fire hydrant is shown to be installed at an adjacent location, not using the existing tee on the watermain, the Contractor shall follow the following procedure. The Contractor shall excavate below the existing fire hydrant to be removed to expose the auxiliary valve. The auxiliary valve shall be shut off completely and the riser stem removed. The valve box shall be modified to remain around the valve but no higher than the top of the valve or the remaining portion of the riser stem, whichever is higher. The connector pipe from the valve to the fire hydrant shall be detached from the valve and a cap installed on the downstream end of the valve. An alternative is to leave a short section of connector pipe attached to the downstream end of the valve and this short section of pipe shall be capped. The cap shall be permanently attached to prevent leakage. When directed by the Engineer, concrete thrust blocking shall be installed adjacent to the cap.

The Contractor shall remove the connector pipe, fire hydrant, and auxiliary valve and valve box (when described above) and deliver them to the Village of Schaumburg Public Works Department (714 S. Plum Grove Road, Schaumburg, IL), or dispose of them if the Public Works Department does not want them.

The Contractor shall backfill the excavation with CA-6 or appropriate backfill, as approved by the Engineer, to the existing grade elevation, unless a new fire hydrant is shown to be installed at this location. The backfill shall be compacted in accordance with Section 550 of the "Standard Specifications" except that only Method 1 shall be used.

Basis of Payment This work shall be paid for at the contract unit price per each for FIRE HYDRANT TO BE REMOVED, which price shall include all labor, equipment and material necessary to complete the work as specified herein.

Fire Hydrant With Auxiliary Valve and Valve Box

Description This item shall consist of furnishing fire hydrants with auxiliary valves and valve boxes and installing them at the locations shown on the plans and in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois.

Materials

1. Fire Hydrants

Fire hydrants shall conform to AWWA Standard C-502 with break away traffic flange. They shall have a valve opening of five and one-fourth inches (5 1/4 ") and shall be equipped with two (2) 2 1/2-inch hose connections and one 4 1/2-inch male pumper connection. The outside diameter of the male thread on the two and one-half inch (2 1/2") hose connections shall be "national standard" threads. Hose caps shall be fastened to barrel with steel chain of at least one-eighth inch (1/8") thickness.

A suitable tee of the quality and kind herein specified shall be placed in the watermain opposite each of the fire hydrants and shall be connected with the hydrant by means of the valve and connecting pipe.

Each hydrant shall be provided with a drip that will leave no water standing in the barrel of the hydrant when the hydrant is closed. This drip shall close tightly before the hydrant begins to open. The hose and steamer connections shall be securely leaded and locked into the hydrant and each shall be provided with a suitable cast iron threaded cover fastened securely.

All fire hydrants shall be equipped with an auxiliary valve and cast iron valve box. The auxiliary valve shall be a six inch (6") valve and the pipe connecting the hydrant to the main shall be six inch (6") ductile iron water pipe (class 52) meeting the requirements contained in the special provision for DUCTILE IRON WATER MAIN.

Fire hydrants shall be the break flange type Mueller hydrant, type A-423 as manufactured by the Mueller Manufacturing Company, Decatur, Illinois, or Clow Medallion F-2545 as manufactured by the Clow Valve Company, Oskaloosa, Iowa, or approved equal.

All hydrants and any required fittings shall receive one (1) coat of red paint as recommended by the manufacturer prior to final acceptance.

2. Auxiliary Valves and Valve Box

Auxiliary valves shall be "Double Face Valves" in accordance with the following: The valves shall come complete with a cast iron valve box and cover produced by the same manufacturer producing the valve. The auxiliary valves shall be six (6) inches in diameter. The word "Water" shall be imprinted on the valve box cover (Mueller 1H-10360 or Clow 1F-2454). All valves shall be rated for 300 psi test pressure and 150 working pressure.

Valves shall conform to Underwriters' Laboratories, Inc., UL-262, Standard for Gate Valves for Fire Protection, and Factory Mutual Research FM Approval Standard Class Numbers 1120 and 1130, for Fire Service Water Control Valves.

Wedges shall be constructed of ductile iron, fully encapsulated in nitrile rubber except for guide and wedge nut areas.

Wedge rubber shall be molded in place and bonded to the ductile iron portion, and shall not be mechanically attached with screws, rivets, or similar fasteners.

Wedge shall seat against seating surfaces arranged symmetrically about the centerline of the operating stem, so that seating is equally effective regardless of direction of pressure unbalance across the wedge.

All seating surfaces in body shall be inclined to the vertical at a minimum angle of 32 degrees (when stem is in a vertical position) to eliminate abrasive wear of rubber sealing surfaces. The stem shall be sealed by at least two O-rings; all stem seals shall be replaceable with valve fully open and while subjected to full pressure. Waterway shall be smooth and shall have no depressions or cavities in seat area where foreign material can lodge and prevent closure or sealing.

Construction Methods Each hydrant shall be set on a concrete thrust block not less than 24 inches by 24 inches by 4 inches in thickness. A minimum of 1/2 cubic yard of gravel shall be placed around the base of the hydrant in order to provide drainage for the hydrant drain.

All hydrants shall be set plumb and shall have their nozzles parallel with edge of pavement, the steamer connection shall be facing the edge of pavement. The height of the nut on a four and one-half inch (4 1/2") steamer connection shall be no less than twenty four inches (24") or more than thirty six inches (36") above finished grade at the hydrant. All hydrant leads between the tee and the hydrant shall be a positively restrained connection.

The bowl of each hydrant shall be well braced against undisturbed earth at the end of trench with stone slabs or concrete backing, or it shall be tied to the pipe with suitable rods or clamps.

Fire hydrant extensions shall only be used with the approval of the Engineer. Should fire hydrant extensions be required due to improper construction methods by the Contractor, the extensions will be installed but will not be measured for payment.

Auxiliary valves shall be installed in the vertical position, supported on a concrete pedestal. It shall be the Contractor's responsibility to assure that the finished elevation of the box is flush with the adjacent proposed ground line. Valve box installation shall meet the requirements of Section 44 of the Standard Specifications for Water and Sewer Main Construction in Illinois.

All excavation around the fire hydrant and auxiliary valve shall be backfilled to the natural line or finished grade as rapidly as possible. The backfill material shall consist

of the excavated material or trench backfill as herein specified. All backfill material shall be deposited in the excavation in a manner that will not cause damage to the fire hydrant or auxiliary valve. Any depressions which may develop within the area involved in a construction operation due to settlement of backfill material shall be filled in a manner consistent with standard practice.

Method of Measurement Measurement for the fire hydrant with auxiliary valve and box complete and including all appurtenances shall be measured on a per each basis at each location.

Six (6) inch watermain connection pipe as specified shall be measured for payment on a per foot basis under DUCTILE IRON WATER MAIN 6".

Basis of Payment Payment for furnishing and installing the fire hydrant with auxiliary valve and box, drainage stone, thrust block, fittings, all appurtenances and backfilling shall be at the contract unit price per each for FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX.

Adjustments and Reconstructions

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

"602.04 Concrete. Cast-in-place concrete for structures shall be constructed of Class SI concrete according to the applicable portions of Section 503. Cast-in-place concrete for pavement patching around adjustments and reconstructions shall be constructed of Class PP-1 concrete, unless otherwise noted in the plans, according to the applicable portions of Section 1020."

Revise the third, fourth and fifth sentences of the second paragraph of Article 602.11(c) to read:

"Castings shall be set to the finished pavement elevation so that no subsequent adjustment will be necessary, and the space around the casting shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.05 to read:

"603.05 Replacement of Existing Flexible Pavement. After the castings have been adjusted, the surrounding space shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.06 to read:

“603.06 Replacement of Existing Rigid Pavement. After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-1 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface.”

Revise the first sentence of Article 603.07 to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.”

Drainage and Inlet Protection Under Traffic (District 1)

Effective: April 1, 2011

Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

- “(i) Temporary Hot-Mix Asphalt (HMA) Ramp (Note 1) 1030
- (j) Temporary Rubber Ramps (Note 2)

Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)”

Revise Article 603.07 of the Standard Specifications to read:

“603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting \pm 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

Portland Cement Concrete Pavement (Special)

Description. This item consists of the installation of a full depth, integrally colored, stamped concrete crosswalk at the locations and in accordance with the details included in the plans.

The work shall be performed on the job-site by trained and experienced workmen. The Contractor shall provide a sample test section, 6' x 6' in size, with color and texture as specified, prior to the start of construction.

The Contractor for this work shall be a Licensed Contractor or Subcontractor who has been trained and equipped to perform colored, patterned concrete specialty work. The Contractor shall have completed at least ten installations of high quality at ten separate locations, each over four-hundred (400) square feet in size, in the last twelve (12) months. These installation sites shall be available to be reviewed by the Engineer. Upon review, the Engineer may elect to waive the necessity of a job site sample. All work shall comply with the current specifications and quality standards issued by the specified manufacturer.

Materials. Portland cement concrete shall conform to Section 420 of the Standard Specifications except as amended by the following:

All aggregates used in the portland cement concrete material shall be crushed limestone. The concrete mix design, containing the crushed limestone aggregates, shall be submitted to the Engineer for approval. No concrete shall be placed without the Engineer's approval of the concrete mix design.

The concrete shall be a 6 bag mix and shall have a minimum compressive strength of 4000 psi @ 28 days. Slump shall be in the range of 4"-5" and air shall be 5%-6%. Portland cement shall conform to ASTM C 150, Type 1. Aggregates shall conform to ASTM C33. Mixing water shall be fresh, clean, and potable. The entraining agent shall comply with ASTM C260. No admixtures containing calcium chloride are permitted. The concrete mix must be approved by the manufacturer and the Engineer.

The integral color shall be Chromix Admixture, A-26 Brick Red, by L. M. Scofield Company or approved equal. The release agent color shall be Lithochrome Color Hardener- Release Agent, A-21 Deep Charcoal, by L. M. Scofield Company, or approved equal. The accent color shall be Lithochrome Chemstain, CS-14 Dark Walnut, by L. M. Scofield Company, or approved equal. All colors shall be approved by the Engineer prior to application. No extra compensation shall be made for the cost of custom colors or the blending colors.

Reinforcement shall be welded wire fabric in a six inch (6") grid, (W.W.F.#6), as shown on plans, conforming to Article 1006.10 of the Standard Specifications. Pavement fabric shall be paid for separately as PAVEMENT FABRIC.

The imprinting tools shall be manufactured by L. M. Scofield Company, or approved equal. The imprinting field pattern shall be Used Brick - Herringbone Pattern, #2570. The imprinting border pattern shall be Used Brick - Solider Course Pattern, #2640. Any substitutions shall be approved by the Engineer prior to use.

The surface sealant shall be Salt Guard WB, by Prosoco Industries, with a non-skid additive, or approved equal. The sealant shall be applied as a finish coat to all colored concrete surfaces.

Construction Methods. The concrete crosswalk shall not be installed until the Aggregate Subgrade Improvement, 12" and Hot-Mix Asphalt Binder Course have been constructed. The pavement shall be saw cut to the dimensions shown on the plans and the pavement removed to the subgrade elevation. The removal of the pavement shall be paid for separately as PAVEMENT REMOVAL. The top lift of the Aggregate Subgrade Improvement shall be repaired, as determined by the Engineer, and recompact. This work shall be included in the pay item PORTLAND CEMENT CONCRETE PAVEMENT (SPECIAL).

The concrete shall be placed on the prepared sub-base to a depth of 11" as shown on the plans, screened to the finished grade and floated to a uniform surface per Section 420 of the Standard Specifications.

The Chromix Admixture integral color shall be mixed full depth at a rate of one bag per cubic yard and at a charging speed of 5 to 10 minutes or a minimum of one-hundred (100) revolutions as recommended by the manufacturer. Additional water shall not be added to the mixture.

The Lithochrome Color Hardener-Release Agent color shall be applied evenly to the troweled surface prior to imprinting. The Release Agent shall be a colored, dry-shake-on powder to facilitate imprinting tool release from the concrete slab and to achieve faux antique accents.

While the concrete is still in the plastic stage of set, imprinting tools shall be applied to make the desired impression to the surface.

Upon setting of concrete, the colored concrete shall be pressure washed and buffed with a rotary type buffer to achieve the desired antique accents and remove excess release agents.

After concrete has cured for not more than thirty (30) days, the Salt Guard WB Sealant with a non-skid additive, or approved equal, shall be applied to a clean, dry surface at a rate of five (5) gallons per one-thousand (1000) square feet of area.

The Contractor will also be required to protect the newly installed crosswalk from staining due to Prime Coat and final surface paving operations. The method of protection shall be determined by the Contractor and approved by the Engineer.

Method of Measurement. Portland cement concrete pavement (special) 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 PORTLAND CEMENT CONCRETE PAVEMENT (SPECIAL) which price shall include all labor, equipment, and materials necessary to perform said work.

Bike Path Removal

Description. This work shall consist of the removal and disposal of the existing hot-mix asphalt bike path as directed by the Engineer. This work shall be performed in accordance with Section 440 of the Standard Specifications.

Method of Measurement. Bike path removal shall 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 BIKE PATH REMOVAL.

Sanitary Sewer Removal

Description. This work shall consist of the removal and disposal of existing sanitary sewer service pipe at the locations shown on the plans or as directed by the Engineer. This work shall be performed in accordance with Section 551 of the Standard Specifications.

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

Basis of Payment. This work will be paid for at the contract unit price per foot for SANITARY SEWER REMOVAL.

Exploration Trench, Special

Description. This item shall consist of excavating a trench at locations designated by the Engineer for the purpose of locating existing tile lines or other underground facilities within the limits of the proposed improvement. The trench shall be deep enough to expose the line but not more than one foot deeper than the line, and the width of the trench shall be sufficient to allow proper investigation to determine if the line needs to be relocated or replaced.

The exploration trench shall be backfilled with gradation CA 6 stone, the cost of which shall be included in the item of EXPLORATION TRENCH, SPECIAL.

Basis of Payment. This work will be paid for at the contract unit price per foot for EXPLORATION TRENCH, SPECIAL, regardless of the depth required, and no extra compensation will be allowed for any delays, inconveniences or damages sustained by the Contractor in performing the work.

Aggregate Surface Course for Temporary Access

Effective: April 1, 2001

Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

"402.10 For Temporary Access. The contractor shall construct and maintain aggregate surface course for temporary access to private entrances, commercial entrances and roads according to Article 402.07 and as directed by the Engineer.

The aggregate surface course shall be constructed to the dimensions and grades specified below, except as modified by the plans or as directed by the Engineer.

- (a) Private Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). The maximum grade shall be eight percent, except as required to match the existing grade.

- (b) Commercial Entrance. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Road. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface coarse for any operation that may disturb or remove the temporary access. The same type and gradation of material used to construct the temporary access shall be used to maintain it.

When use of the temporary access is discontinued, the aggregate shall be removed and utilized in the permanent construction or disposed of according to Article 202.03.”

Add the following to Article 402.12 of the Standard Specifications:

“Aggregate surface course for temporary access will be measured for payment as each for every private entrance, commercial entrance or road constructed for the purpose of temporary access. If a residential drive, commercial entrance, or road is to be constructed under multiple stages, the aggregate needed to construct the second or subsequent stages will not be measured for payment but shall be included in the cost per each of the type specified.”

Revise the second paragraph of Article 402.13 of the Standard Specifications to read:

“Aggregate surface course for temporary access will be paid for at the contract unit price per each for TEMPORARY ACCESS (PRIVATE ENTRANCE), TEMPORARY ACCESS (COMMERCIAL ENTRANCE) or TEMPORARY ACCESS (ROAD).

Partial payment of the each amount bid for temporary access, of the type specified, will be paid according to the following schedule:

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.
- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access.”

Portland Cement Concrete Pavement (Variable Depth)

Description. This item consists of the installation of a variable depth portland cement concrete pavement adjacent to a decorative concrete crosswalk.

Materials. The concrete shall meet the requirements of Section 1020 of the Standard Specifications for class PV concrete.

Installation. The concrete pavement shall not be installed until the Aggregate Subgrade Improvement, 12" and Hot-Mix Asphalt Binder Course have been constructed. The pavement shall be saw cut to the dimensions shown on the plans and the pavement removed to the subgrade elevation. The removal of the pavement shall be paid for separately as PAVEMENT REMOVAL. The top lift of the Aggregate Subgrade Improvement shall be repaired, as determined by the Engineer, and recompacted. This work shall be included in the pay item PORTLAND CEMENT CONCRETE PAVEMENT (VARIABLE DEPTH).

The concrete pavement shall be placed on the prepared sub-base to a depth ranging from 9" adjacent to the HMA pavement to 11" adjacent to the decorative concrete crosswalk. Placement and curing of the concrete shall be in accordance with Section 420. Pavement fabric, meeting the requirements of Article 1006.10, shall be placed in accordance with Article 420.08. Pavement fabric shall be paid for separately as PAVEMENT FABRIC.

During the time the approach roadways are open to traffic, and before the final surface course is placed, the Contractor shall provide and maintain temporary bituminous ramps at both upstream and downstream ends of the concrete pavement, in accordance with the applicable portions of Article 406.08. The cost of the installation and removal of the temporary ramps shall be included in the cost of PORTLAND CEMENT CONCRETE PAVEMENT (VARIABLE DEPTH).

Method of Measurement. Portland cement concrete pavement (variable depth) 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 PORTLAND CEMENT CONCRETE PAVEMENT (VARIABLE DEPTH) which price shall include all labor, equipment, and materials necessary to perform said work.

Portland Cement Concrete Driveway Pavement, 8 Inch, Special

Description. This work shall consist of the construction of Portland Cement Concrete driveways at the locations designated on the plans in accordance with Section 423 of the Standard Specifications.

Materials. Materials shall comply with the requirements of Sections 1006, 1020 and 1051 of the Standard Specifications for Class PV concrete with a compressive strength of 3500 psi after 3 days.

Construction Method. The new driveway shall be poured to a minimum thickness of eight (8) inches unless otherwise directed by the Engineer. The existing aggregate subbase shall be replaced with 2" of Subbase Granular Material, Type B. The subbase shall be paid for separately as SUBBASE GRANULAR MATERIAL, TYPE B 2".

6 inch X 6 inch - #6 welded wire mesh shall be placed 3" below the surface of the concrete.

All forming shall be with 2" x 8" lumber or approved metal forms except within areas of driveway radij where 1" x 6" lumber shall be utilized.

The Contractor shall machine-saw a perpendicular joint between that portion of a driveway to be removed and that which is to remain in place. If the Contractor removes or damages the existing driveway or parking area outside the limits designated by the Engineer for removal and replacement, he will be required to repair or replace that portion at his own expense to the Engineer's satisfaction. All required excavation shall be included in the contract unit price for this item. Removal of the existing driveway pavement will be paid for separately.

Method of Measurement. This work 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 PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH, SPECIAL.

Removal of the existing driveway pavement shall be paid for per square yard as DRIVEWAY PAVEMENT REMOVAL.

Watermain to be Abandoned

Description. This work shall consist of the capping and abandonment of the existing watermain. When directed by the Engineer and the new watermain has been placed into service, this work is to be accomplished.

Construction Methods. When the new watermain has been installed, tested and placed into service, the contractor shall excavate down to the existing watermain, work with the Village of Schaumburg Water Division (847.923.6612) to temporarily shut down the water system, cut into the existing watermain and cap both ends of the existing watermain. The caps shall be a fitting that is connected to sections of water main pipe by means of a positive restrained joint consisting of mechanical joints with retainer gland, or Megalug or approved equal joints. Fittings shall be ductile iron meeting requirements of ANSI/AWWA C153/A21.10 and ANSI/AWWA C111/A21.11. Concrete thrust blocks shall be placed against the cap on the existing watermain to remain in service.

The Contractor shall backfill the excavation with CA-6 or appropriate backfill, as approved by the Engineer, to the existing grade elevation. The backfill shall be compacted in accordance with Section 550 of the "Standard Specifications" except that only Method 1 shall be used.

Basis of Payment. This work shall be paid for at the contract unit price per lump sum for WATERMAIN TO BE ABANDONED, which price shall include all labor, equipment and material necessary to complete the work as specified herein.

Combination Concrete Curb and Gutter, Type B-6.12 (Special)
Combination Concrete Curb and Gutter, Type B-6.18 (Special)

Description. This work shall consist of the construction of combination concrete curb and gutter, of the type specified in accordance with Section 508 and 606 of the Standard Specifications.

Materials. Materials shall comply with the requirements of Section 1006, 1020 and 1051 of the Standard Specifications for Class PV concrete with a compressive strength of 3500 psi after three (3) days.

Method of Measurement. Measurement for curb and gutter shall be per foot for the actual length of curb and gutter constructed.

Basis of Payment. This work shall be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12, (SPECIAL) or COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18 (SPECIAL) which price shall include all labor, equipment, and materials necessary to perform said work.

Traffic Control Plan

Effective: September 30, 1985
Revised: January 1, 2007

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

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

The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.

STANDARDS

- 701006-03 Off-Road Operations, 2L, 2W, 15' to 24" From Pavement Edge
- 701011-02 Off-Road Moving Operations, 2L, 2W, Day Only
- 701101-02 Off-Road Operations, Multilane, 15' to 24" From Pavement Edge
- 701106-02 Off-Road Operations, Multilane, More than 15' Away
- 701301-04 Lane Closure, 2L, 2W, Short Time Operations
- 701311-03 Lane Closure, 2L, 2W, Moving Operations – Day Only
- 701501-06 Urban Lane Closure, 2L, 2W, Undivided
- 701701-08 Urban Lane Closure, Multilane Intersection
- 701801-05 Lane Closure, 1W or 2W Crosswalk or Sidewalk Closure
- 701901-02 Traffic Control Devices

DETAILS

Maintenance of Traffic Plan
Detour Plan
Traffic Control and Protection for Side Roads, Intersections & Driveways (TC-10)
District One Typical Pavement Markers (TC-13)
Pavement Marking Letters and Symbols for Traffic Staging (TC-16)
Detour Signing for Closing State Highways (TC-21)
Arterial Road Information Sign (TC-22)
Driveway Entrance Signing (TC-26)

RECURRING SPECIAL PROVISIONS

LRS 3: Construction Zone Traffic Control
LRS 4: Flaggers in Work Zones

SPECIAL PROVISIONS

"Traffic Control and Protection (Arterials)"
"Temporary Information Signing"
"Maintenance of Roadways"
"Type III Temporary Tape for Wet Conditions"
"Flagger at Side Roads and Entrances (BDE)"
"Pavement Marking Removal (BDE)"
"Sidewalk, Corner or Crosswalk Closure (BDE)"
"Traffic Control Deficiency Deduction (BDE)"

Traffic Control and Protection (Arterials)

Effective: February 1, 1996

Revised: March 1, 2011

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

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

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

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

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

Type III Temporary Tape for Wet Conditions

Effective: February 1, 2007
Revised: February 1, 2011

Description. This work shall consist of furnishing, installing, and maintaining Type III Temporary Pavement Marking Tape for Wet Conditions.

Materials. Materials shall be according to the following.

Item	Article/Section
(a) Pavement Marking Tape	1095.06

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 will be verified by a visual inspection method performed by the Department. The surface of the material shall provide an average skid resistance of 45 BPN when tested according to ASTM E 303.

CONSTRUCTION REQUIREMENTS

Type III Temporary Tape for Wet Conditions shall meet the requirements of Article 703.03 and 703.05. Application shall follow manufacturer's recommendations.

Method of Measurement: This work will be measured for payment in place, in feet (meters).

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for WET REFLECTIVE TEMPORARY TAPE TYPE III of the line width specified, and at the contract unit price per square foot (square

Sign Panel – Type 1 (Special)

Description. This work shall consist of furnishing, fabricating, and /or installing sign panels, complete with sign faces, legend, and supplemental panels in accordance with Section 720 of the Standard Specification with the following modifications:

The sheeting for Stop Signs (R1-1) and Yield Signs (R1-2) shall be Diamond Grade DG3 Reflective Sheeting Series 4000 manufactured by 3M or approved equal.

The sheeting for all other signs shall be High Intensity Prismatic Reflective Sheeting Series 3930 manufactured by 3M or approved equal.

Method of Measurement. Sign panels will be measured for payment in square feet according to Article 720.03.

Basis of Payment. This work will be paid for at the contract unit price per square foot for SIGN PANEL – TYPE 1 (SPECIAL).

Valve Vaults to be Abandoned

Description. This work shall consist of abandoning the existing water valves not being used in the new water system. When directed by the Engineer and the new watermain has been placed into service, this work is to be accomplished.

Construction Methods. When the new watermain has been installed, tested and placed into service, the contractor shall excavate around the existing valve in vault to remove the top barrel section(s) leaving only the section with the existing valve. This barrel section shall be filled with sand while the remaining depth of the hole is to be filled with approved backfill material as approved by the Engineer, to the existing grade elevation. The backfill shall be compacted in accordance with Section 550 of the "Standard Specifications" except that only Method 1 shall be used.

The barrel section(s) that have been removed shall be hauled offsite and disposed of in an appropriate and approved location.

Basis of Payment. This work shall be paid for at the contract unit price per each for VALVE VAULTS TO BE ABANDONED, which price shall include all labor, equipment and material necessary to complete the work as specified herein.

Pressure Connection

Description This work shall consist of installing a valve in a five foot diameter vault under pressure on the existing water main when directed by the engineer so as not to disrupt service to the existing main. The connection shall be constructed in accordance with all applicable portions of Section 561 of the "Standard Specifications" and Section 46 of the "Standard Specifications of Water and Sewer Main Construction in Illinois" with the following materials:

- 1) The MJ tapping sleeve shall meet or exceed all material specifications as listed below and be suitable for use with standard mechanical joint x mechanical joint resilient wedge gate valves per ANSI/AWWA C609-94. The mechanical joint outlet shall be a one-piece casting having a plain end and a mechanical joint gland TIG and MIG welded a full 360 degrees.
- 2) The tapping sleeve shall have a Mechanical Joint Outlet Gasket, Branch Sealing Gasket, and complete Circle Gasket attached to the sleeve at the factory.
- 3) The Branch Sealing Gasket and Complete Circle Gasket shall be contained within stainless steel Retaining Rings.
- 4) The tapping sleeve shall incorporate Drop-in, Square-Neck, Track-Head bolts with a minimum of two (2) longer starter bolts.
- 5) A minimum quantity of 16 drop-in bolts and 6 mechanical joint outlet bolts shall be provided.

- 6) The Branch opening shall be larger in diameter than nominal to allow the use of a full size cutter.
- 7) All welding shall be passivated so as to return the welded stainless steel to its original corrosion resistant state.
- 8) There shall be no Paper or Plastic adhesive labels attached to the tapping sleeve, any information appearing on the sleeve shall be stenciled.
- 9) The tapping sleeve shall be Factory Hydrostatically Tested on pipe to a minimum of 300 psi to verify proper fit and weld integrity with zero leakage allowed.
- 10) Sleeves shall be the PowerSeal Model 3490MJ stainless steel tap sleeve with mechanical joint outlet as manufactured by PowerSeal Corporation or an approved equal.

Material Specifications

- 1) The shell shall be 304 (18-8) stainless steel.
- 2) Mechanical joint outlet gland and plain end shall be per ANSI / AWWA – C101 – C101.1 as applicable and cast of 304 (18-8) stainless steel.
- 3) The Armor Plate shall be 304 (18-8) stainless steel.
- 4) The Lugs shall be 304 (18-8) stainless steel. The Lugs shall be welded (GMAW) to the shell.
- 5) The Nuts shall be Heavy-Hex, of 304 (18-8) stainless steel and lubricated to prevent galling or seizing.
- 6) The Bolts shall be 304 (18-8) stainless steel, or equal, 5/8" NC thread.
- 7) The Gaskets shall be of virgin Nitrile (Buna-N, NBR), or equal, compounded for water service.
- 8) The gate valve used as part of the pressure connection shall be a resilient wedge epoxy coated gate valve either Mueller A2360, Watrous 2500, or approved equal. All buried hardware shall be non-Ferrous material.

Installation After the surface disinfection, the tapping sleeve shall be mounted to the main and tapping valve to form a pressure-tight connection. The installation shall be pressure tested at operating pressure plus 50 percent, to insure the integrity of the installation. This shall be a hydrostatic test, introduced through a port on the tapping machine, or through a tapped mechanical joint plug on the outlet side of the tapping valve. The tapping machine and the tapping valve and sleeve assembly shall be externally supported so that no additional weight is placed upon the main.

Basis of Payment This work will be paid for at the contract unit price per each for PRESSURE CONNECTION, which price shall be payment in full for all labor, equipment, and materials necessary to complete the work specified herein including water tapping valves and vaults.

Gate Valve and Vault, Complete

Description. This work shall consist of furnishing and installing a water main valve connected to new water main inside a 4-foot diameter precast concrete valve vault at locations shown on the Plans and as directed by the Engineer.

Materials. Gate valves shall conform to AWWA C500 requirements, and shall be installed per the requirements of Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois. Valve vaults shall be precast concrete and shall conform to IDOT Standard 602501, Type A. Frames and lids shall be Neenah R-1712 frame and solid lid, or approved equal. "WATER" and "VILLAGE OF SCHAUMBURG" shall be cast into the lid. No more than 2 adjusting rings shall be allowed for a total grade adjustment in the field of 8 inches.

Basis of Payment. This work shall be paid for at the contract unit price per each for GATE VALVE AND VAULT, COMPLETE, which price shall include all labor, equipment and material necessary to complete the work as specified herein.

Temporary Information Signing

Effective: November 13, 1996

Revised: January 2, 2007

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

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

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

Note 1. The Contractor may use 5/8-inch instead of 3/4-inch plywood.

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

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

Note 4. The overlay panels shall be 0.08-inch thick.

GENERAL CONSTRUCTION REQUIREMENTS

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

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Articles 701.14 and 720.04. The signs shall be 7 feet above the near edge of the pavement and shall be a minimum of 2 feet beyond the edge of the paved shoulder. A minimum of 2 posts shall be used.

The attachment of temporary signs to existing sign structures or sign panels shall be approved by the Engineer. Any damage to the existing signs due to the Contractor's operations shall be repaired or signs replaced, as determined by the Engineer, at the Contractor's expense.

Signs which are placed on overhead bridge structures shall be fastened to the handrail with stainless steel bands. These signs shall rest on the concrete parapet where possible. The Contractor shall furnish mounting details for approval by the Engineer.

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

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

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

Storm Sewers (Water Main Requirements)

Description. This work shall consist of the installation of watermain quality pipe in areas where the storm sewer line crosses above the watermain. All work shall be performed in accordance with Section 550 of the Standard Specifications and Section 40 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," current edition.

Materials. All pipe materials shall conform to Section 40-2 of the Standard Specifications for Water and Sewer Main Construction in Illinois. The materials shall be approved by the Engineer prior to their installation. The watermain quality pipe shall be connected to the storm sewer pipe on both ends by use of non-shear mission couplings with stainless steel bands or a method approved by the Engineer. When connecting the watermain quality pipe to existing CMP pipes, the connection shall be made using a

concrete collar meeting the approval of the Engineer. The cost of these connections shall be included in the cost of STORM SEWERS (WATER MAIN REQUIREMENTS).

Basis of Payment. This work shall be measured and paid for at the contract unit price per foot for STORM SEWERS (WATER MAIN REQUIREMENTS) of the size specified which price shall include all labor, equipment, and materials necessary to perform said work.

Sanitary Sewer, 6"

Description. This work shall consist of the installation of watermain quality pipe in areas where the watermain crosses below the existing sanitary sewer service. All work shall be performed in accordance with Section 550 of the Standard Specifications and Section 40 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," current edition.

Materials. All pipe materials shall conform to Section 40-2 of the Standard Specifications for Water and Sewer Main Construction in Illinois. The materials shall be approved by the Engineer prior to their installation. The watermain quality pipe shall be connected to the existing sanitary sewer service pipe on both ends by use of non-shear mission couplings with stainless steel bands or a method approved by the Engineer. The cost of these connections shall be included in the cost of SANITARY SEWER, 6".

Basis of Payment. This work shall be measured and paid for at the contract unit price per foot for SANITARY SEWER, 6" which price shall include all labor, equipment, and materials necessary to perform said work.

Sanitary Sewer, 10"

Description. The Contractor shall furnish and install the proposed forcemain of the diameter specified at the locations shown on the plans or as directed by the Engineer. The sanitary sewer forcemain shall include excavation, granular bedding, installation of the forcemain and testing forcemain, backfill and compaction of the trench and all incidental items required for a complete and operational forcemain.

Materials. Forcemain material shall be polyvinyl chloride (PVC) meeting AWWA Standard C-900 requirements. The pipe shall have push-on type joints with elastomeric gaskets. The pipe shall be pressure rated at 150 psi, with a dimension ratio of 18 for both bell and pipe thickness. Pipe shall be furnished in nominal twenty-foot (20') lengths. Tees, elbows and other fittings for PVC C-900 shall be ductile iron and compact type produced in accordance with AWWA C-153, and shall have mechanical joints with Megalugs Series 2000PV or approved equal, and Corten T-bolts. All pipe, joints and fittings shall be capable of withstanding an internal working pressure of 150 psi. Tracer wire bare copper #12 shall be continuously laid from fitting to fitting, valve to valve and hydrant to hydrant.

Construction Methods. The forcemain shall be installed as detailed on the plans and in accordance with the applicable provisions of the Standard Specifications for Water and Sewer Main Construction in Illinois. The forcemain shall be installed to the grades shown on the plans and shall have a nominal minimum depth of cover of five feet six inches (5'-6"). The excavation for the forcemain should be made using trench equipment or other suitable excavating equipment. The trench for the pipe shall be excavated at least twelve inches (12") wider than the external diameter of the pipe and not more than eighteen inches (18") wider than the diameter of the pipe at the top of the pipe.

Bell holes of sufficient depth shall be provided across the bottom of the trench to accommodate the bell of the pipe to provide sufficient room for joint making and to ensure bearing for the pipe.

Where a firm foundation is not found to exist for the bottom of the trench at the required depth, due to soft, spongy or other unsuitable soil, such unsuitable soil shall be removed for the full width of the trench and replaced with well compacted unwashed gravel or an equal substitute thereof, or crushed stone if such compacted material proved unsatisfactory. The cost of this work shall not be paid for separately, but shall be included in the pay item SANITARY SEWER.

Sheeting and bracing shall be placed in the trench, as may be necessary, for the safety of the work and public, for the protection of the workmen, adjacent properties, or structures and for the proper installation of the work.

Sheeting and/or bracing shall be progressively removed as the backfill is placed in such a manner as to prevent the caving in of the sides of the trench or excavation and to prevent damage to the work.

Sheeting which is placed for the protection of the public, adjacent to properties or structures, shall not be removed until the backfill has been placed and thoroughly compacted. While sheeting is being withdrawn, all vacancies shall be carefully filled with sand free from silt and compacted.

The Contractor shall keep the trench free from water while the sanitary forcemain is being placed and until the pipe joint has been sealed to the satisfaction of the Engineer.

Granular bedding shall be placed along the entire length of all forcemain from six (6) inches below the forcemain to twelve (12) inches above the top of the forcemain. Material shall be CA-6 course aggregate. The bedding material shall be incidental to the forcemain. The filling shall be carried up evenly on both sides. Care shall be taken that no rock, frozen material, or other hard substances are placed in contact with the pipe. The pipe shall then be covered at least eighteen inches (18") with clean, dry material.

If the excavation has been made deeper than necessary, the sanitary forcemain shall be laid at the lower depth, and no additional cost shall be charged for the extra excavation or trench backfill. All excavated materials not needed for backfilling the trenches shall be disposed of by the Contractor.

The Contractor shall not backfill above the top of the pipe, until grade, alignment and the pipe joints have been made available for checking by the Engineer.

Unless otherwise directed, all trenches and excavations shall be backfilled as soon as possible and the work shall be prosecuted expeditiously after it has commenced.

The remainder of the trench shall be backfilled by using the material originally excavated from the trench to a height slightly above the original elevation of the ground. Trenches constructed in open cut across or within two feet (2') of any existing or proposed pavements, existing driveway and sidewalks, shall be backfilled to subgrade with Trench Backfill.

After backfill is completed all trenches shall be compacted by jetting and watersoaking in accordance with Section 20-2.21B of the Standard Specifications for Water and Sewer Main Construction in Illinois, or by other approved methods set forth in said Standard Specifications.

Where possible, the forcemain must be laid at least 10 feet horizontally from any sewer. In the event this is not possible, less than 10 feet is permissible provided the water main invert is at least 18 inches above the crown of the sewer in a separate trench or on a shelf of undisturbed earth in the same trench.

The sanitary sewer shall be tested for exfiltration of air pressure and for deflection in accordance with Section 31-1.12 of the Standard Specifications for Water and Sewer Main Construction in Illinois. All testing shall be performed with the Engineer's inspector in attendance. The Engineer shall be notified by the Contractor at least 48 hours in advance of the testing operations.

In the event the air or deflection tests fail to meet the allowable testing limits, the Contractor shall determine the sources of leakage and/or location of excessive deflection. The failed sections shall be repaired and retested, as necessary, at the Contractor's own expense, until test results meeting the requirements of Article 31-1.12 are achieved. The cost of exfiltration and deflection testing will not be measured for payment, but shall be included in the cost of the sanitary sewer construction.

Measurement. Forcemain (of the diameter specified) will be measured per foot in place. Forcemain shall be measured along the center line of the forcemain from the ends of the new pipe.

Payment. Payment for sanitary forcemain shall be made at the contract unit price per foot for SANITARY SEWER, 10". Payment shall be full compensation for excavation, capping existing tees, bedding, installation of forcemain, backfill, thrust blocking, bends, fittings, jetting, testing, and all labor, materials, equipment and incidentals as shown on the plans and as specified herein to construct a complete and operational sanitary forcemain except as noted below.

Payment for Trench Backfill shall be made at the contract unit price bid per cubic yard for TRENCH BACKFILL.

Restoration of sidewalk, driveways and landscaping shall be measured for payment under their respective bid items. Granular bedding as specified shall be included to the cost of the sanitary forcemain.

Forcemain Connection

Description. This work shall consist of the connection of new forcemain to existing forcemain. This work shall be performed in accordance with the applicable portions of Section 31 of the Water and Sewer Specifications with the following clarifications.

Materials. Forcemain material shall be polyvinyl chloride (PVC) meeting AWWA Standard C-900 requirements. The pipe shall be pressure rated at 150 psi, with a dimension ratio of 18 for both bell and pipe thickness. Tees, elbows and other fittings for PVC C-900 shall be ductile iron and compact type produced in accordance with AWWA C-153, and shall have mechanical joints with Megalugs Series 2000PV or approved equal, and Corten T-bolts. All pipe, joints and fittings shall be capable of withstanding an internal working pressure of 150 psi.

Construction Requirements. Connections shall be accomplished by the use of mechanical joint fittings and lengths of pipe to make the most direct vertical and horizontal adjustment necessary to complete the connection. This may include cut-ins to the existing main or connections to existing valves or fittings. This work will require lift station to be temporarily shut off, which shall be coordinated with the Village of Schaumburg Sanitary Division (847.923.6612).

Basis of Payment. This work will be not be measured for payment but shall be included in the contract unit price for SANITARY SEWER, 10", which price shall include all labor, equipment, PVC C-900 material, water main fittings, backfill and thrust blocking required to make the connection.

Temporary Pavement

Description. This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.

The contractor shall use either portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, and 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both portland cement concrete and HMA are shown in the plans.

Articles 355.08 and 406.11 of the Standard Specifications shall not apply.

The removal of the Temporary Pavement, if required, shall conform to Section 440 of the Standard Specification.

When the temporary pavement is placed over utility trenches, the void between the top of the trench backfill required for the permanent pavement and the bottom of the temporary pavement shall be filled with aggregate meeting the approval of the Engineer. The furnishing, placing, compacting, and removing of this aggregate material shall be included in the cost of TEMPORARY PAVEMENT.

When the existing pavement removed is thicker than the proposed temporary pavement that will replace it, the void between the existing subgrade and the bottom of the temporary pavement shall be filled with aggregate meeting the approval of the Engineer. The furnishing, placing, compacting, and removing of this aggregate material shall be included in the cost of TEMPORARY PAVEMENT.

Method of Measurement. Temporary pavement will be measured 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 TEMPORARY PAVEMENT.

Removal of temporary pavement will be paid for at the contract unit price per square yard for PAVEMENT REMOVAL.

Forcemain to be Abandoned

Description. This work shall consist of the capping and abandonment of the existing forcemain. When directed by the Engineer and the new forcemain has been placed into service, this work is to be accomplished.

Construction Methods. When the new forcemain has been installed, tested and placed into service, the contractor shall excavate down to the existing forcemain, work with the Schaumburg Public Works Department to temporarily shut down the pumping station, cut into the existing forcemain and cap both ends the existing forcemain with a minimum of 2 foot long non-shrink concrete/mortar plugs. Concrete thrust blocks shall be placed against the cap on the existing forcemain to remain in service.

The Contractor shall backfill the excavation with CA-6 or appropriate backfill, as approved by the Engineer, to the existing grade elevation. The backfill shall be compacted in accordance with Section 550 of the "Standard Specifications" except that only Method 1 shall be used.

Basis of Payment. This work shall be paid for at the contract unit price per lump sum for FORCEMAIN TO BE ABANDONED, which price shall include all labor, equipment and material necessary to complete the work as specified herein.

Irrigation System Special

This item of work shall consist of furnishing all work and materials, appliances, tools, equipment, facilities, transportation, and services necessary for and incidental to performing all operations in connection with the installation of underground sprinkler irrigation system complete, as shown on the drawings and/or specified herein, in accordance with sections 561, 562, 563, and 565 of the Standard Specifications and the Standard Construction Details, except as herein modified. When the term "Contractor" is used in this section, it shall refer to the irrigation Contractor.

Quality Assurance

The following Codes, Regulations, Reference Standards, and Specifications apply to work included in this section: ASTM: D2241, D2464, D2466, D2564, and D855. Unless otherwise noted on the plans, all materials shall be new and unused.

Submittals

The Contractor shall submit shop drawings or manufacturer's "cut sheet" for each type of sprinkler head, pipe, controller, valves, check valve assemblies, valve boxes, wire, conduit, fittings, and all other types of fixtures and equipment which he proposes to install on the job. The submittal shall include the manufacturer's name, model number, equipment capacity, and manufacturer's installation recommendation, if applicable, for each proposed item.

No partial submittal will be accepted and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed except by written consent of the Engineer. Shop drawings shall include dimensions, elevations, construction details, arrangements, and capacity of equipment, as well as manufacturer's installation recommendations.

"Approved Equal" Substitutions

Several items in this section and on the plans are specified by a manufacturer's brand name and catalog number, followed by the phrase "or approved equal". This is not intended to unduly restrict competitive procurements or bidding, but is done to assure a minimum standard of quality which is believed to be best for the item specified. For maintenance purposes, the Village of Schaumburg will require the use of Rain Bird spray heads, valves, and controllers. The Engineer shall be the sole determinant as to whether a substitution will be allowed as coordinated with the Village of Schaumburg.

Codes/Permits

Installation of equipment and materials shall be done in accordance with requirements of the National Electrical Code, Village of Schaumburg Plumbing Code, and standard plumbing procedures. The drawings and these Specifications are intended to comply with all the necessary rules and regulations; however, some discrepancies may occur. The Contractor shall immediately notify the Engineer in writing of the discrepancies and apply for an interpretation. Should the discovery and notification occur after the execution of a Contract, any additional work required for compliance with the regulations shall be paid for as covered by these Contract documents.

The Contractor shall include in the work any labor, materials, services, apparatus, or drawings in order to comply with all applicable laws, ordinances, rules, and regulations whether or not shown on the drawings and/or specified.

Existing Utilities Location and Elevation

The Contractor shall make necessary adjustments in the layout as may be required to connect to existing stub outs, should such stub outs not be located exactly as shown and as may be required to work around existing work, at no increase in cost. All such work will be recorded on record drawings and turned over to the Engineer prior to final acceptance.

Record Drawings

Record dimensioned locations and depths for each of the following:

1. Point of connection.
2. Sprinkler pressure line routing (provide dimensions for each 100 lineal feet (maximum) along each routing, and for each change in directions).
3. Gate valves.
4. Sprinkler control valves (buried only).
5. Control wire routing.
6. Other related items as may be directed by the Engineer.

Locate all dimensions from 2 permanent points (buildings, monuments, sidewalks, curbs, or pavements). Record all changes which are made from the Contract drawings, including changes in the pressure and non pressure lines. Record all required information on a set of blackline prints of the Contract drawings. Do not use these prints for any other purpose.

Maintain information daily. Keep Contract drawings at the work site at all times and available for review by the Engineer.

When record drawings have been approved by the Engineer, transfer all information to a set of reproducible mylars using permanent India ink. Changes using ballpoint pen are not acceptable. Make dimensions accurately at the same scale used on original drawings, or larger. If photo reduction is required to facilitate controller chart housing, notes or dimension must be a minimum 1/4" in size.

Reproducible mylars will be furnished by the Engineer to the Contractor. The Engineer's costs for printing and handling shall be paid by the Contractor, and the cost shall be included in the cost of IRRIGATION SYSTEM SPECIAL.

Controller Charts

Do not prepare charts until record drawings have been approved by the Engineer. Provide 1 controller chart for each automatic controller installed. Chart may be a reproduction of the record drawing, if the scale permits fitting the controller door. If photo reduction prints are required, keep reduction to maximum size possible to retain full legibility.

Chart shall be blackline print of the actual system, showing the area covered by that controller.

Identify the area of coverage of each remote control valve, using a distinctly different pastel color, drawn over the entire area of coverage.

Following approval of charts by the Engineer, they shall be hermetically sealed between 2 layers of 20 mil. thick plastic sheet. Charts must be completed and approved prior to final acceptance of the irrigation system.

Operating and Maintenance Manuals

Provide individual bound manuals detailing operating and maintenance requirements for irrigation systems. Manuals shall be delivered to the Engineer no later than 10 days prior to completion of work. Provide descriptions of all installed materials and systems in sufficient detail to permit maintenance personnel to understand, operate, and maintain the equipment.

Provide the following in each manual:

1. Index sheet, stating Irrigation Contractor's name, address, telephone number, and name of person to contact.
2. Duration of Guarantee period.
3. Equipment list providing the following for each item:
 - a. Manufacturer's name.
 - b. Make and model number.
 - c. Name and address of local manufacturer's representative.
 - d. Spare parts list in detail.
 - e. Detailed operating and maintenance instructions of major equipment.

Checklist

Provide a signed and dated checklist, and deliver to the Engineer prior to final acceptance of the work. Use the following format:

1. Plumbing permits: if none required, so note.
2. Material approvals: approved by and date.
3. Pressure line tests: by whom and date.
4. Record Drawings: received by and date.
5. Controller charts: received by and date.
6. Materials furnished: received by and date.
7. Operation and maintenance manuals: received by and date.
8. System and equipment operation instructions: received by and date.
9. Manufacturer's warranties if required: received by and date.
10. Written guarantee: received by and date.
11. Lowering of heads in lawn areas: if incomplete, so state.

Excavation and Trenching

The Contractor shall perform all excavation to the depth indicated in these Specifications and Contract drawings. The banks of trenches shall be kept as nearly vertical as practicable. Trenches shall be wide enough to allow a minimum of 4" between parallel pipelines or electrical wiring. Where rock excavation is required, or where stones are encountered in the bottom of the trench that would create a concentrated pressure on the pipe, the rock or stones shall be removed to a depth of 6" minimum below the trench depth indicated. The overdepth rock excavation and all

excess trench excavation shall be backfilled with loose, moist earth or sand, thoroughly tamped. Whenever wet or otherwise unstable soil that is incapable of properly supporting the pipe is encountered in the trench bottom, such shall be removed to a depth and length required, and the trench backfilled to trench bottom grade as hereinafter specified, with coarse sand, fine gravel, or other suitable material.

Bottom of trench grade shall be continued past ground surface deviations to avoid air pockets and low collection points in the line. The minimum cover specifications shall govern regardless of variations in ground surface profile and the occasional deeper excavation required at banks and other field conditions. Excavation shall be such that a uniform trench grade variation will occur in all cases where variations are necessary.

Trench excavation shall comprise the satisfactory removal and disposition of all materials, and shall include all shoring and sheeting required to protect the excavation and to safeguard employees.

During excavation, material suitable for backfilling shall be stockpiled in an orderly manner a sufficient distance back from edge of trenches to avoid overloading and prevent slides or cave-ins. Material unsuitable for backfilling shall be wasted as directed by the Engineer. When excavated material is of a rocky nature and the topsoil or any other layer of excavated material is suitable for pipe bedding and backfill in the vicinity of the pipe, such material shall be separately stockpiled for use in such bedding and pipe backfill operations, unless satisfactory imported material is used. All excavations and backfill shall be unclassified and covered in the basic bid. No additional compensation shall be allowed for rock encountered.

Restore all surfaces, existing underground installations, etc., damaged or cut as a result of the excavations to their original conditions in a manner acceptable to the Engineer.

Hydrostatic Tests

Pressure Test: After the pipe is laid, the joints completed, and the trench partially backfilled, leaving the joints exposed for examination, the newly laid piping or any valved section of main pressure line piping shall, unless otherwise specified, be subjected for 4 hours to a hydrostatic pressure test of normal city water pressure. Each valve shall be opened and closed during the test. Enclosed pipe, joints, fittings, and valves shall be carefully examined during the partially open trench test. Joints showing visible leakage shall be replaced or remade, as necessary. Cracked or defective pipe, joints, fittings, or valves discovered in consequence of this pressure test shall be repeated until the test results are satisfactory. All replacement and repair shall be at Contractor's cost.

Water For Testing

Unless noted otherwise on the plans or elsewhere, furnish all water necessary for testing, flushing, and jetting.

Backfill and Compaction

After system is operating and required tests and inspections have been made, the irrigation trenches shall be carefully backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, gravel, soft shale, or other

approved materials, free from large clods of earth or stone. Rock, broken concrete, or pavement, and large boulders shall not be used as backfill material. The backfill shall be thoroughly compacted and evened with the adjacent soil level.

Compact trenches in areas to be planted by thoroughly flooding the backfill. Compact all other areas by flooding or hand tamping. The jetting process may be used in areas when flooding. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to a minimum of 90% density. Any trenches improperly backfilled, or where settlement occurs, shall be reopened to the depth required for compaction, then refilled and compacted with the surface restored to the required grade and left in a completed surface condition as described above. This no-settlement clause shall extend over the entire warranty period.

Specifically tamp backfill under heads and around the flange of heads for 1' by a suitable means after trench backfill has dried from flooding to prevent heads loosening in the ground.

Irrigation pipe trenches made within 2' of pavement or in the shoulder pavement shall be backfilled with granular material and compacted to the satisfaction of the Engineer. All labor and material necessary to complete the backfilling operations shall be considered included in the Contract Unit Price for IRRIGATION SYSTEM SPECIAL.

PVC Sleeves.

All irrigation piping which is under existing or proposed pavement, including: roadways, sidewalks, bike paths, etc., shall be protected with PVC sleeving. The sleeves shall be sized a minimum of two times the diameter of the proposed irrigation pipe (example: 1" irrigation pipe = min. 2" PVC sleeve). All sleeves shall extend into landscape areas beyond the pavement a minimum of 12". All PVC sleeves shall be considered included in the Contract Unit Price for IRRIGATION SYSTEM SPECIAL.

Final Adjustment

After installation has been completed, make final adjustment of sprinkler system prior to Engineer's final inspection. Completely flush system to remove debris from lines by removing nozzle from heads on ends of lines and turning on system. Check sprinklers for proper operation and proper alignment for direction of throw. Check each section for operating pressure and balance to other sections by use of flow adjustment on top of each valve. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arc or angle of spray should be other than as shown on drawings. In this case, change nozzles to provide correct coverage and furnish record data to the Engineer with each change.

After system is thoroughly flushed and ready for operation, each section of sprinklers shall be adjusted to control pressure at heads. Use the following method, 1 section at a time:

1. Remove last head on section and install a temporary riser above grade. Install tee with pressure gauge attached on top of riser and reinstall head with nipple onto tee.

2. Correct operating pressure at last head of each section to match manufacturer's specifications.
3. After replacing head, at grade, tamp thoroughly around head.

Valve and Valve Box Placement

All manual, electric, and quick coupling valves shall be in boxes, and shall be set with a minimum of 6" of space between their top surface and the bottom of the valve box. Valves shall be fully opened and fully closed to ensure that all parts are in operating condition. Valve boxes shall be set plumb, vertical, and concentric with the valve stem. Any valve box which has moved from this required position so as to prevent the use of the operating wheel of the valve shall be reset by the Contractor at his own expense. A minimum of 9" of gravel shall be placed below all valve boxes. The cost of the gravel shall be included in the cost of the valve box being installed. All valve boxes not specifically called out on the plans shall be considered included in the cost of IRRIGATION SYSTEM SPECIAL.

Cleanup

The work site shall be thoroughly cleaned of all waste materials and all unused or salvaged materials, equipment, tools, etc. After completion of the work, areas disturbed shall be leveled and the work site shall be raked clean and left in an orderly condition.

Electric Remote Control Valve

Electric remote control valves shall have plastic bodies and covers and shall be globe type diaphragm valves of normally closed design. Electric remote control valves shall be Rain Bird 1-1/2" PEB series electric valves, per Village standards. Electric valves operated by the TBOS controller shall be installed with latching solenoids.

Operation shall be accomplished by means of integrally mounted latching AC solenoid. Solenoid coil shall be potted in epoxy resin within a plastic coated stainless steel housing. Solenoids shall be completely waterproof, suitable for direct underground burial. A flow stem adjustment shall be included in each valve.

Electric remote control valves shall be located and sized as shown on the plans. All electrical connections shall be made when the weather is dry with connection kits as specified, in strict accordance with manufacturer's recommended procedures. All remote control valves shall be installed in a horizontal position, in accordance to the manufacturer's published installation instructions.

Irrigation Controller

The electric irrigation controllers shall be capable of operating the number of stations as indicated on the drawings. The system is designed to operate only 1 section valve at a time, unless otherwise noted. Irrigation controllers shall be Toro DDCWP Sprinkler Timer, per Village standards.

Operation of the controller shall be fully automatic, incorporating one 24 hour clock and 14 day calendar per controlled number of electric valves shown on the plan. The controller shall be capable of repeating watering cycles as required with a maximum delay between the ending of 1 cycle and the beginning of the next not to exceed 2 hours. The controller shall provide optional semiautomatic operation whereby the

automatic cycle may be started independent of the clock and manual operation whereby any station may be operated by hand independent of all timing mechanism. The choice of automatic day or hour programming shall be available to the operator on the face of the control panel without the use of tools. The controller shall be installed in valve box which has been sized appropriately to accommodate valves and controller.

Low Voltage Wire

All wire shall be single strand solid copper, minimum 14 gauge with type UF insulation which is Underwriters Laboratory approved for direct underground burial when used in a National Electrical Code Class 2 Circuit (30 volts or less) as per Articles 725 and 300. Voltage drop shall be taken into consideration.

All wire shall be color coded so that the common wire shall have white insulation and the signal wires shall have red insulation. All wire connectors shall have a 2 piece PVC housing which, when filled with resin epoxy and pressed together, forms a permanent, 1 piece, moisture proof wire splice. All connectors shall be UL listed, rated 600 volt, for PVC insulated wire. No wire splices shall be buried.

Low voltage wire shall be installed between the irrigation controllers and the electric valves. It shall be the responsibility of the Contractor to furnish and install the proper size wire with the required number of conductors on each of the low voltage circuits from the master control center to the various electric remote control valves. Consideration shall be given to each circuit for allowance of voltage drop and economy consistent with accepted practices of electrical installation.

All control wire less than 500' in length shall be continuous without splices or joints from the controller to the valves. Connections to the electric valves shall be made within 18" of the valve using connectors specified, unless otherwise approved by the Engineer in writing.

All control wires shall be installed at least 18" deep. The Contractor shall obtain the Engineer's approval for wire routing when installed in a separate ditch. Control wires may be installed in a common ditch with piping; however, wires must be installed a minimum of 4" below or to 1 side of piping. All wire passing under existing or future paving, sidewalk, construction, etc., shall be encased in PVC Schedule 40 conduit extending at least 2' beyond edges of paving, sidewalks, or construction.

Polyvinyl Chloride (PVC) Pipe

PVC pipe shall be manufactured in accordance with ASTM Standards noted herein.

Marking and Identification: PVC pipe shall be continuously and permanently marked with following information: Manufacturer's name, size, type of pipe, and material, SDR number, Product Standard number, and the NSF (National Sanitation Foundation) Seal.

PVC pipe fittings: Shall be of the same material as the PVC pipe specified and compatible with PVC pipe furnished. Solvent weld type shall be Schedule 40.

Lateral PVC Pipe: Shall be Class 200 solvent weld, SDR21, PS 2270 for all sizes 3/4 – 2".

Mainline PVC Pipe: Shall be SDR 80 for all sizes 3" and greater.

Flexible PVC Risers (Nipples): All flexible PVC nipples shall be made from virgin PVC material, and shall comply with ASTM D2287, shall be tested at 200 P.S.I. static pressure for 2 hours and have a quick burst rating of a minimum 400 P.S.I. Flexible PVC pipe nipples shall be factory assembled only.

Design Pressure: This irrigation system shall be designed to operate with a minimum static inlet water pressure of 50 psi at the point of connection. The Contractor shall take a pressure reading prior to beginning construction. If the pressure reading is less than above, the Contractor shall notify the Engineer.

Contractor Responsibility: The Contractor shall not willfully install the irrigation system as shown on the shop drawings when it is obvious in the field that obstructions, grade differences or discrepancies in equipment usage, area dimensions, or water pressure exist that might not have been considered in the engineering. Such obstructions or differences shall be brought to the attention of the Engineer in writing. In the event this notification is not performed, the Contractor shall assume full responsibility for any revision necessary.

Staking. Before installation is started, place a stake or flag where each sprinkler is to be located, in accordance with drawing. Staking shall be approved by the Engineer before proceeding.

Piping Layout: Piping layout is diagrammatic. Route piping around existing trees and shrubs in such a manner as to avoid damage to plantings. Do not dig within the ball of newly planted trees or shrubs.

In areas where trees are present, trenches will be adjusted on site to provide a minimum clearance of 4 times the trunk diameter of the tree (at its base) between any tree and any trench.

All material and equipment shall be delivered to the worksite in unbroken reels, cartons, or other packaging to demonstrate that such material is new and of a quality and grade in keeping with the intent of these specifications.

Pipe Installation

Sprinkler Mains: Sprinkler mains are that portion of piping from water source to electric valves. This portion of piping is subject to surges since it is a closed portion of the sprinkler system. Sprinkler mains shall be installed in a trench with a minimum of 18" of cover.

Lateral Piping: Lateral piping is that portion of piping from electrical valve to sprinkler heads. This portion of piping is not subject to surges since it is an "open end" portion of the sprinkler system. Lateral piping shall be installed in a trench with a minimum of 12" of cover.

Where the plans call for continuous irrigation pipe to be placed beneath the roadway, sidewalk, curbing, brick pavers or other hard surface, the Contractor shall furnish and install by directional bore laid prior to placement of hard surface, a continuous PVC Schedule 40 pipe or IDOT approved jointed pipe sleeve under the roadway structure. The pipe sleeve shall be a minimum of twice the inside diameter of the pipe which will be inside the sleeve. The irrigation pipe sleeve shall also be approved by the Engineer prior to installation and shall be considered included in the cost of IRRIGATION SYSTEM SPECIAL.

Remove lumber, rubbish, and rocks from trenches. Provide firm, uniform bearing for entire length of each pipeline to prevent uneven settlement. Wedging or blocking of pipe will not be permitted. Remove foreign matter or dirt from inside of pipe before welding, and keep piping clean during and after laying pipe.

PVC pipe shall not be installed where there is water in the trench, nor shall PVC pipe be laid when temperature is 40° F or below or when rain is imminent. PVC pipe will expand and contract as the temperature changes. Therefore, pipe shall be snaked from side to side of trench bottom to allow for expansion and contraction.

PVC Pipe and Fitting Assembly

Solvent: Use only solvent recommended by manufacturer to make solvent welded joints following standards noted herein. Thoroughly clean pipe and fittings of dirt, dust, and moisture with an approved PVC primer before applying solvent.

PVC to Metal Connection: Work metal connections first. Use a non hardening pipe dope such as Permatex No. 2 or "Teflon" tape on threaded PVC to metal joints. Use only light wrench pressure.

Threaded PVC Connections: Where required, use threaded PVC adapters into which pipe may be welded.

Pop-Up Spray Heads

Spray heads shall have a pop up heights as specified in the plans. All heads shall be Rain Bird brand products at sizes specified, per Village standards. The sprinkler body and all related parts shall be plastic cyclac or polycarbonate. They shall have a spring retraction for positive return action of the pop-up nozzle. The spring for retraction and the adjustable nozzle screw shall be made of corrosion resistant materials.

Provide heads and nozzles as specified and install in locations as shown on the Contract Drawings. Pop-up spray heads shall be installed to lateral piping as detailed on the Contract drawings. Heads shall be installed with underside of flange flush with the finished grade. The Contractor shall be required to adjust heads as necessary after establishment of grass or other plant material.

Basis of Payment. This work will be paid for at the lump sum price for IRRIGATION SYSTEM SPECIAL which price shall be payment in full for all labor, material, equipment, and services necessary for providing the landscape irrigation systems in a serviceable, fully operational manner, including, but not limited to, excavation and backfilling, furnishing and installing the piping system, spray heads, wiring, solenoid

control valves, isolation valves, valve boxes and automatic controls, electrical connections, system testing and maintenance, owner personnel training, piping and equipment identification, plumbing permits and inspection fees, valve tags and charts, and all supports, sleeves, fittings, valves, meters, and accessories.

When the irrigation installation work is performed by a subcontractor, this delay in acceptance shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the irrigation quantities listed in the contract, multiplied by their contract unit prices. The bond shall be executed prior to acceptance and final payment of the non-irrigation items and shall be in full force and effect until final inspection and acceptance of all irrigation items. Execution of the third party bond shall be the option of the prime Contractor.

Water Service Line, 1 1/2"

Description. This work shall consist of extending water service for the proposed irrigation system. The Contractor shall provide all necessary labor, materials, and equipment to trench the water pipe as shown on the plan sheets.

The Contractor shall excavate a trench to the required depth as provided by the standard detail, avoiding any existing utilities that may be present and making any necessary adjustments to the route of the water service, as approved by the Engineer. The Contractor then shall place Type K Copper Water Piping in the trench. Any required copper water fittings also shall be considered included as part of this work. Once the pipe is in place and any fittings have been tightened, the trench shall be backfilled. Existing excavated material may be used in open areas; however, if under an improved surface or utility or within 2 feet of the roadway, the Engineer may require trench backfill. The Contractor shall demonstrate to the Engineer that the system piping is without leak.

Materials for this item, Type K Copper Water piping and fittings shall meet all applicable AWWA Specifications. Trench backfill shall meet the material specifications of the IDOT Standard Specification for Road Construction.

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

Basis of Payment. This work shall be paid for at the contract unit price per foot for WATER SERVICE LINE, 1 1/2", which price shall include all labor, excavation, backfill, materials, equipment, connections and adjustments, and trench backfill as directed by the Engineer necessary to complete the work. Any dewatering or sheeting required to do the work as specified shall not be paid for separately but will be incidental to the contract unit price of the item.

RPZ Backflow Preventer

Description. This work shall consist of installing a new backflow preventer for the future irrigation system from the water service, including the backflow preventer, backflow preventer enclosure, quick connect valve, and up to 20' of Type K Copper Water Piping, as shown on the detail in the plans.

General Requirements:

A double gate valve, double check assembly shall be located and sized as shown on the plans. The backflow preventer shall be Febco, model 825YA, or approved equal. Construction shall be all brass for sizes 3/4- 2 inches. This assembly shall conform to the Village Plumbing Codes.

Backflow Preventer (RPZ). A double gate valve, double check assembly shall be located and sized as shown on the plans. The backflow preventer shall be Febco, model 825YA, per Village standards. Construction shall be all brass for sizes 3/4- 2 inches. This assembly shall conform to the Village Plumbing Codes.

Backflow Preventer Enclosure. The Backflow Preventer shall include an enclosure constructed of fiberglass to completely cover and protect the backflow preventer and associated plumbing. The enclosure shall be sized appropriately to allow for additional space around backflow preventer for routine maintenance. The backflow preventer enclosure shall be Hot Box, PolyRock, PHR2, brown color, or approved equal. The enclosure shall be mounted on a 4" concrete pad poured with expansion joints around the piping. Concrete pad shall be installed such that the top of the pad is level with the adjacent grade. The enclosure shall be attached to the pad using stainless steel anchor bolts.

The cost of labor and material to install the backflow preventer enclosure shall be included in the cost of the backflow preventer.

Quick Coupling Valve. Quick coupling valves shall be composed of a bronze cast body with anti-rotation wings and a non-potable lavender plastic cover. The valve shall accept a single lug 3/4 inch bronze valve key for operation. Provide one Buckner, QB33NPAR07, QB33SK07 coupler and QHS0707 hose swivel elbow, or approved equal, for each backflow preventer shown on the plans.

Quick coupling valves shall be installed inside valve boxes which are sized large enough to operate valve coupler. The coupler shall be installed with the underside of flange flush with the finished grade inside the valve box.

Trench backfill required for the copper piping shall be in accordance with section 208 of the Standard Specifications but shall be included in the cost of this item.

Method of Measurement. This work will be measured per each RPZ BACKFLOW PREVENTER, 1 1/2", of the type indicated.

Basis of Payment. This work shall be paid for at the contract unit price for each RPZ BACKFLOW PREVENTER, 1 1/2" of the type indicated. Price shall include backflow preventer (RPZ), enclosure, concrete base, locks, keys, pipe caps, installation of 1 1/2" Type K copper piping from the Backflow Preventer to the Quick Couple, quick couple, valve box and all other work required to complete this item. Any dewatering or sheeting required to do the work as specified shall not be paid for separately but will be incidental to the contract unit price of the item.

Water Service Connection, 1 1/2"

Description. This work shall consist of installing new water service line for the future irrigation system from the proposed/existing water main, including the tapping of the proposed main, installation of the corporation stop, curb stop, and up to 20' of Type K Copper Water Piping, as shown on the detail in the plans. The size of the water main to be tapped needs to be verified by the Contractor.

Water service connections shall be Type K Copper Water Piping meeting specifications of ASTM B-88 and B-251. Water service connections over 2" in diameter shall be copper and shall comply with all specifications for water mains, fittings, valve vaults, and appurtenances. All taps made into cast iron water main 4" in diameter shall incorporate an approved tapping clamp. All copper connections shall be made with flared joints. Compression type joints shall be allowed underground off the corporation stop and roadway key stop. All water services shall have a minimum of 5'6" of cover over the service. At the time of construction, all water services shall be left completely exposed until a representative of the Village of Schaumburg has inspected same.

Twenty-four hours notice is required for such inspection. At the time the inspection is made, a representative of the Contractor shall be present. The Contractor shall give 24 hours notice to the Water Department of the Village (847.923.6612), before any water main is to be tapped. At the time the tap is made, a representative of the Contractor shall be present. All water services 4" or larger shall be subjected to a hydrostatic pressure test of 150 psi gauged for a period of not less than 1 hour. Such hydrostatic test shall be witnessed by an authorized representative of the Village of Schaumburg. All water services used for fire protection 4" in diameter or larger shall be gas chlorinated after satisfactory results of the hydrostatic test.

When a water service is installed beneath existing roadways, sidewalks, and driveways which are not being reconstructed, the pipe shall be installed by pushing or augering a hole beneath said roadway, sidewalk, and driveway and installing the water service pipe through the hole. Under no circumstances will a service be allowed under the length of a sidewalk or driveway. Steel casing of water service may be required under the direction of the Director of Public Works or his authorized representative. In all residential or commercial developments, water service taps must be made before pressure testing.

Corporation Stop. The corporation stop shall be Mueller Company H-1500, Oraseal, Ford F-600, or approved equal and shall be installed by tapping the water main with an approved tapping machine. The tap shall be made in the upper third of the main, as

close to 45° angle as is practical. A tap into the top of the main will not be permitted. The service box shall be made in the United States.

Curb Stop (Buffalo Box). The curb stop shall be Mueller Company M-15154, Ford B44-444, or approved equal with a Mueller H-10302 cast iron service box. Only cast iron buffalo style boxes and lids are allowed. The round way key stop shall be located within the parkway in a plastic valve box and approved by the Director of Public Works or his authorized representative. The cover of the buffalo box shall have the word "Water" cast therein. The Contractor shall record the location of each buffalo box and tap in relation to the nearest corner lot line. Two copies of this record shall be filed with the Village prior to final inspection.

Valve Boxes. A box shall be provided for all valves. Valve boxes shall be made of high strength plastic suitable for turf irrigation purposes. Boxes shall be suitable in size and configuration for the operability and adjustment of the valve. Extension sections will be used as appropriate to the depth of piping. All valve box covers shall bolt down or have locking mechanisms and shall be colored green or brown as selected by the Village Engineer. All Valve Boxes shall be included in the cost of WATER SERVICE CONNECTION, 1 1/2".

The Contractor shall contact the Water Superintendent of the Village of Schaumburg, when water service installations are completed and installed, in conformance with the specifications, to set up final inspection for the Village acceptance and future maintenance of the installation. Prior to the final inspection, the Contractor shall see that all on-surface water appurtenances are clearly visible, locatable, and operable.

Any excavation, shoring and backfill required to install this item shall be included.

Trench backfill shall be in accordance with section 208 of the Standard Specifications but shall be included in the cost of this item.

Basis of Payment: This work shall be paid for at the contract unit price per each for WATER SERVICE CONNECTION, 1 1/2", which price shall include all labor, excavation, backfill, materials, equipment, connections and adjustments, and trench backfill as directed by the Engineer necessary to complete the work. Any dewatering or sheeting required to do the work as specified shall not be paid for separately but will be incidental to the contract unit price of the item.

Landscaping / Planting

General. The following Landscaping Special Provisions and Detailed Specifications supplement the "Standard Specifications for Road and Bridge Construction", Adopted January 1, 2012 and the "American Standard for Nursery Stock ANSI Z60.1-1996", Approved November 6, 1996 in effect on the date of invitation of bids. In case of conflict with any part or parts of said Specifications, the said Special Provisions or Detailed Specifications shall take precedence and shall govern.

Approval at place of growth does not preclude inspection and right of rejection at the site. Rejected plants or materials shall be removed immediately from the site and promptly replaced with plants and materials meeting the specified requirements, as determined by the Engineer.

The Contractor shall deliver all standard products in the manufacturer's original containers with seals unbroken, labeled with manufacturer's names, product names, and analysis where applicable.

All work shall be performed by a firm specializing in landscaping. The Contractor shall use an adequate number of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

Nomenclature. The botanical and common name of all plant materials shown on the drawings and required under this section are in conformance with the approved names given in "Standardized Plant Names" prepared by the American Committee on Horticultural Nomenclature. Names and varieties not included therein shall conform generally with names accepted in the nursery trade. In all cases, botanical names take precedence over common names.

Durable, legible labels stating in weather resistant ink or in an embossed process, the correct plant name, and plant size shall be securely attached to at least 1 plant from each bundle or lot.

All tags, seals, and other markers shall not be removed by the Contractor until after the final inspection and acceptance is made by the Engineer. Once the project is accepted, the Contractor shall remove all tags, seals, and other markers.

Submittals. The Contractor shall submit the following samples with copies of the manufacturer's specifications to the Engineer for approval prior to installation of any plants or materials.

Specified Soil Mixes
Soil Mixture Additives
Hardwood Bark Mulch
Topsoil

Materials for Planting. Add the following to the end of Article 1081.01(c), Inspection of Plant Material:

All plant materials shall be subject to inspection and approval at the place of growth, and upon delivery for conformity to specification requirements. Approval at the place of growth shall not impair the right of the inspection and rejection upon delivery at the site or during the progress of the work for size and condition of ball, roots, canopy, diseases, insects, and latent defects or injuries. Rejected plants shall be removed immediately from the site.

Upon award of this Contract, the Contractor shall inform the Engineer of his intended sources of plant material. The Contractor shall provide the Engineer 30 calendar days advance notice of the plant material to be inspected. The Engineer will visit these sources with the Contractor to select and identify all woody plants for the project. All trees (deciduous, evergreen) and shrubs will be selected and tagged by the Engineer. The selection of materials by the Engineer shall in no way relieve the Contractor from his obligation to provide healthy plants as specified herein.

Add the following to the end of Article 1081, Materials for Planting:

Before commencing the work, all plant material shall be on order and the Contractor shall examine the site to determine that it is free of conditions which might be detrimental to proper and timely completion of the work. Start of work shall indicate acceptance of all the site conditions.

Protection During Work and Maintenance. The Contractor shall provide adequate protection during the construction period for planted areas against trespassing, erosion, and damage. Protect adjacent surfaces from damage and soiling during the work.

Tree Preservation

Add the following to the end of Article 201.05(a), Temporary Fencing:

The Contractor shall install temporary barriers necessary for the preservation of existing plant materials (not to be removed) before any work takes place at the project site. The protective fencing shall be installed in accordance with Village Ordinance 154.135(C)(4). Wooden snow fencing or brightly colored plastic construction fencing shall be installed at the periphery of the drip line of the tree or beyond to prevent the storage of vehicles or materials, and the encroachment of grading and construction equipment. All protective fencing shall be maintained to the satisfaction of the Engineer.

In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree of a species listed in Section IX, Item C-2 of the Village of Schaumburg Subdivision Control Ordinance #1639 as specified by the Engineer, and having a diameter not less than the tree destroyed (not to exceed 6 inches, measured at 6 inches above the ground level). Any tree that is replaced out of the neglect of the Contractor shall be replaced at no additional cost. In addition, all tree trimming, limbing, root pruning, and tree preservation shall be approved by the Engineer.

Topsoil and Compost

Add the following to Article 211, Topsoil and Compost:

The Contractor shall inform the Engineer of his intended source for topsoil. The Engineer will inspect the topsoil to ensure that it meets with the requirements of the specifications.

Median Soil Mix Furnish and Place

Description. Work under this item shall be performed in accordance with Section 200 of the Standard Specifications for Road and Bridge Construction except as modified herein. This work shall consist of testing, preparing, furnishing, and placing median soil including finish grading.

General Requirements. In general, the Median Soil Mix shall be 2 parts pulverized top soil and 1 part coarse sand. The sand shall be added and mixed during the pulverization process only. The sand shall be of an F2 gradation.

Submittals. Soil Testing: No median soil mix shall be delivered to the site until the Engineer has reviewed test results and has accepted the median soil mix. The Contractor shall employ a soil testing agency, acceptable to the Engineer, which uses methods approved by the Association of Agricultural Chemists. A minimum of 3 samples shall be taken from different locations of the proposed median soil source.

The median soil test report shall include the following, and the appropriate ranges are as follows:

Chemical Analysis:	HIGH	LOW
pH	7.0	6.5
Mechanical Analysis		
% clay	25%	0%
% silt	77%	45%
% sand	33%	25%

Additionally, the following variables are required:

Cation exchange capacity (CEC)

Soluble salts

Organic matter

Phosphorous

Available potassium

Nutrients

Residual chemicals

Recommendations to mitigate any issues from the results of these items.

The mechanical analysis should show that the % sand, % silt, and the % clay must yield a silt loam soil.

Inspections. The Engineer retains the right to visually inspect the Median Soil Mix on site before placement. The Engineer may ask that the material suspected of not meeting specification be removed from the site.

The Engineer will take samples of the Median Soil Mix after it has been placed. A sample will be taken every 300' or every median. The same chemical and mechanical test will be performed. If the Median Soil Mix in place does not meet specification, then that area or median will not be paid for. The Contractor shall remedy any discrepancies per the soil test recommendations, so that full payment can be made.

Preparation and Placement. Structure Adjustments: perform or coordinate final adjustments of any utility structure.

Clean medians of all trash and debris before placement of the Median Soil Mix. Remove and legally dispose of debris off site. Repair to the satisfaction of the Engineer any portion of the pipe underdrain.

Place, spread, and rough grade specified Median Soil Mix to depths specified in all areas to be planted. Place the Median Soil Mix in 2 level lifts. The first lift shall contain 2/3 of the median soil depth. After placing each lift, moisten the surface at a rate of 1 gallon of water per square foot. Allow the water to thoroughly percolate through the soil before placing the next lift. Allow for settling, and place additional planting soil as necessary. Allow for placement and mixing of compost in perennial planting areas, but place enough soil mix to meet finish grades within specified tolerances.

Rake smooth and finish grade all planted areas. The removal of excess material or the addition of median soil may be required prior to landscaping. This shall be included in the unit price for MEDIAN SOIL MIX FURNISH AND PLACE. Grading will be to a tolerance of +/- .10 foot of design grades. Grade disturbed by irrigation installation shall be restored to finish grade and raked smooth.

All debris, litter, tire tracks, dirt, and unintended materials shall be removed, raked, swept or washed off all landscape, hard median surfaces, and pavement on a daily basis.

Method of Measurement. Median Soil Mix Furnish and Place will be measured for payment in cubic yards at the locations shown in the plans and as directed by the Engineer.

Basis of Payment. Median Soil Mix Furnished and Placed will be paid for at the Contract Unit Price per cubic yard for MEDIAN SOIL MIX FURNISH AND PLACE.

Compost Furnish and Place

Description. Work under this item shall be performed in accordance with Section 200 of the Standard Specifications for Road and Bridge Construction except as modified herein. This work shall consist of furnishing, transporting, spreading, and incorporating landscape compost into soil in areas shown on the plans and as directed by the Engineer. The Contractor shall submit a sample of the compost for approval prior to installation.

Materials. Add the following to Article 1081.05(b) Topsoil and Compost:

The Contractor shall inform the Engineer of his intended source for the landscape compost. The Engineer will inspect the landscape compost to ensure that it meets with the requirements of the specifications. The compost shall be a mixture of decomposed grass clippings, small branches, and leaves. Said mixture shall be screened and free of refuse, stone, clumps, roots, large branches, clay, and other foreign material. The compost shall be of such consistency that it can be readily incorporated with the topsoil.

Compost shall not be placed until the area designated has been shaped, trimmed, and finished in accordance with Section 212 of the Standard Specifications, and any required placement of topsoil has been completed. Prior to compost placement, the area shall be disked or raked to a minimum depth of 2" and all debris and loose stones removed. The grades and condition of the area must be approved by the Engineer prior to Compost Placement.

The compost shall be placed in the planting beds to the depth specified and shall meet finish grades within specified tolerances. After the Engineer verifies that the proper compost depth has been applied, the Contractor shall completely incorporate the compost into the soil to a minimum depth of 6" by raking, disking or rototilling to amend the existing topsoil.

After the compost has been incorporated into the soil, any debris or piles of unincorporated material shall be immediately removed from the finished area to the lines and grades shown on the plan and approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

Method of Measurement. Compost Furnish and Place will be measured in square yards at the locations listed in the special provisions and as directed by the Engineer prior to incorporation into the soil.

Basis of Payment. This work will be paid for at the Contract Unit Price per square yard for COMPOST FURNISH AND PLACE, 2". Payment shall include all costs for materials, equipment, and labor required to complete the work specified herein, including the cost of removing and disposing of any debris.

Gypsum Placement

Description. This work shall consist of furnishing, transporting, spreading, and incorporating Gypsum into the soil in areas listed in the special provisions and as directed by the Engineer.

Materials. The Gypsum shall be an approved commercial grade.

Gypsum soil conditioner shall not be placed until the area designated has been shaped, trimmed, and finished in accordance with Section 212 of the Standard Specifications and any required placement of Topsoil has been completed. Prior to Gypsum placement, the area shall be disked or raked to a minimum depth of 4" and all debris and loose stones removed. The grades and condition of the area must be approved by the Engineer prior to Gypsum Placement.

The Gypsum shall be used in accordance with the manufacturer's direction on the package. Apply the Gypsum using a rotary-type spreader designed to apply granular products. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the Gypsum at the rate of 30 lbs. per 100 square feet. After the Engineer verifies that the proper amount of Gypsum has been applied, the Contractor shall completely incorporate the Gypsum into the soil to a minimum depth of 6" by raking, disking, or rototilling to amend the existing topsoil.

After the Gypsum has been incorporated into the soil, any debris or piles of unincorporated material shall be immediately removed from the right-of-way and the area finished to the lines and grades shown of the plan and approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

Method of Measurement. Gypsum Placement will be measured by weight of actual product used at the locations shown in the plans and listed in the special provisions, and as directed by the Engineer prior to incorporation into the soil.

Basis of Payment. This work will be paid for at the Contract Unit Price per pound for GYPSUM PLACEMENT. Payment shall include all costs for materials, equipment, and labor required to complete the work specified herein, including the cost of removing and disposing of any debris.

Sodding, Salt Tolerant

Description. Work under this item shall be performed in accordance with Section 252 of the Standard Specifications for Road and Bridge Construction except as modified herein.

Add the following to Article 1081.03, Sod:

Sod shall be cleanly cut, either by hand or machine, to a minimum uniform thickness of 1" but of not more than 2", to a uniform width of 18", and in strips of not less than 3'-0" nor more than 6'-0" in length. Edges of sod shall be straight.

Add the following to Article 252.04, Sodding Time:

Sod shall be delivered to the site within 24 hours of harvest at the sod nursery. All sod installation shall be complete within 36 hours of harvest from the sod nursery. The Contractor shall submit a ticket from the sod nursery clearly stating the date and time of day that harvest took place.

Add the following to Article 252.05, Transportation:

Care shall be taken to retain the native soil on the roots during the process of stripping, transporting, and placing sod. Sod shall be cut and transported only when moisture conditions are favorable for correct handling, and shall be protected by a suitable canvas or other wind-resistant material while in transit. Dumping of sod from vehicles on the areas of delivery will not be permitted. Sod shall be delivered within 24 hours from time of cutting. Sod which has been damaged in transit or in handling, including drying out, shall be rejected and removed from the site immediately.

Delete paragraph 1 of Article 252.06, Placing Sod and substitute the following:

Sod shall be of type specified, laid smoothly, edge to edge in close contact on the prepared surface, with joints staggered. Sod shall be pressed into setting bed immediately by tamping or rolling with approved equipment to eliminate air pockets and to produce an even surface. Where grades are such that the flow of water will be over sodded areas and onto paved areas, after compaction, the sod shall be placed flush with the pavement or drainage structures.

Add the following to article 252.11, Inspection:

Sod shall have been grown on a well-drained, fertile, sandy loam (not peat) soil. Sod shall be cut or stripped from living thickly matted turns of firmly rooted specified turf type. The consistency of adherent soil shall be such that it will not break, crumble, or tear during handling and placing of the sod.

Maintenance of Sodded Areas: Add the following to Article 252, Sodding:

Maintenance of sodded areas by the Contractor shall consist of watering, weeding, 3 mowings, repair of erosion, spraying the sodded areas to keep them free of insects and diseases, and re-sodding as necessary to establish a uniform stand of turf. The Contractor shall provide general care for sodded areas until the time of knitting, or a period of not less than 6 weeks. Prior to acceptance, sodded areas shall be mowed at least 3 times by the Contractor to maintain healthy vigorous growth. At no time shall the turf be mowed shorter than 2" or the average height allowed to become more than 4". Debris encountered during the mowing and/or overseeding operation shall be removed and disposed in accordance with Article 250.05. Damage to the sodded

areas, such as ruts or wheel tracks more than 2" in depth, shall be repaired by the Contractor to the satisfaction of the Engineer. If noxious weeds start growth which threatens to smother the species grass, they shall be removed or sprayed as directed by the Engineer, and the vacant spots filled with new sod, if necessary. All necessary weed control applications and re-sodding are included in the cost for sodding.

Add the following to Article 252.12, Method of Measurement:

Payment for maintenance of sodded areas shall be included in the Contract Unit Price of SODDING, SALT TOLERANT.

Planting Woody Plants

Description. Work under this item shall be performed in accordance with Section 253 of the Standard Specifications for Road and Bridge Construction except as modified herein.

Layout of Planting: Add the following to Article 253.07, Layout of Planting:

The configuration of all plant beds shall be staked or laid out by the Contractor and verified by the Engineer prior to commencing with plant bed preparation.

Planting Procedures: Add the following to Article 253.10, Planting Procedures:

When planting shrubs and trees in bed areas as shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

All existing ground cover vegetation shall be cut out 2" below the existing soil line and disposed of as specified in Article 202.03, or killed using RoundUp at the Manufacturer's suggested rate 14 days prior to planting.

Compost shall be placed on the planting beds to a depth of 2" then tilled into the soil to a depth of 6" to amend the existing topsoil.

Fertilizer nutrients shall be added and tilled into the soil to a depth of 6" in the following 5:3:2 ratio:

Nitrogen Fertilizer Nutrients	90 lbs./acre
Phosphorus Fertilizer Nutrients	54 lbs./acre
Potassium Fertilizer Nutrients	36 lbs./acre

All plant beds and individual tree saucers with a minimum diameter of 5' shall receive a hand tooled edge. Using a garden spade, the edge shall be cleanly trenched to a minimum depth of 3" with one vertical side toward the lawn areas.

Mulch Cover: Omit Article 253.11, Mulch Cover and substitute with the following:

Within 48 hours after planting, shredded hardwood bark mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 3". The

shredded hardwood bark shall be: free of leaf material, standard size with a minimum particle size of 1/4" and a maximum size of 1 1/4". In all areas within the project limits where there is existing plant material, all trees, shrubs, and planting beds shall be mulched according to the specifications for new plant material, incidental to Contract. No weed barrier fabric will be required for tree and shrub planting. Pre-emergent herbicide will be used instead of weed barrier fabric. The pre-emergent herbicide shall be applied according to the Special Provision for Weed Control, Pre-emergent Granular Herbicide.

Wrapping of Tree Trunks: Delete Article 253.12 of the Standard Specifications and substitute the following:

Wrapping of all deciduous trees (shade trees and ornamentals) shall be done immediately after planting. Trees shall be inspected for injury to trunks, disease, insect infestation, and improper pruning before wrapping. The Contractor shall be responsible for the condition of this wrapping throughout the life of this Contract. Any damage resulting from the improper installation or maintenance of this wrapping shall be the responsibility of the Contractor and such damaged trees shall be replaced by the Contractor at his expense.

Period of Establishment. Revise the first and second paragraphs of Article 253.14 of the Standard Specifications to read:

"253.14 Period of Establishment. Prior to being accepted, the plants shall endure a period of establishment. This period shall begin in June and end in September of the same year. To qualify for inspection, plants shall have been in place, in a live healthy condition, on or before June 1 of the year of inspection. To be acceptable, plants shall be in a live healthy condition, representative of their species, at the time of inspection in the month of September.

When the planting work is performed by a subcontractor, this delay in inspection and acceptance of plants shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities listed in the contract, multiplied by their contract unit prices. The bond shall be executed prior to acceptance and final payment of the non-planting items and shall be in full force and effect until final inspection and acceptance of all plants including replacements. Execution of the third party bond shall be the option of the prime Contractor."

Revise Article 253.16 of the Standard Specifications to read:

"253.16 Method of Measurement. This work will be measured for final payment, in place, after the period of establishment. Trees, evergreens, and shrubs will be measured as each individual plant"

Mulch placement will be measured for payment in square yards of the thickness specified.

Fertilizer nutrients will be measured for payment as specified in Article 250.09.

Compost will be measured for payment as specified in the special provision COMPOST FURNISH AND PLACE, 2".

Gypsum will be measured for payment as specified in the special provision GYPSUM PLACEMENT.

Revise Article 253.17 of the Standard Specifications to read:

"253.17 Basis of Payment. This work will be paid for at the contract unit price per each for TREES, EVERGREENS, and SHRUBS, of the species, root type, and plant size specified.

(a) Initial Payment. Upon planting, 75 percent of the pay item(s) will be paid.

(b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining 25 percent of the pay item(s) will be paid."

Mulch placement will be paid for at the contract unit price per square yard for SHREDDED BARK MULCH, 3".

Fertilizer will be paid as specified in Article 250.09.

Compost will be paid for as specified in COMPOST FURNISH AND PLACE, 2".

Pre-emergent herbicide will be paid for as specified in WEED CONTROL PRE-EMERGENT GRANULAR HERBICIDE.

Gypsum will be paid for as specified in GYPSUM PLACEMENT.

Perennial Plants

Description. Work under this item shall be performed in accordance with Section 254 of the Standard Specifications for Road and Bridge Construction except as modified herein.

Layout of Planting: Add the following to Article 254.06, Layout of Planting:

The configuration of all plant beds shall be staked or laid out by the Contractor and verified by the Engineer prior to commencing with plant bed preparation.

Planting Procedures: Add the following to Article 254.07, Planting Procedures:

When planting perennials in bed areas shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

All existing turf shall be cut out 2" below the existing soil line, and disposed of as specified in Article 202.03, or killed using RoundUp at the manufacturer's suggested rate 14 days prior to planting.

Compost shall be placed on the planting beds to a depth of 2" then tilled into the soil to a depth of 6" to amend the existing topsoil.

Fertilizer nutrients shall be added and tilled into the soil to a depth of 6" in the following 5:3:2 ratio:

Nitrogen Fertilizer Nutrients	90 lbs./acre
Phosphorus Fertilizer Nutrients	54 lbs./acre
Potassium Fertilizer Nutrients	36 lbs./acre

Gypsum shall be placed on the planting beds at the rate specified then tilled into the soil to a depth of 6" to amend the existing soil.

Mulch Cover: Omit Article 254.08, Mulch Cover and substitute with the following:

Within 48 hours after planting, shredded hardwood bark mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 3". The shredded hardwood bark shall be: free of leaf material, standard size with a minimum particle size of 1/4" and a maximum size of 1 1/4". In all areas within the project limits where there is existing plant material, all trees, shrubs, and planting beds shall be mulched according to the specifications for new plant material, incidental to Contract. No weed barrier fabric will be required for perennial. Pre-emergent herbicide will be used instead of weed barrier fabric. The pre-emergent herbicide shall be applied according to the Special Provision for Weed Control, Pre-emergent Granular Herbicide.

Revise Article 254.10 of the Standard Specifications to read:

"254.10 Method of Measurement. Grasses, vines, and perennials specified as one gallon container size will be measured for payment in units, where 1 unit is equal to 1 container. Vines and perennials specified as over one gallon container size will be measured for payment as each container, of the size specified. Measurement for payment of this work will not be performed until at the end of the 30 day establishment period for the replacement planting. Only plants that are in place and alive at the time of measurement will be measured for payment, except that if fewer than 25 percent of the plants are acceptable, a quantity equal to 25 percent of the number of units of plants originally planted will be considered measured for payment.

Mulch placement will be measured for payment in square yards of the thickness specified.

Fertilizer nutrients will be measured for payment as specified in Article 250.09.

Compost will be measured for payment as specified in the special provision COMPOST FURNISH AND PLACE, 2".

Gypsum will be measured for payment as specified in the special provision GYPSUM PLACEMENT.

"254.11 Basis of Payment. Grasses, vines, and perennials specified as one gallon container size will be paid for at the contract unit price per unit for PERENNIAL PLANTS, GALLON POT regardless of the species. Vines and perennials specified as over one gallon container size will be paid for at the contract unit price per each for VINES and PERENNIALS, of the species and plant size specified.

Mulch placement will be paid for at the contract unit price per square yard for SHREDDDED BARK MULCH, 3".

Fertilizer will be paid as specified in Article 250.09.

Compost will be paid for as specified in COMPOST FURNISH AND PLACE, 2".

Pre-emergent herbicide will be paid for as specified in WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE.

Gypsum will be paid for as specified in GYPSUM PLACEMENT.

Supplemental Watering

Description. This work will include watering turf, trees, shrubs, and perennial plants at the rates specified and as directed by the Engineer.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 48 hours and must apply a minimum of 10 units of water per day until the watering directed is complete. Damage to plant material that is a result of the Contractor's failure to water in a timely way must be repaired or replaced at the Contractor's expense.

Source of Water. The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth.

Rate of Application: The normal rates of application for watering are as follows. The Engineer will adjust these rates as needed depending upon weather conditions.

Turf and Perennial Plants: 3 gallons per square yard.

Trees: 10 gallons per tree.

Shrubs: 3 gallons per shrub.

Method of Application. A spray nozzle that does not damage small plants must be used when watering perennial plants or turf. An open hose may be used to water trees and shrubs if mulch and soil are not displaced by watering. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

Method of Measurement. Supplemental watering will be measure in units of 1,000 gallons of water applied as directed.

Basis of Payment. This work will be paid for at the Contract Unit Price per unit of SUPPLEMENTAL WATERING, measured as specified. Payment will include the cost of all water, equipment, and labor needed to complete the work as specified.

Weed Control, Pre-Emergent Granular Herbicide

Description: This work shall consist of spreading a pre-emergent granular herbicide in areas as shown on the plans or as directed by the Engineer. This item will be used in mulched plant beds and mulch rings.

Materials: The pre-emergent granular herbicide (Snapshot 2.5 TG or equivalent) shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least seventy-two (72) hours prior to application.

Method: The pre-emergent granular herbicide shall be used in accordance with the manufacturer's directions on the package. The granules are to be applied prior to mulching.

Apply the granular herbicide using a drop or rotary-type designed to apply granular herbicide or insecticides. Calibrate application equipment to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the granular herbicide at the rate of 100 lbs/acre (112 kg/ha) or 2.3 lbs/1000 sq. ft. (11.2 kg/1000 sq. meters).

Method of Measurement. Pre-emergent granular herbicide will be measured in place in Pounds (Kilograms) of Pre-emergent Granular Herbicide applied. Areas treated after mulch placement shall not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per pound (kilogram) of WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE which price shall include all materials, equipment, and labor necessary to complete the work as specified.

Shredded Bark Mulch 3"

Description. This work shall consist of the placement of shredded bark mulch around the proposed trees and plantings as shown on the plans and details or as directed by the Engineer. The mulch shall be an organic mulch free from deleterious materials,

standard size with a minimum particle size of ¼" and a maximum size of 1 ¼", and consisting of a dark shredded hardwood meeting the requirements of Article 1081.06 of the Standard Specifications and shall be approved by the Engineer prior to its placement.

Method of Measurement. Shredded Bark Mulch 3" 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 for SHREDDED BARK MULCH 3", which price shall include all required materials, labor and equipment necessary to complete the work as specified herein.

General Electrical Requirements

Effective: January 1, 2012

Add the following to Article 801 of the Standard Specifications:

“Maintenance transfer and Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction period.

Establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The party responsible for maintenance of any existing lighting and/or traffic control systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the State. A project may involve multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 304.8 mm (one (1) foot) to either side.. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. Note that the contractor shall be entitled to only one request for location marking of existing systems and that multiple requests may only be honored at the contractor's expense. No locates will be made after maintenance is transferred, unless it is at the contractor's expense.

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken.

The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record, all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition."

Add the following to the 1st paragraph of Article 801.05(a) of the Standard Specifications:

"Items from multiple disciplines shall not be combined on a single submittal and transmittal. Items for lighting, signals, surveillance and CCTV must be in separate submittals since they may be reviewed by various personnel in various locations."

Revise the second sentence of the 5th paragraph of Article 801.05(a) of the Standard Specifications to read:

"The Engineer will stamp the submittals indicating their status as 'Approved', 'Approved as Noted', 'Disapproved', or 'Information Only'.

Revise the 6th paragraph of Article 801.05(a) of the Standard Specifications to read:

"Resubmittals. All submitted items reviewed and marked 'Approved as Noted', or 'Disapproved' are to be resubmitted in their entirety with a disposition of previous comments to verify contract compliance at no additional cost to the state unless otherwise indicated within the submittal comments."

Revise Article 801.11(a) of the Standard Specifications to read:

"Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance the of existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein. Maintenance of lighting systems is specified elsewhere and will be paid for separately

Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in service, whether the system has passed final acceptance or not,

(such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.”

Add the following to Section 801 of the Standard Specifications:

“Lighting Cable Identification. Each wire installed shall be identified with its complete circuit number at each termination, splice, junction box or other location where the wire is accessible.”

“Lighting Cable Fuse Installation. Standard fuse holders shall be used on non-frangible (non-breakaway) light pole installations and quick-disconnect fuse holders shall be used on frangible (breakaway) light pole installations. Wires shall be carefully stripped only as far as needed for connection to the device. Over-stripping shall be avoided. An oxide inhibiting lubricant shall be applied to the wire for minimum connection resistance before the terminals are crimped-on. Crimping shall be performed in accordance with the fuse holder manufacturer's recommendations. The exposed metal connecting portion of the assembly shall be taped with two half-lapped wraps of electrical tape and then covered by the specified insulating boot. The fuse holder shall be installed such that the fuse side is connected to the pole wire (load side) and the receptacle side of the holder is connected to the line side.”

Revise the 2nd paragraph of Article 801.16 of the Standard Specifications to read:

“When the work is complete, and seven days before the request for a final inspection, the full-size set of contract drawings. Stamped “RECORD DRAWINGS”, shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or electrician. The record drawings shall be submitted in PDF format on CDROM as well as hardcopy for review and approval. In addition to the record drawings, copies of the final catalog cuts which have been Approved or Approved as Noted shall be submitted in PDF format along with the record drawings. The PDF files shall clearly indicate either by filename or PDF table of contents the respective pay item number. Specific part or model numbers of items which have been selected shall be clearly visible.”

Add the following to Article 801.16 of the Standard Specifications:

“In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following electrical components being installed, modified or being affected in other ways by this contract:

- Last light pole on each circuit
- Handholes
- Conduit roadway crossings

- Controllers
- Control Buildings
- Structures with electrical connections, i.e. DMS, lighted signs.
- Electric Service locations
- CCTV Camera installations
- Fiber Optic Splice Locations

Datum to be used shall be North American 1983.

Data shall be provided electronically and in print form. The electronic format shall be compatible with MS Excel. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

1. Description of item
2. Designation or approximate station if the item is undesignated
3. Latitude
4. Longitude

Examples:

Equipment Description	Equipment Designation	Latitude	Longitude
CCTV Camera pole	ST42	41.5 8049 3	- 87.79337 8
FO mainline splice handhole	HHL-ST31	41.5 5853 2	- 87.79257 1
Handhole	HH at STA 234+35	41.7 6553 2	- 87.54357 1
Electric Service	Elec Srv	41.6 0224 8	- 87.79405 3
Conduit crossing	SB IL83 to EB I290 ramp SIDE A	41.5 8459 3	- 87.79337 8
Conduit crossing	SB IL83 to EB I290 ramp SIDE B	41.5 8460 0	- 87.79343 2
Light Pole	DA03	41.5 5853 2	- 87.79257 1
Lighting Controller	X	41.6 5184 8	- 87.76205 3
Sign Structure	FGD	41.5 8049 3	- 87.79337 8
Video Collection Point	VCP-IK	41.5 5853 2	- 87.78977 1
Fiber splice connection	Toll Plaza34	41.6 0692 8	- 87.79405 3

Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 100 feet. Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified.

Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have a minimum 5 meter accuracy after post processing.

GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years.”

Electric Service Installation

Effective: January 1, 2012

Description. This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

Materials. Materials shall be in accordance with the Standard Specifications.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not included by other contract pay items required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

Method Of Measurement. Electric Service Installation shall be counted, each.

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Cook County

Basis Of Payment. This work will be paid for at the contract unit price each for **ELECTRIC SERVICE INSTALLATION** which shall be payment in full for the work specified herein.

Electric Utility Service Connection (ComEd)

Effective: January 1, 2012

Description. This item shall consist of payment for work performed by ComEd in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE. For summary of the Electrical Service Drop Locations see the schedule contained elsewhere herein.

CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact ComEd. The Contractor shall coordinate his work fully with the ComEd both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. **Please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.**

The Contractor should make particular note of the need for the earliest attention to arrangements with ComEd for service. In the event of delay by ComEd, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Method Of Payment. The Contractor will be reimbursed to the exact amount of money as billed by ComEd for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$5000.00

Basis Of Payment. This work will be paid for at the contract lump sum price for **ELECTRIC UTILITY SERVICE CONNECTION** which shall be reimbursement in full for electric utility service charges.

Underground Raceways

Effective: January 1, 2012

Revise Article 810.04 of the Standard Specifications to read:

"Installation. All underground conduit shall have a minimum depth of 30-inches (700 mm) below the finished grade."

Add the following to Article 810.04 of the Standard Specifications:

"All metal conduit installed underground shall be Rigid Steel Conduit unless otherwise indicated on the plans."

Add the following to Article 810.04 of the Standard Specifications:

"All raceways which extend outside of a structure or duct bank but are not terminated in a cabinet, junction box, pull box, handhole, post, pole, or pedestal shall extend a minimum of 300 mm (12") or the length shown on the plans beyond the structure or duct bank. The end of this extension shall be capped and sealed with a cap designed for the conduit to be capped. The ends of rigid metal conduit to be capped shall be threaded, the threads protected with full galvanizing, and capped with a threaded galvanized steel cap. The ends of rigid nonmetallic conduit and coilable nonmetallic conduit shall be capped with a rigid PVC cap of not less than 3 mm (0.125") thick. The cap shall be sealed to the conduit using a room-temperature-vulcanizing (RTV) sealant compatible with the material of both the cap and the conduit. A washer or similar metal ring shall be glued to the inside center of the cap with epoxy, and the pull cord shall be tied to this ring."

Add the following to Article 810.04(c) of the Standard Specifications:

"Coilable non-metallic conduit shall be machine straightened to remove the longitudinal curvature caused by coiling the conduit onto reels prior to installing in trench, encasing in concrete or embedding in structure. The straightening shall not deform the cross-section of the conduit such that any two measured outside diameters, each from any location and at any orientation around the longitudinal axis along the conduit differ by more than 6 mm (0.25")." The longitudinal axis of the straightened conduit shall not deviate by more than 20 mm per meter (0.25" per foot" from a straight line. The HDPE and straightening mechanism manufacturer operating temperatures shall be followed.

Unit Duct

Effective: January 1, 2012

Revise the first paragraph of Article 810.04 to read:

“The unit duct shall be installed at a minimum depth of 30-inches (760 mm) unless otherwise directed by the Engineer.”

Revise Article 1088.01(c) to read:

“(c) Coilable Nonmetallic Conduit.

General:

The duct shall be a plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The duct shall be a plastic duct which is intended for underground use and can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance.

The duct shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethylene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

The duct shall be UL Listed per 651-B for continuous length HDPE coiled conduit. The duct shall also comply with NEC Article 354.100 and 354.120.

Submittal information shall demonstrate compliance with the details of these requirements.

Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D2447. Submittal information shall demonstrate compliance with these requirements.

Nominal Size		Nominal I.D.		Nominal O.D.		Minimum Wall	
mm	in	mm	in	mm	in	mm	in
31.75	1.25	35.05	1.380	42.16	1.660	3.556 +0.51	0.140 +0.020
38.1	1.50	40.89	1.610	48.26	1.900	3.683 +0.51	0.145 +0.020

Nominal Size		Pulled Tensile	
mm	in	N	lbs
31.75	1.25	3322	747
38.1	1.50	3972	893

Marking:

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 3.05 meters (10 feet) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

Performance Tests:

Polyethylene Duct testing procedures and test results shall meet the requirements of UL 651. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	lbs
35	1.25	4937	1110
41	1.5	4559	1025

Luminaire

The luminaire shall be manufactured by General Electric, model M-400A with medium semi-cutoff type III distribution.

Add the following to first paragraph of Article 1067(c) of the Standard Specifications:

“The reflector shall not be altered by paint or other opaque coatings which would cover or coat the reflecting surface.”

Add the following to Article 1067(f) of the Standard Specifications:

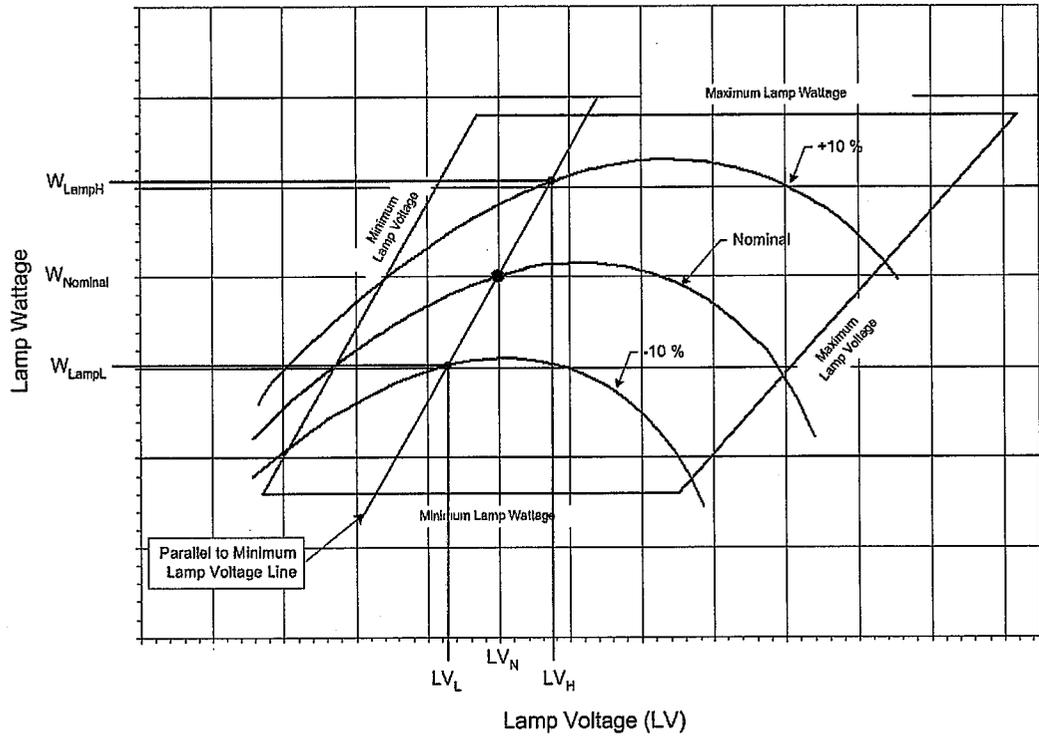
“The ballast shall be a High Pressure Sodium, high power factor, constant wattage auto-regulator, lead type (CWA) for operation on a nominal 240 volt system.”

Revise Article 1067(f)(1) of the Standard Specifications to read:

“The high pressure sodium, auto-regulator, lead type (CWA) ballast shall be designed to ANSI Standards and shall be designed and rated for operation on a nominal 240 volt system. The ballast shall provide positive lamp ignition at the input voltage of 216 volts. It shall operate the lamp over a range of input voltages from 216 to 264 volts without damage to the ballast. It shall provide lamp operation within lamp specifications for rated lamp life at input design voltage range. Operating characteristics shall produce output regulation not exceeding the following values:

Nominal Ballast Wattage	Maximum Ballast Regulation
750	25%
400	26%
310	26%
250	26%
150	24%
70	18%

For this measure, regulation shall be defined as the ratio of the lamp watt difference between the upper and lower operating curves to the nominal lamp watts; with the lamp watt difference taken within the ANSI trapezoid at the nominal lamp operating voltage point parallel to the minimum lamp volt line:



$$\text{Ballast Regulation} = \frac{W_{LampH} - W_{LampL}}{W_{LampN}} \times 100$$

where:

- W_{LampH} = lamp watts at +10% line voltage when Lamp voltage = LV_H
- W_{LampL} = lamp watts at -10% line voltage when lamp voltage = LV_L
- W_{lampN} = lamp watts at nominal lamp operating voltage = LV_N

Wattage	Nominal Lamp Voltage, LV_N	LV_L	LV_H
750	120v	115v	125v
400	100v	95v	105v
310	100v	95v	105v
250	100v	95v	105v
150	55v	50v	60v
70	52v	47v	57v

Ballast losses, based on cold bench tests, shall not exceed the following values:

Nominal Ballast Wattage	Maximum Ballast Losses
750	15%
400	20%
310	21%
250	24%
150	26%
70	34%

Ballast losses shall be calculated based on input watts and lamp watts at nominal system voltage as indicated in the following equation:

$$\text{Ballast Losses} = \frac{W_{Line} - W_{Lamp}}{W_{Lamp}} \times 100$$

where:

W_{line} = line watts at nominal system voltage

W_{lamp} = lamp watts at nominal system voltage

Ballast output to lamp. At nominal system voltage and nominal lamp voltage, the ballast shall deliver lamp wattage with the variation specified in the following table.

Nominal Ballast Wattage	Output to lamp variation
750	± 7.5%
400	± 7.5%
310	± 7.5%
250	± 7.5%
150	± 7.5%
70	± 7.5%

Example: For a 400w luminaire, the ballast shall deliver 400 watts ±7.5% at a lamp voltage of 100v for the nominal system voltage of 240v which is the range of 370w to 430w.

Ballast output over lamp life. Over the life of the lamp the ballast shall produce average output wattage of the nominal lamp rating as specified in the following table. Lamp wattage readings shall be taken at 5-volt

increments throughout the ballast trapezoid. Reading shall begin at the lamp voltage (L_v) specified in the table and continue at 5 volt increments until the right side of the trapezoid is reached. The lamp wattage values shall then be averaged and shall be within the specified value of the nominal ballast rating. Submittal documents shall include a tabulation of the lamp wattage vs. lamp voltage readings.

Nominal Ballast Wattage	LV Readings begin at	Maximum Wattage Variation
750	110v	$\pm 7.5\%$
400	90v	$\pm 7.5\%$
310	90v	$\pm 7.5\%$
250	90v	$\pm 7.5\%$
150	50v	$\pm 7.5\%$
70	45v	$\pm 7.5\%$

Example: For a 400w luminaire, the averaged lamp wattage reading shall not exceed the range of $\pm 7.5\%$ which is 370w to 430w"

Add the following to Article 1067(h) of the Standard Specifications:

"Independent Testing. Independent testing of luminaires shall be required whenever the pay item quantity of luminaires of a given pay item, as indicated on the plans, is 50 or more. For each luminaire type to be so tested, one luminaire plus one luminaire for each 50 luminaires shall be tested. Example: A plan pay item quantity of 75 luminaires for a specific pay item would dictate that 2 be tested; 135 luminaires would dictate that three be tested." If the luminaire performance table is missing from the contract documents, the luminaire(s) shall be tested and the test results shall be evaluated against the manufacturer's data as provided in the approved material submittal. The test luminaire(s) results shall be equal to or better than the published data. If the test results indicated performance not meeting the published data, the test luminaire will be designated as failed and corrective action as described herein shall be performed.

The Contractor shall be responsible for all costs associated with the specified testing, including but not limited to shipping, travel and lodging costs as well as the costs of the tests themselves, all as part of the bid unit price for this item. Travel, lodging and other associated costs for travel by the Engineer shall be direct-billed to or shall be pre-paid by the Contractor, requiring no direct reimbursement to the Engineer or the independent witness, as applicable"

The Contractor shall select one of the following options for the required testing with the Engineer's approval:

- a. Engineer Factory Selection for Independent Lab: The Contractor may select this option if the luminaire manufacturing facility is within the state of Illinois. The Contractor shall propose an independent test laboratory for approval by the Engineer. The selected luminaires shall be marked by the Engineer and shipped to the independent laboratory for tests.
- b. Engineer Witness of Independent Lab Test: The Contractor may select this option if the independent testing laboratory is within the state of Illinois. The Engineer shall select, from the project luminaires at the manufacturer's facility or at the Contractor's storage facility, luminaires for testing by the independent laboratory.
- c. Independent Witness of Manufacturer Testing: The independent witness shall select from the project luminaires at the manufacturer's facility or at the Contractor's storage facility, the luminaires for testing. The Contractor shall propose a qualified independent agent, familiar with the luminaire requirements and test procedures, for approval by the Engineer, to witness the required tests as performed by the luminaire manufacturer.

The independent witness shall as a minimum meet the following requirements:

- ▶ Have been involved with roadway lighting design for at least 15 years.
- ▶ Not have been the employee of a luminaire or ballast manufacturer within the last 5 years.
- ▶ Not associated in any way (plan preparation, construction or supply) with the particular project being tested.
- ▶ Be a member of IESNA in good standing.
- ▶ Provide a list of professional references.

This list is not an all inclusive list and the Engineer will make the final determination as to the acceptability of the proposed independent witness.

- d. Engineer Factory Selection and Witness of Manufacturer Testing: The Contractor may select this option if the luminaire manufacturing facility is within the state of Illinois. At the Manufacturer's facility, the Engineer shall select the luminaires to be tested and shall be present during the testing process. The Contractor shall schedule travel by the Engineer to and from the Manufacturer's laboratory to witness the performance of the required tests.

Should any of the tested luminaires fail to satisfy the specifications and perform according to approved submittal information, the luminaire shall be unacceptable and be replaced by alternate equipment meeting the specifications with the submittal and testing process

repeated in their entirety; or corrections made to achieve required performance. In the case of corrections, the Contractor shall advise the Engineer of corrections made and shall request a repeat of the specified testing and, if the corrections are deemed reasonable by the Engineer, the testing process shall be repeated. The number of luminaires to be tested shall be the same quantity as originally tested; i.e. if three luminaires were tested originally, one, two or three failed, another three must be tested after corrective action is taken.

Revise Article 1067.06(a)(1) of the Standard Specifications to read:

“The lamps shall be of the clear type and shall have a color of 1900° to 2200° Kelvin.”

Lighting Controller, Base Mounted, 240 Volt, 100 Amp

Description. This item shall consist of furnishing and installing a Lighting Controller complete with all circuit breakers and appurtenances as shown on the plans, in accordance to NEC and as specified herein.

Cabinets shall be installed at least 12 inches from the edge of a sidewalk. The side of the cabinet with the door shall be oriented opposite of traffic and the contractor shall confirm with the Engineer prior to installing the foundation.

The lighting controller shall be installed on concrete foundation. The controller shall be mounted plumb and level on the foundation. The controller shall be fastened to the foundation with anchor rods using hot dipped galvanized or stainless steel nuts and washers. The base of the controller cabinet shall be caulked with silicone where it meets the foundation. All conduit entrances shall be sealed with a pliable waterproof material.

The controller cabinet shall be a single door type fabricated from 0.125 inch type 5052-H32 aluminum. The cabinet shall have a vent designed to keep moisture, dirt and insects out. The cabinet door frame shall be double flanged on all four sides. All external hardware shall be stainless steel. The cabinet shall have a NEMA 3R rating. The door shall be equipped with a three point latching mechanism with nylon rollers top and bottom. The handle shall be stainless steel and have a provision for a padlock. The door shall be sealed with a neoprene gasket. The hinge shall be a continuous hinge with a ¼" diameter stainless steel hinge pin. The door shall have a linkage arm system capable of holding the door in a wide open position. The lock shall be a rain and ice resistant standard traffic signal lock with two keys.

Aluminum enclosures shall be painted per the manufacturer's recommendations. Color shall be green and approved by the Village of Schaumburg prior to fabrication.

The cabinet door shall have a stainless steel name plate as shown in the contract documents.

The lighting controller shall have the components shown in the contract documents. The type of wire in the lighting controller is #12 AWG, 600V type 'SIS' strand copper gray switch board wire. Components shall be sized properly for the given load. All controllers shall have provisions for the installation of four additional circuits at a future date.

The lighting controller shall be provided with a 15 amp single pole circuit breaker for the pedestrian activated crosswalk warning system and sufficient space on the panel to install the controller equipment for the warning system.

A ground rod shall be provided at the controller. Grounding of the electric system shall be in conformance with the applicable requirements of the National Electrical Code (NEC) and the Village of Schaumburg electrical code.

Submittal of Drawings. The Contractor shall furnish, prior to any shop work or fabrication, complete and detailed drawings as to dimensions, type of material and method of fabrication for the control cabinet, equipment mounting panel, arrangement of equipment on panels, bus bar sizes, wire or cable sizes for connections between main breaker, automatic switches, photo electric cell, circuit breakers, H-O-A switch, all appurtenances as shown on the plans, and any other equipment as may be necessary for proper operation and control of the lighting system.

Basis of Payment. This work will be paid for at the contract unit price each for LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 100 AMP, which price shall be payment in full for furnishing and placing Class "SI" concrete foundation with rigid steel conduit for cable entrance and grounding of equipment; Class "SI" concrete pad; furnishing and placing ground rod; furnishing and placing fabricated cabinet complete with equipment panels and all necessary switch gear, appurtenances and wiring of same as indicated on the plans; furnishing, installing and connecting the photo-electric cells; and shall include all labor, materials, tools and incidentals necessary to complete and test the operation of the control cabinet as herein specified and as shown on the plans.

Remove Electric Cable from Conduit

Description. This work shall consist of removing existing electric cable as described in Section 895 of the Standard Specification and as specified herein and shown in the contract plans.

All existing electric cable removed from conduit shall be remain the property of the Village of Schaumburg. It shall be delivered and unloaded at the Village of Schaumburg Public Works 714 Plum Grove Road, Schaumburg or as directed by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per foot for REMOVE ELECTRIC CABLE FROM CONDUIT, and shall include all labor, material and equipment necessary to perform the work as specified in the plan documentation and as herein specified.

Relocate Existing Lighting Unit, Special

Description. This work shall consist of relocating the existing lighting unit and the metal foundation as shown in the plans or as directed by the Engineer in accordance to Section 844 in the Standard Specification except as modified herein. The lighting units and foundations once removed shall be stored by the Contractor in a secure facility until item is needed for placement.

The Contractor, Village and the Engineer will inspect the existing lighting units to be removed and document the condition of them before removal. Any damage resulting from the removal or transportation of the lighting units shall be repaired or replaced in kind by the Contractor. The Engineer shall be the sole judge to determine the extent of damage and suitability of repair and/or replacement.

The existing lighting unit shall be disconnected and removed from the metal foundation. The metal foundation will be relocated and the existing lighting unit will be reinstalled onto the metal foundation. The foundation shall be installed per Article 836.03 (b) of the Standard Specifications. Grounding electrode shall be installed for each foundation per detail in the plans and included in for payment in this item. Grounding shall be according to Section 836 of the Standard Specifications.

Any damage sustained to the lighting unit or the foundation during removing or relocating operation shall be repaired or replaced in kind to the satisfaction of the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per each as RELOCATE EXISTING LIGHTING UNIT, SPECIAL, which price shall be payment in full for all labor, material and equipment necessary to complete the work as specified.

Pedestrian Activated Crosswalk Warning System

Description. This item shall consist of furnishing and installing pedestrian activated LED flashing crosswalk signs with push buttons stations, a control box and all the wiring connections.

Materials. Material for the pedestrian activated crosswalk warning system shall be according to the following.

The warning system shall be manufactured by Traffic Safety Corporation. The model shall be the TS30 with AC power controlled, 2 push buttons (part no. AC-XAV2) and a TS1000 controller. An equivalent system by other manufacturers may be submitted for approval.

LED Illuminated Pedestrian Crosswalk Signs

This shall conform to the specifications of the Federal Highway Administration (FHWA) and in compliance with the Manual Uniform Traffic Control Devices (MUTCD). The reflective sheeting of the sign shall be fluorescent yellow-green, 3M-Diamond-grade sheeting with an anti-graffiti overlay. The sign shall employ flashing

LEDs (light-emitting diodes) to be activated by the push buttons to warn vehicular traffic of crossing pedestrian. Each LED shall be sealed in heat dissipating plastic enclosure to provide resistance to weather and vibration and be ultrasonically welded to the sign assembly. The signs shall be mounted per Section 720 of the Standard Specifications and as recommended by the manufacturer. Signs shall include vandal resistant mounting hardware and custom tool for securing vandal resistant nuts.

Pedestrian Push Button Station

This shall be ADA compliant, with a directional arrow (field adjustable) on the push button and requiring only 1-3 lbs. of force to activate. Once activated a pre-recorded audible message shall play. The station shall have a noise monitoring microphone and circuit for dynamically controlling the volume over ambient noise. The speakers shall be waterproof. The station shall have a switch life in excess of 20 million cycles, withstand severe impacts and shall not fail in the "ON" position. The station shall be housed in a vandal resistant, cast aluminum frame with yellow powder coated finish and watertight O-ring seals. Mounting hardware shall be supplied.

The Crosswalk System Controller

This shall be compliant to MUTCD regular and enhanced flash patterns.

- A visual LED indicator in the controller to indicate power on condition
- Activation duration shall be field adjustable in one second increments
- Flash pattern setting shall be field adjustable
- Internal push button used to activate the system during field test with a LED indicator to indicate internal push button or external activation device calls.
- Include an override switch to allow switching from manual system activation to continuous system activation during an ongoing crossing cycle.
- All settings must be retained in the event that input power is removed.

The system shall be housed in a NEMA 4 compliant, aluminum enclosure with a thickness of 0.125". The enclosure shall have a mill finish and be supplied with NEMA 4 compliant lock for security. The system controller shall be mounted in the street lighting controller cabinet.

Installation. The LED illuminated crosswalk signs will be installed on the light poles on each end of the crosswalk. The push button station will be installed on a pedestrian push button post on each end of the crosswalk. A two inch galvanized steel conduit shall be used between the two posts and poles and back to the controller for system wiring. The conduit and push button post shall be paid for separately.

Basis of Payment. This work will be paid for at the contract unit price of each for PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM, which price shall include 2 LED illuminated pedestrian crosswalk signs (W11-2)(30"x30"), 2 arrow signs (W16-7P)(24"x12"), two pedestrian push button stations, a crosswalk system controller, and all materials including wiring, labor and equipment necessary to perform and complete the work as specified herein and as shown in the contract plans.

Maintenance of Lighting System

Replace Article 801.11 and 801.12 of the Standard Specifications with the following:

Effective the date the Contractor's activities (electrical or otherwise) at the job site begin, the Contractor shall be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by the work until final acceptance or as otherwise determined by the Engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. The request for the maintenance preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained.

Maintenance of Existing Lighting Systems

Existing lighting systems. Existing lighting systems shall be defined as any lighting system or part of a lighting system in service at the time of contract Letting. The contract drawings indicate the general extent of any existing lighting, but whether indicated or not, it remains the Contractor's responsibility to ascertain the extent of effort required for compliance with these specifications and failure to do so will not be justification for extra payment or reduced responsibilities.

Extent of Maintenance.

Partial Maintenance. Unless otherwise indicated, if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work, the Contractor needs only to maintain the affected circuits. The affected circuits shall be isolated by means of in-line waterproof fuse holders as specified elsewhere and as approved by the Engineer.

Full Maintenance. If the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work, the Contractor shall maintain the entire controller and all associated circuits.

Maintenance of Proposed Lighting Systems

Proposed Lighting Systems. Proposed lighting systems shall be defined as any lighting system or part of a lighting system, temporary or permanent, which is to be constructed under this contract.

The Contractor shall be fully responsible for maintenance of all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, vandalism, or other means. The potential cost of replacing or repairing any malfunctioning, damaged, or vandalized equipment shall be included in the bid price of this item and will not be paid for separately.

Lighting System Maintenance Operations

These responsibilities shall include the maintenance of lighting units (including sign lighting), cable runs and lighting controls. In the case of a pole knockdown or sign light damage, the Contractor shall promptly clear the lighting unit and circuit discontinuity and restore the system to service. The equipment shall then be re-set by the contractor within the time limits specified herein.

If the equipment damaged by normal vehicular traffic, not contractor operations, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind with payment made for such equipment under Article 109.04. If the equipment damaged by any construction operations, not normal vehicular traffic, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind and the cost of the equipment shall be included in the cost of this pay item and shall not be paid for separately.

Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected within 24 hours of the patrol. Patrol reports shall be presented on standard forms as designated by the Engineer. Uncorrected deficiencies may be designated by the Engineer as necessitating emergency repairs as described elsewhere herein.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Radio problem	1 hour	4 hours	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey or reported to EMC	na	na	7 Calendar days
Navigation light outage	na	na	24 hours

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.
- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)
- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

Operation of Lighting

The lighting shall be operational every night, dusk to dawn. Duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Lighting systems shall not be kept in operation during long daytime periods.

Method of Measurement. The contractor shall demonstrate to the satisfaction of the Engineer that the lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request. Months in which the lighting systems are not maintained and not operational will not be paid for. Payment shall not be made retroactively for months in which lighting systems were not operational.

Basis of Payment. Maintenance of lighting systems shall be paid for at the contract unit price per calendar month for MAINTENANCE OF LIGHTING SYSTEM, which shall include all work as described herein.

Roadway Light Pole, Install Only

Description. This work shall consist of installing a light pole complete with mast arm, luminaire and all hardware and accessories required and as described in Section 821 and 830 of the Standard Specification and as specified herein and shown in the contract plans.

The contractor will coordinate with the Village of Schaumburg public works department to obtain the light pole, mast arm and luminaire when it is ready to erect the light pole. The contractor will install the light pole with mast and luminaire provided from the Village on a proposed helix foundation. Contractor shall provide all necessary pole cables, surge protector and fusing needed to make and complete the luminaire connection to the lighting system.

Basis of Payment. This work will be paid for at the contract unit price per each for ROADWAY LIGHT POLE, INSTALL ONLY, and shall include all labor, material, equipment and splicing necessary to perform the work as specified herein and in the plan documentation.

Unit Duct, 600V, 2-1c No. 8, 1/c No. 8 Ground, (XLP-Type USE), 1 ¼" Dia. Polyethylene

Description. This work shall consist of furnishing and installing unit duct according to Section 816 of the Standard Specification, the unit duct special provision and as specified herein.

The unit duct shall be installed a minimum of 30" below grade. Minimum bending radius for the installed duct shall be no smaller than the recommended radius. Bends shall be made so that the duct will not be damaged or kinked and the internal diameter of the duct will not be effectively reduced.

FAU 2556 Walnut Lane
Section 08-00094-00-PV
Project M-9003(494)
Cook County

Basis of Payment. This work will be paid for at the contract unit price per foot for UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO. 8 GROUND, (XLP-TYPE USE), 1 ¼" DIA. POLYETHYLENE, and shall include all labor, material and equipment necessary to perform the work as specified in the plan documentation and as herein specified.

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

Effective: August 1, 2012

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 for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under the Illinois Prevailing Wage Act and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the

TPG under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for one TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this Special Provision.

METHOD OF MEASUREMENT: The unit of measurement is in hours.

BASIS OF PAYMENT: This work will be paid for at the contract unit price of \$10.00 per hour for TRAINEES TRAINING PROGRAM GRADUATE. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeyworker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is 1. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

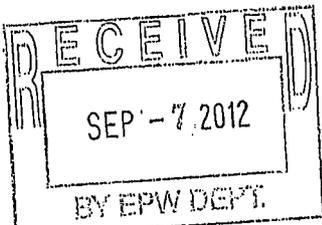
For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted by Intergovernmental Agreement with the Illinois Community College Board to provide screening, tutoring and pre-training to individuals interested in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

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program

Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT 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 it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate TPG Special Provision \$10.00 an hour incentive.

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



SEWER REPLACEMENT NOTIFICATION AND REQUEST FOR INSPECTION (NRI)

12-5074

METROPOLITAN WATER RECLAMATION DISTRICT OF GREAT CHICAGO 111 EAST ERIE SREET, CHICAGO, ILLINOIS 60611 312-751-3260

LOCAL SEWER SYSTEMS SECTION 12 JUN - 6 11:11:30

1. PROJECT INFORMATION

Name and description of project:

Walnut Lane Roadway Improvements

Full roadway reconstruction of Walnut Lane which includes the replacement of an existing 10" sanitary forcemain

Location of project (street address or with respect to two major streets):

Walnut Lane South of Gold Road and north of Bode Road

Municipality (Township, if unincorporated): Village of Schaumburg

Related MWRD Sewer Permit Number, if known 70-352

2. APPROXIMATE TIME SCHEDULE

Construction Start Date Summer 2013; Completion Date Fall 2013

3. PROJECT TYPE

Government/Municipal [X]; Commercial []; Industrial []; Residential []; Private Utility []; Institutional [];

Recreational []; Sewer Rehabilitation []; Other

4. SCOPE OF CONSTRUCTION

Work consists of: Sewer main reconstruction [X]; Replacement []; Relining []; Spot repairs []; Building sewer service replacement/relining []; Existing manholes to be reconstructed []; New Manhole(s) []; Grease trap (s) []; Oil separator(s) []; Mud basin (s) []

Reason for replacement/repair: Collapse []; Deterioration [X]; Suspected breaks []; Excessive Infiltration/Inflow []

Building Alterations []; Other

Bedding must be used for new or replacement sewer work as required by MWRD specifications.

5. PIPE MATERIAL AND JOINTS

Table with 6 columns: Diameter, Estimated Length, Material and Specification, Joint and Specification, No. of M.H. s. Rows for EXISTING and PROPOSED pipe materials.

6. CO-PERMITTEE (OWNER/DEVELOPER)

We have read and thoroughly understand the conditions and requirements of this permit application.

Village of Schaumburg Address: 101 Schaumburg Court Schaumburg, IL 60193

Signature: Steven R. Weinstock Name and Title (Print) Steven R. Weinstock, Director of Engineering & Public Works

Date 6-28-12 Phone 847-923-6600

7. PERMITTEE (MUNICIPALITY)

I hereby certify that the project described herein will be constructed in accordance with all applicable requirements and necessary supervision will be provided.

Village of Schaumburg Address: 101 Schaumburg Court Schaumburg, IL 60193

Signature: Steven R. Weinstock Name and Title (Print) Steven R. Weinstock, Director of Engineering & Public Works

Date 6-28-12 Phone 847-923-6600

See attached special condition

FOR MWRD USE ONLY... NRI APPROVAL By: Maurice Dubi Date Issued: August 31, 2012 Fee Paid \$ 0.00

- 1. **APPLICABILITY:** This form may be used in lieu of a standard Sewerage System Permit form only if the works consist of:
 - A. **Reconstruction, relining, rehabilitation**
Sewer reconstruction, replacement, repair (including spot repairs involving excavation) on public right-of-way or utility easement, including appurtenances, using the same alignment (same trench); or,
Reconstruction of an existing building sewer service, including the addition of an inspection or maintenance manhole, with no change in alignment. Reconstructed sewers must be of the same diameter as that being replaced; and/or,
 - B. **Minor New Construction**
The addition of a grease trap/separator, triple basin, or maintenance inspection manhole or mud basin with less than 25 linear feet of new sewer service construction with no new connection to an existing sewer main, in conjunction with building alteration, and/or change in ownership or use. Plans are required for new construction.

This form shall not be used if the alignment is changed more than 5 feet horizontally, if new service areas are added, or if new sewer work would require stormwater detention, or if reconstructed /replaced sewers will be larger in diameter than the existing sewer (including via pipe bursting). For these cases, a standard Sewerage System Permit is required.

- 2. **INSTRUCTIONS FOR FILING FORMS:** Submit typed NRI form in quadruplicate; complete all information or indicate non-applicability; do not leave any blank spaces; use "X" for checking applicable information. Submit four copies of location map and plans. Submit four copies of specifications, where applicable. Address all correspondence to Local Sewer Systems Section; for any inquiries or assistance, call (312) 751-3260.

Make written submittal sufficiently in advance. Give advance notice of at least two (2) working days before any work is started (telephone (708) 588-4055). For emergency repairs, give advance notice and obtain permission to start before any work is started, and proceed with written submittal. Failure to give advance notice and make written submittal as required constitutes a violation of the Sewer Permit Ordinance.

- 3. **EXPIRATION:** This NRI will expire if construction has not started within one (1) year from the date of issuance. Construction under an expired NRI is deemed construction without a permit. Construction must be completed within one (1) year after start of construction.
- 4. **REVOCAION:** In issuing this NRI, the MWRD has relied upon the statements and representations made by the Applicant or his/her agent. Any incorrect statements or misrepresentations will be cause for revocation of this NRI, and all rights of the Applicant hereunder will immediately become null and void.
- 5. **PERMIT FEES:** The permit fee to be presented with the NRI applications is \$100.00 plus \$5.00 per linear foot of sewer. (There is no fee for government public works projects.) The Fee Payment Voucher form is to be completed and submitted as instructed on that form. This NRI application will not be processed unless the fee, where applicable, is paid in full.

INSPECTION REPORT: (FOR MWRD USE ONLY)

- 1. **TIME SCHEDULE:** (a) Verbal telephone notice received _____ (b) Work started _____ Work completed _____ (c) First inspection made _____
Total number of inspection made _____
- 2. **SUPERVISION:** (a) Construction supervision provided: Yes ___ No ___ If yes, supervision by Municipal employee _____ by Consultant _____
(b) Name of inspector _____
- 3. **MANHOLES:** (a) With respect to the ground immediately adjacent, existing rims are below _____; at or above _____ immediate surroundings.
(b) Existing /new manholes are located in a low area and are subject to entry of surface runoff: Yes ___ No ___ If yes, watertight manhole covers are provided: Yes ___ No ___ (c) Condition of walls, bench, and frame of existing manholes: Subject to infiltration _____; Satisfactory _____
- 4. **MATERIALS:** (A) Existing pipe _____ Existing bedding _____; Existing joint _____ (b) New pipe _____; New bedding _____; New joint _____
- 5. **TESTING AND APPROVAL:** (a) Visual inspection only _____; Other tests (specify) _____
(b) Test or inspection performed by: Municipal employee _____; Consultant _____; MWRD _____
(c) Names of persons performing or witnessing test or inspection: _____

Comments: _____

APPROVAL BY METROPOLITAN WATER RECLAMATION DISTRICT

The project has been inspected and is hereby approved. (Test method _____)
This approval does not constitute or release from other obligations under the Sewer Permit Ordinance.

Date: _____ MWRD Area Inspector _____ MWRD Area Engineer/Field Supervisor _____

SPECIAL CONDITION FOR MWRD NRI PERMIT NO. 12-5074

The abandoned 10-inch existing forcemain shall be plugged at both ends with a minimum of two (2) feet long non-shrink concrete/mortar plugs.



Route F.A.U. 2556
 Section 08-00094-00-PV
 County Cook

Marked Rte. Walnut Lane
 Project No. M-9003 (494)
 Contract No. 63738

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.

Steven R. Weinstock
 Print Name
Director of Engineering and Public Works
 Title
Village of Schaumburg
 Agency

Steven R. Weinstock
 Signature
8-15-12
 Date

I. Site Description:

A. Provide a description of the project location (include latitude and longitude):

The proposed improvement is located along Walnut Lane between Golf Road and Bode Road in the Village of Schaumburg (Latitude 42° 2'50.63"N, Longitude 88° 7'34.30"W). The net length of the project 0.48 miles.

B. Provide a description of the construction activity which is the subject of this plan:

The proposed improvements include pavement reconstruction, storm sewer removal and replacement, and the installation of new sanitary force main and watermain.

C. Provide the estimated duration of this project:

The project will be under construction for approximately 9 months.

D. The total area of the construction site is estimated to be 4.83 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 4.83 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.63

F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:

Five soil types located within the project area of the Walnut Lane improvement:

Peotone Silty Clay (330A), 0 to 2 percent slopes - A poorly drained soil with moderately slow permeability. This soil has a low susceptibility to water erosion and a moderate susceptibility to wind erosion.

Markham Silt Loam (531B), 2 to 4 percent slopes - A moderately well drained soil with a moderately slow

permeability. This soil has a low susceptibility to water erosion and a low susceptibility to wind erosion.

Markham Silt Loam (531C2), 4 to 6 percent slopes, eroded - A moderately well drained soil with a slow permeability. This soil has a moderate susceptibility to water erosion and a low susceptibility to wind erosion.

Orthents (805B), clayey, undulating - A moderately well drained soil with very slow permeability. This soil has a moderate susceptibility to water erosion and a moderate susceptibility to wind erosion.

Muskego and Houghton Mucks (903A), 0 to 2 percent slopes - A very poorly drained soil with a slow permeability. This soil has a slight susceptibility to water erosion and a high susceptibility to wind erosion.

G. Provide an aerial extent of wetland acreage at the site:

0.0 acres

H. Provide a description of potentially erosive areas associated with this project:

Muskego and Houghton Mucks (903A) has a high susceptibility to wind erosion, and can be found at the north end of the project near Golf Road.

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):

Stage 1 - Construction of storm sewer, drainage structures, watermain, and sanitary forcemain

Stage 2 - Removal and replacement of curb and gutter, pavement, and driveways

Stage 3 - Removal and replacement of curb and gutter, pavement, and driveways. Installation of street lighting and placement of topsoil and sod.

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:

Village of Schaumburg

L. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:

The stormwater from the site flows to a mainline storm sewer north along Walnut Lane. This storm sewer drains to Poplar Creek Schaumburg Branch, which is tributary to the Fox River.

M. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

Any portion of the construction site draining directly to the stream will require protection.

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 checked="" type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (specify) |

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor, and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

- 1. **Stabilized Practices:** Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

Where the initiation of stabilization measures by the seventh day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following stabilization practices will be used for this project:

- | | |
|---|---|
| <input type="checkbox"/> Preservation of Mature Vegetation | <input type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input checked="" type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Temporary Mulching | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) |

Describe how the stabilization practices listed above will be utilized during construction:

1. Temporary Erosion Control Seeding – This item will be applied to all bare areas every seven days to minimize the amount of exposed surface areas.
2. Protection of Trees - This shall consist of the item "Temporary Fence" as shown on the detail in the plans or as directed by the Engineer and in accordance with Article 201.05 of the Illinois Department of Transportation's Standard Specifications for Road and Bridge Construction.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

1. Sodding - Sod will be installed after the placement of topsoil per IDOT specifications.
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 type="checkbox"/> Temporary Ditch Check | <input type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input type="checkbox"/> Retaining Walls |
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input type="checkbox"/> Turf Reinforcement Mats | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Aggregate Ditch | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paved Ditch | <input type="checkbox"/> Other (specify) |

Describe how the structural practices listed above will be utilized during construction:

1. Perimeter Erosion Barrier - Barrier will be placed along the areas of the project that drain offsite.
2. Storm Drain Inlet Protection - Inlet and Pipe Protection, consisting of Inlet Filters and Perimeter Erosion Barrier will be placed on all open lid structures in landscaped areas to collect sediment during construction and will be cleaned on a regular basis. Inlet Filters will be placed on all open lid structures in paved areas to collect sediment during construction and will be cleaned on a regular basis.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

N/A

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:

The proposed storm sewer will discharge through the existing culvert headwall. The slopes of the pipes have been designed to reduce the velocity of the storm water as much as possible without causing siltation within the pipes.

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 Specifications 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 manufacture's specifications.

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.

Protection of Trees / Temporary Tree Protection – Any protective measures which are knocked down will be repaired immediately.

Storm Drain Inlet Protection – Sediment filters will be cleaned on a regular basis.

IV Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm that is 0.5 inch or greater or equivalent snowfall.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Contractor Certification Statement

Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.5 of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route F.A.U. 2556 Marked Rte. Walnut Lane
Section 08-00094-00-PV Project No. M-9003 (494)
County Cook Contract No. 63738

This certification statement is a part of the SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in the SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

- Contractor
Sub-Contractor

Print Name Signature
Title Date
Name of Firm Telephone
Street Address City/State/ZIP

Items which this Contractor/subcontractor will be responsible for as required in Section II.5. of the SWPPP:



Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control Notice of Intent (NOI) for General Permit to Discharge Storm Water Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

For Office Use Only

OWNER INFORMATION

Permit No. ILR10 _____

Company/Owner Name: Village of Schaumburg
Mailing Address: 714 S. Plum Grove Road Phone: 847-923-6600
City: Schaumburg State: IL Zip: 60193 Fax: _____
Contact Person: Steven R. Weinstock E-mail: sweinstock@ci.schaumburg.il.us
Owner Type (select one) City

MS4 Community: Yes No

CONTRACTOR INFORMATION

Contractor Name: _____
Mailing Address: _____ Phone: _____
City: _____ State: _____ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Select One: New Change of information for: ILR10 _____
Project Name: Walnut Lane Reconstruction County: Cook
Street Address: Walnut Lane City: Schaumburg IL Zip: 60194
Latitude: 42 2 50.63 Longitude: 88 7 34.3 17 41N 10E
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range
Approximate Construction Start Date March 2013 Approximate Construction End Date December 2013

Total size of construction site in acres: 4.83

If less than 1 acre, is the site part of a larger common plan of development?
 Yes No

Fee Schedule for Construction Sites: Less than 5 acres - \$250 5 or more acres - \$750

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Has the SWPPP been submitted to the Agency? Yes No

(Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov)

Location of SWPPP for viewing: Address: _____ City: _____

SWPPP contact information: _____ Inspector qualifications: _____

Contact Name: _____

Phone: _____ Fax: _____ E-mail: _____

Project inspector, if different from above _____ Inspector qualifications: _____

Inspector's Name: _____

Phone: _____ Fax: _____ E-mail: _____

IL 532 2104 WPC 623 Rev 5/10
This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

TYPE OF CONSTRUCTION (select one)

Construction Type Reconstruction

SIC Code: _____

Type a detailed description of the project:

The project involves the reconstruction of Walnut Lane, including the removal and replacement of existing pavement, curb and gutter, storm sewer system, watermain, and sanitary force main. Street lighting will also be installed.

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on:

Historic Preservation Agency Yes No

Endangered Species Yes No

RECEIVING WATER INFORMATION

Does your storm water discharge directly to: Waters of the State or Storm Sewer

Owner of storm sewer system: Village of Schaumburg

Name of closest receiving water body to which you discharge: Poplar Creek Schaumburg Branch

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this 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. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature:

Date:

Printed Name:

Title:

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the upper right hand corner of the first page.

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."

Submission of initial fee and an electronic submission of Storm Water Pollution Prevention Plan (SWPPP) for Initial Permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA at the above address.

Construction sites with less than 5 acres of land disturbance - fee is \$250.

Construction sites with 5 or more acres of land disturbance - fee is \$750.

SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov When submitting electronically, use Project Name and City as indicated on NOI form.



Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control

Construction Site Storm Water Discharge Incidence of Non-Compliance (ION)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. You may email this completed form to: epa.swnoncomp@illinois.gov

For Office Use Only
Permit No. ILR10_____

Permittee Information:

Name: Village of Schaumburg
Street Address: 714 S. Plum Grove Road P.O. Box: _____
City: Schaumburg State: IL Zip Code: 60193 County: Cook
Phone: 847-923-6600 Email: sweinstock@ci.schaumburg.il.us

Construction Site Information:

Site Name: Walnut Lane
Street Address: Walnut Lane
City: Schaumburg State: IL Zip Code: 60194

Latitude: 42 2 50.63 Longitude: 88 7 34.3 17 41N 10E
(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Cause of Non-Compliance

Actions Taken to Prevent Any Further Non-Compliance

Environmental Impact Resulting From the Non-Compliance

Actions Taken to Reduce the Environmental Impact Resulting From the Non-Compliance

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature:

Date:

Printed Name:

Title:

IL 532 2105 WPC
624 Rev. 10/2011

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

DIVISION OF WATER POLLUTION CONTROL
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
FIELD OPERATIONS SECTION

GUIDELINES FOR COMPLETION OF INCIDENCE OF NON-COMPLIANCE (ION) FORM

Complete and submit this form for any violation of the Storm Water Pollution Prevention Plan observed during any inspection conducted, including those not required by the SWPPP. Please adhere to the following guidelines:

Initial submission within 24 hours by email, telephone or fax (see region fax numbers) of any incidence of non-compliance for any violation. Submit email copy to: epa.swnoncomp@illinois.gov. After 24 hours notification, submit signed original ION within 5 days to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance #19
Post Office Box 19276
Springfield, Illinois 62794-9276

FIELD OPERATIONS HEADQUARTERS
Bruce Yurdin, Manager
Phone: 217/782-3362 Fax: 217/785-1225
EMAIL: epa.swnoncomp@illinois.gov

Region 1 - ROCKFORD
Chuck Corley, Manager
Phone: 815/987-7760 Fax: 815/987-7005

Region 2 - DESPLAINES
Jay Patel, Manager
Phone: 847/294-4000 Fax: 847/294-4058

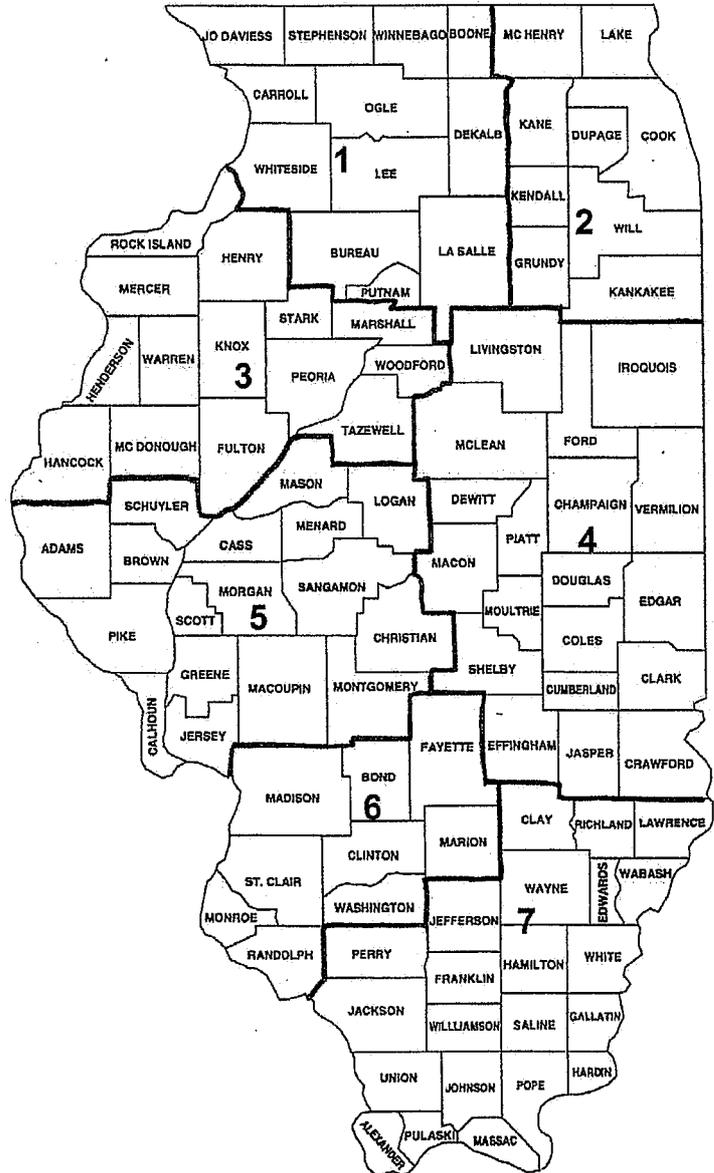
Region 3 - PEORIA
Jim Kammuller, Manager
Phone: 309/693-5463 Fax: 309/693-5467

Region 4 - CHAMPAIGN
Joe Koronkowski, Manager
Phone: 217/278-5800 Fax: 217/278-5808

Region 5 - SPRINGFIELD
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 6 - COLLINSVILLE
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 7 - MARION
Byron Marks, Manager
Phone: 618/993-7200 Fax: 618/997-5467



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

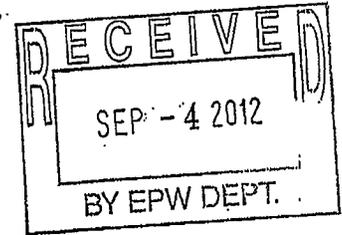
1021 North Grand Avenue, East; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: SCHAUMBURG (Cook County-0314890)



Permit Issued to:
Village President and Board of Trustees
714 S. Plu Grove Road
Schaumburg, IL 60193

PERMIT NUMBER: 0013-FY2013

DATE ISSUED: August 29, 2012

PERMIT TYPE: Water Main

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated, and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the "Environmental Protection Act", Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM: Village of Schaumburg
NUMBER OF PLAN SHEETS: 6
TITLE OF PLANS: "Walnut Lane Roadway Improvements **SR**"

PROPOSED IMPROVEMENTS:

Install 214 lineal feet of 6-inch water main, 286 lineal feet of 8-inch water main, and 2,295 lineal feet of 10-inch water main

ADDITIONAL CONDITIONS:

1. All water mains shall be satisfactorily disinfected prior to use. In accordance with the requirements of AWWA C651-99, at least one set of samples shall be collected from every 1,200 feet of new water main, plus one set from the end of the line and at least one set from each branch. Satisfactory disinfection shall be demonstrated in accordance with the requirements of 35 Ill. Adm. Code 652.203.
2. There are no further conditions to this permit.

DCC:ECA: dsa

cc: Village of Schaumburg
Elgin Region
Cook County Health Department

A handwritten signature in cursive script that reads "D. Cook".

David C. Cook, P.E.
Acting Manager Permit Section
Division of Public Water Supplies



Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Public Water Supplies, Permit Section Application for Operating Permit

This form may be completed online, a copy saved locally and printed before it is signed. You may also complete a printed copy manually. Submit the completed and signed form to the Illinois EPA, Bureau of Water, Permit Section at the address listed above.

Facility Name: SCHAUMBURG Facility ID: IL 0314890
 Address 1: Village President and Board of Trustees Construction Permit No.: 0013 -FY 2013
 Address 2: 714 S. Plum Grove Road Permit Type: Water Main
 City: Schaumburg State: IL Zip Code: 60193 Date Permit Issued: August 29, 2012
 County: Cook

Project Title: Walnut Lane Roadway Improvements **SR**
 Firm Name: Village of Schaumburg

Application Requirements (check when complete):

- Project Status: (Check One) Final Permit Number, Facility Number, and Facility Name identified on the Lab Report(s).
 Partial Samples analyzed by the Membrane Filter technique.
 Sample results attached to the Application. (If a new well was constructed, provide a copy of the sample results as required by Section II, Part g of the C-I application).
Partial A, B, C, etc.

If you select Partial, you must also submit the following items:

- Cover letter describing which sections were completed.
 General project layout plans.
 For water main projects, identify the length the Partial: _____ LF

Date of Project Completion: _____ (Provide the date construction was completed on the project or partial)

Certified Operator in Responsible Charge:

Name: _____ Classification: _____ Number: _____
 Telephone: _____

Owner of the Completed Project:

Name: _____ Title: _____ Telephone: _____
 Address: _____ City: _____ State: _____ Zip Code: _____

Owner/Authorized Personnel Signature

Date

The Owner hereby certifies that the project named and described has been constructed in accordance with plans and specifications approved by the Illinois EPA. See instructions for further information. For Verbal Approvals, please call 217-782-4697.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

***** FOR IEPA USE ONLY *****

This operating permit 0013 -FY 2013 issued on _____ is valid until revoked. This permit is valid only for the work completed under the Construction Permit of the same number.

Instructions for Operating Permit Application

The Operating Permit Application must be submitted for all Public Water Supply projects that required a construction permit. The Operating Permit *must* be obtained before the project is placed in service.

Fill out the top section using the corresponding Construction Permit for reference.

Facility Name is the name of the village, city or entity distributing community water supplies.

Facility ID Number can be found on the Construction Permit. This number is specific to your facility.

Address is the same as the address on the Construction Permit.

Construction Permit Number is the assigned permit number of the corresponding Construction Permit. The Operating Permit and the corresponding Construction Permit will have the same permit number.

Permit Type identifies whether the project involved is a Water Main, a Plant Improvement or Both.

Date Permit Issued is the date the Construction Permit was granted.

Date of Project Completion is the date construction was completed for the section of project you are requesting the Operating Permit for. If you are requesting an Operating Permit for a Partial project, the Date of Project Completion is the date construction was completed on that partial section. The Date of Project Completion will never be a date in the future, and must be a date *after* the issue date of the Construction Permit.

Title of Project is the same title of project listed on the corresponding Construction Permit. The Operating Permit and the Construction Permit will have the same Title of Project.

Firm Name is the engineering entity that designed the project.

Project Status will either be Final or Partial.

Final: If construction on the project is complete, you will select **Final**.

Partial: If construction on the total project is only *partially* complete, but you want to operate the completed section, you will select **Partial**. If this is the first partial, you will identify it as "Partial A", if this is the second partial, you will identify it as "Partial B" and so forth. Once the last partial section has been completed, identify it as such and also select Final in the Project Status.

The **Certified Operator in Responsible Charge** and **Owner of the Completed Project** should fill out his/her respective section. Please print your name legibly and sign where appropriate. By signing the application, the owner hereby certifies that the project named and described has been constructed in accordance with plans and specifications approved by the Illinois EPA, including specifications for bacteriological samples, and that bacteriological samples (if required) were taken under the supervision of a representative from the Public Water Supply. The owner also certifies that the project will be operated in accordance with the provisions of the Illinois Environmental Protection Act and the Rules and Regulations adopted by the Illinois Pollution Control Board pursuant to provisions of the Act.

Requests for **Verbal Approval** and questions can be addressed at (217) 782-4697 or (217) 782-1020/9470.

Disinfection and bacteriological analysis must be performed for the completed project in accordance with the requirements of AWWA C651 or C53-03. For projects requiring these procedures, the sample results must be attached to the application. The construction permit number should be clearly visible on the sample results. Samples are to be taken every 1,200 feet of new water main unless otherwise approved by the Illinois EPA. Samples must be measured using the Membrane Filter technique, Colilert/ Colisure will not be accepted for new construction projects.

This form may be completed online, a copy saved locally and printed before it is signed. You may also complete a printed copy manually. Print this form on yellow paper if possible, and submit the completed form to the Illinois EPA, Bureau of Water, Permit Section at the following address:

Illinois Environmental Protection Agency
Division of Public Water Supplies, Permit Section #13
1021 North Grand Avenue East, PO Box 19276
Springfield, IL 62794-9276

**STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

The Illinois Environmental Protection Agency Act (Illinois Compiled Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Divisions of Water Pollution Control, Air Pollution Control, Public Water Supplies, and Land and Noise Pollution Control. Special conditions may also be imposed by the separate divisions in addition to these standard conditions.

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year after this date of issuance unless construction or development on this project has started on or prior to that date. (See below).
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentation of credentials:
 - a. to enter at reasonable times the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit.
 - b. to have access to and copy at reasonable times any records required be kept under the terms and conditions of this permit.
 - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit.
 - d. to obtain and remove at reasonable times samples of any discharges or emission of pollutants.
 - e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the permits upon which the permitted facilities are to be located;
 - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
 - c. does not release the permittee from compliance with the other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
 - e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability directly or indirectly for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. These standard conditions shall prevail unless modified by special conditions.
7. The Agency may file a complaint with Board of modification, suspension or revocation of a permit:
 - a. upon discovery that the permit application misrepresentation or false statements or that all relevant facts were not disclosed; or
 - b. upon finding that any standard or special conditions have been violated; or
 - c. upon any violation of the Environmental Protection Act or any Rule or Regulation effective thereunder as a result of the construction or development authorized by this permit.

For Division of Public Water Supply Construction Permits, construction on this project, once started, may continue for four years before this permit expires. A request for extension shall be filed at least 90 days prior to the permit expiration date.



www.msetinc.com

MIDLAND STANDARD ENGINEERING & TESTING, INC.

558 Plate Drive, Unit 6 East Dundee, Illinois 60118
(847) 844-1895 (847) 844-3875

December 30, 2011

Mr. David J. Kreeger, P.E.
Civiltech Engineering, Inc.
450 E. Devon Avenue
Suite 300
Itasca, Illinois 60143

Re: Geotechnical Exploration and Analysis
Walnut Lane – Bode Road to Golf Road
Schaumburg, Illinois
MSET File No. 11445

Dear Mr. Kreeger:

We have completed field exploration work and analysis of the subgrade conditions for the roadway rehabilitation project, referenced above. The report was prepared for use in the preparation of the project design plans.

Purpose

The purpose of this exploration was to determine the subgrade conditions along the alignment proposed for resurfacing or reconstruction. Using this information along with the project data provided, design criteria and recommendations have been prepared for use by the Design Engineers in preparing the plans and specifications.

Scope

The scope of this exploration and analysis included review of available information from previous work conducted in the area, field and laboratory testing, analysis of the data obtained, formulation of our recommendations and preparation of this report. The field exploration included making eight (8) soil borings and four (4) pavement cores along the Walnut Lane alignment between Bode Road and Golf Road.

The report was prepared by interpreting data from the test borings and field tests made along the proposed improvements and from laboratory tests on the subsoil samples taken from there. The report gives a representative, but not exhaustive, picture of the project soil make-up. The soil engineer warrants findings, recommendations, specifications, and/or professional advice to have been promulgated with generally accepted professional engineering practices in the fields of foundation engineering, soil mechanics, and engineering geology.

Referenced Documents

The soils exploration and survey was performed in accordance with the State of Illinois, 'Geotechnical Manual' dated January 1, 1999.

PROJECT EXPLORATION AND DESCRIPTION

Project Location

The program includes the Walnut Lane alignment between Bode Road and Golf Road. The alignment is located in Cook County, Schaumburg Township, Section 17, T41N, R10E, in the Village of Schaumburg, Illinois. Refer to the Project Vicinity Map, for the overall view of the project.

Project Description

Walnut Lane is currently a two-lane urban residential roadway with curb and gutter and storm sewer improvements running in a north-south direction. The estimated length of the project is approximately 2,431 feet between Bode Road and Golf Road. Proposed improvements of the roadway are anticipated to include either milling and resurfacing of the roadway or reconstruction.

Climatological Data

The fieldwork for the soil survey was accomplished in the final week of November 2011. The table listed below lists the actual precipitation as measured at O'Hare International Airport by NOAA prior to the time of our fieldwork.

<u>Month</u>	<u>Actual Precipitation</u>	<u>Departure From Normal</u>
May 2011	7.27"	+3.89"
June 2011	3.39"	-0.24"
July 2011	11.15"	+7.64"
August 2011	4.54"	-0.36"
September 2011	3.45"	+0.24"
October 2011	1.98"	-1.17"

In the six months prior to the work being completed, the actual precipitation was 10.0 inches above normal. The ground water levels recorded during our field observations are considered elevated, when compared to normal.

Site Geology

Geologically the project lies primarily within the Valparaiso Moranic System (undifferentiated), part of the Haeger Member of the Wedron Formation, composed of silty, sandy or gravelly till with local areas of silty clayey till and lenses of poorly sorted gravel and small kames.

Soil Conservation Survey

The available surficial soils mapping for the project area indicate that the Orthents, clayey, undulating (805B) is the predominant natural soil type encountered along the proposed alignment. To a lesser extent, the Markham Silt Loam (531B, 531C2) is located at the south end of the alignment and the Peotone Silty Clay Loam (330A) and the Muskego and Houghton Mucks (903A) are located along the north end of the alignment.

FIELD EXPLORATION

General

The procedures for this exploration were conducted in general accordance with the appropriate Illinois Department of Transportation Standards. The borings were supervised by a field engineer from Midland Standard Engineering & Testing, Inc. The soil specimens obtained were transported to our laboratory for testing and analysis. Our project engineer has directed all phases of this investigation.

Pavement Sampling Procedures

Pavement cores were made with a 4-inch diameter core barrel/electric drill setup to sample all pavement components. A sample of the subgrade soil was obtained with hand auguring equipment.

Soil Drilling and Sampling Procedures

The soil borings were performed with a truck mounted drill rig equipped with a rotary head. Continuous flight augers were used to advance the boreholes. Representative samples of the profile soils were obtained by use of split-spoon sampling methods in accordance with ASTM procedure D 1586.

During the split-spoon sampling procedures, a standard penetration test was performed in accordance with current ASTM D 1586 procedures. At sampling intervals, advancement of the boring was stopped and all loose material was removed from the borehole. The sampler was then lowered into the borehole and was seated in undisturbed soil by pushing or tapping, taking suitable precautions that the rods were reasonably tight. The sampling spoon was then advanced by driving with an automatic drop hammer. During the sampling procedure, the standard penetration value (N) of the soil was determined. The standard penetration value (N) is defined as the number of blows of a one hundred forty pound (140 lb) hammer required to advance the spoon sampler one foot (12") into the soil.

The results of the standard penetration tests indicate the relative density and comparative consistency of the soils and thereby provide a basis for estimating the relative strength and compressibility of the soil profile components. The results of the standard penetration tests can be found on the boring logs in the Appendix of this report.

Strength Tests

A calibrated hand penetrometer was used in the field to aid in determining the strength and consistency of cohesive soil samples (Q_p) in the field. Split-spoon samples were subjected to unconfined compressive strength testing (Q_u) by the RIMAC Method as modified by IDOT. Consideration must be given to the manner in which the values of the unconfined compressive strength were obtained. Split-spoon sampling techniques provide a representative, but somewhat disturbed soil sample.

Water Level Measurements

Water level observations were made during and immediately after the boring operations and are noted on the boring logs. In relatively pervious, sandy soils, the water level elevations would be considered reliable. In relatively impervious, clayey soils, the accurate determination of the groundwater elevation may not be possible, even after several days of observation. Seasonal variations, temperature and recent rainfall conditions may influence the levels of the groundwater table, and volumes of water will depend on the permeability of the soils.

LABORATORY TESTING

Scope

A supplemental testing program was conducted to ascertain additional pertinent engineering characteristics of the subgrade and foundation materials. The soils laboratory work was performed in accordance with applicable ASTM and IDOT standards. The laboratory-testing program included visual classification; moisture content determination for each sample obtained, and unconfined compression testing for applicable samples. Representative samples of the various soil strata encountered were subjected to Atterberg Limit Tests and Grain Size Analysis. Representative samples of the main subgrade soils were subjected to moisture density relationship (Standard Proctor) testing and an Illinois Bearing Ratio test. The results of testing are presented on the Soil Test Data Sheet and individual laboratory data sheets provided in the Appendix to this report.

The soils encountered in the borings have been classified using both the IDOT Textural Classification System, and the AASHTO Engineering Soil Classification System (AASHTO, M-145).

SUBSURFACE CONDITIONS

Pavement Conditions

Pavement materials encountered along the alignment were generally comprised of 6-1/4" to 8-1/2" Bituminous Concrete over 4-1/2" to 13-3/4" of Granular Base Course Material. A total pavement cross section of 13" to 20" was encountered along the alignment.

The bituminous concrete was comprised of a 1-1/4" to 1-1/2" Bituminous Surface wearing course. Beneath the top surface layer, crack control fabric was encountered. Beneath the crack control fabric, additional surface layers were noted and another layer of crack control fabric was encountered at 3-1/4" to 3-1/2" below the existing ground surface. Below the second layer of crack control fabric, one to two additional Bituminous Surface layers and one lift of Bituminous Binder was encountered.

Granular Base Course comprised of light brown to grey Crushed Limestone, CA-6 and brown Crushed Sand and Gravel were encountered below the bituminous concrete. The granular base course materials were determined to have likely been a Pozzolanic Stabilized Base Course. A structural number (Sn) for the pavement cross-section was estimated at 1.48 to 2.75.

Details of materials encountered and laboratory test results are presented on the appended Pavement Core Logs.

Subgrade Conditions

Materials encountered at subgrade elevation were comprised of brown and grey to dark grey CLAY, A-7-6: FILL and brown and grey CLAY, A-6. The fill materials were very stiff in consistency with unconfined compressive strengths (Qu) of 2.72 to 3.49 tsf and moisture contents between 11 to 24 percent. The naturally occurring CLAY subgrade soils were hard in consistency with unconfined compressive strengths (Qu) of 4.07 to 6.21 tsf and moisture contents between 16 to 18 percent.

Subsurface Conditions

Brown and grey to grey CLAY, A-6 was encountered beneath the subgrade soils. The CLAY was very stiff to hard in consistency with unconfined compressive strengths (Qu) between 2.13 and 4.66 tsf and moisture contents of 12 to 28 percent.

At boring B-1, very stiff brown Silty LOAM, A-6 was encountered between the natural clay soils to an elevation of 837.6. At boring B-7, a layer of slightly dense brown Gravelly LOAM, A-2-4 was encountered between the clay layers to an elevation of 791.0. At boring B-8, fill materials were encountered to an elevation of 783.7. Below the fill materials, dark grey Sandy LOAM, A-2 to A-4 was encountered for the remainder of the boring.

Details of materials encountered and laboratory test results are presented on the Boring Logs and Soil Profile Drawing appended to this report.

Groundwater Conditions

Groundwater measurements were made during and immediately after the drilling operations. Water was encountered at boring B-2 at a depth of 1.5' below the existing ground surface elevation. The encountered water was determined to be due to a saturated base course and the borehole was dry after drilling was complete. Groundwater was encountered at borings B-7 and B-8 at a depth of 5.5' to 6.9' below existing ground surface elevation. Groundwater was not encountered at the remaining boreholes.

Details of the groundwater measurements are presented on the appended boring logs.

RESURFACING RECOMMENDATIONS

Roadway Rehabilitation

The pavement section encountered consisted of 6-1/4" to 8-1/2" of bituminous concrete over Pozzolanic Stabilized Granular Base Course. Two lifts of crack control fabric were encountered in the pavement section, indicating multiple overlays to the alignment. Additionally, historical aerial photographs of the area show a developed crack pattern, likely reflective cracking of the stabilized base course. A rehabilitation program of milling the existing surface and overlaying with a new surface course is not suggested.

RECONSTRUCTION RECOMMENDATIONS

Design Parameter Recommendations

Soils encountered as the predominant subgrade materials were evaluated to determine the Subgrade Support Rating (SSR) and to estimate the bearing ratio for full depth Bituminous and Rigid Pavement Design. In addition, a sample of predominant subgrade soil was sampled and subjected to testing and analysis. The following table summarizes the subgrade design parameters for the project:

<u>Test Location</u>	<u>Soil Type</u>	<u>SSR</u>	<u>IBR</u>
STA. 102+00 (B-1)	A-6(16)	FAIR	--
STA. 111+00 (B-4)	A-7-6(19)	FAIR	3.0

In general, soils encountered as the predominant subgrade materials are considered to have a Subgrade Support Rating (SSR) of 'FAIR'. An Illinois Bearing Ratio (IBR) test was performed on a sample from borings B-4 at a depth of 3.0 to 5.0 feet. An IBR value of 3.0 would be considered appropriate for pavement design.

Susceptibility of Subgrade Soils

The susceptibility of the subgrade soils to excessive frost action has been reviewed. The fine sand and silt content (52% to 58%) and plasticity index (19 to 27) of the subgrade soils are not considered susceptible to frost. Additionally, the lack of groundwater within the depth of frost penetration further indicates that the subgrade conditions are not considered frost susceptible.

Remedial Treatment Areas

All undercuts must be verified by cone penetrometer tests on the subgrade during construction in accordance with the guidelines in the Illinois Department of Transportation "Subgrade Stability Manual." Areas that were identified by the borings as needing additional treatment are summarized on the following tabulation:

Summary of Earthwork Remedial Treatment

<u>Location</u>	<u>Material Description</u>	<u>Depth¹</u>	<u>Treatment Width</u>	<u>Replacement Material²</u>
Walnut Lane STA. 101+16 to STA. 103+50 (B-1)	Brown CLAY, A-6(16) Mc=18%, Qu=4.07 tsf		No Treatment Indicated	
STA. 103+50 to STA. 106+50 (B-2)	Dark Grey and Olive-Grey CLAY, A-7-6: FILL Mc=21%, Qu=3.49 tsf		No Treatment Indicated	

<u>Location</u>	<u>Material Description</u>	<u>Depth¹</u>	<u>Treatment Width</u>	<u>Replacement Material²</u>
Walnut Lane (cont.)				
STA. 106+50 to STA. 109+50 (B-3)	Brown Silty Clay LOAM, A-6: FILL Mc=17%, Qu=2.72 tsf		No Treatment Indicated	
STA. 109+50 to STA. 112+50 (B-4)	Brown and Dark Grey CLAY, A-7-6(19): FILL Mc=24%, Qp=3.0 tsf		No Treatment Indicated	
STA. 112+50 to STA. 115+50 (B-5)	Brown and Grey CLAY, A-6 Mc=16%, Qu=6.21 tsf		No Treatment Indicated	
STA. 115+50 to STA. 118+50 (B-6)	Brown and Grey CLAY, A-7-6: FILL Mc=18%, Qp=4.0 tsf		No Treatment Indicated	
STA. 118+50 to STA. 121+50 (B-7)	Brown CLAY, A-6 Mc=18%, Qp=4.5 tsf		No Treatment Indicated	
STA. 121+50 to STA. 125+67 (B-8)	Brown and Grey CLAY, A-6: FILL Mc=16%, Qp=4.5 tsf		No Treatment Indicated	

1: Undercut unstable or low strength soil and replace with an additional Aggregate Subgrade. Undercuts refer to additional treatment beyond an assumed mandatory treatment of 12" Aggregate Subgrade. All subgrade treatments or non-treatments are based on soil strength measured during the geotechnical investigation. Exposed subgrade that receives repeated construction traffic and/or exposure to adverse weather conditions may become unstable, and then require additional treatment. During construction, every effort should be made to maintain the integrity of the pavement subgrade. The full aggregate subgrade section should be in place prior to construction traffic exposure.

2: Replacement Materials or Treatment:
Embankment Materials and placement in accordance with Sections 205, 207 and Reoccurring Special Provision
EMB – Embankment (205)
PGES – Porous Granular Embankment Subgrade / Aggregate Subgrade

Subgrade Treatment Plan Notes

Porous Granular Embankment Subgrade (PGES) or Embankment (EMB) should be specified for use at the locations indicated for soils that tend to be unsuitable or unstable or where additional fill is needed. The actual need for removal and replacement with PGES will be determined in the field at the time of construction by the geotechnical engineer. All potentially unstable soils should be tested with a static cone penetrometer and treated in accordance with Article 301.04 and the undercut guidelines in the IDOT Subgrade Stability Manual. If unstable and/or unsuitable material is not encountered, then the quantity shall be deducted and no additional compensation will be due to the contractor.

GENERAL CONSTRUCTION REQUIREMENTS

Ground and Surface Water Control

The contractor should protect all subgrade and excavations from surface water accumulation by sloping grade, providing temporary ditch lines and pumping when necessary.

Excavation and Trench Support

Soil and groundwater conditions are such that open cut excavations will likely stand vertical for a period of time. However, some excavations may require sloping back or bracing of the sidewalls. Please note that OSHA and local codes require the use of shoring and bracing in the excavations during utility installation, the contractor shall be well versed in these requirements.

Storm Sewer

A storm sewer system may be used on this project. Unsuitable or unstable materials, if exposed at design invert elevation, should be undercut and replaced with select granular material, such as PGES or CA-01. All utility backfill procedures should be handled as described in Utility Trench Backfill given below.

Utility Trench Backfill

The trenches for all sewer and water pipes should be backfilled in accordance with the requirements of the project specifications. First, the pipes should be bedded in the specified bedding material. All trenches within the pavement areas or supporting adjacent pavement or sidewalks should be backfilled and mechanically compacted to a minimum 95% of the maximum dry density as defined by ASTM D-698.

The use of granular trench backfill, meeting IDOT gradation requirements of FA-02, FA-06, or CA-06 should be used to backfill trenches. Trench backfill should be compacted using an approved IDOT method outlined in the standard specifications.

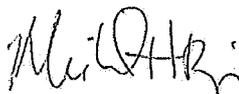
Protection of Adjacent Utilities and Roadways

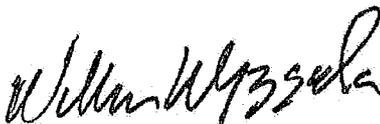
Excavations extending below any existing utility components and the adjacent roadway may cause future settlement problems if not protected. Procedures for the protection of any existing utilities and roadway should be reviewed and presented to the supervising engineer, prior to the start of work.

Closure

Thank you for the opportunity to be of continuing service. Please contact us if you have any questions regarding the information contained in this report.

Very truly yours,
MIDLAND STANDARD ENGINEERING & TESTING, INC.


Michael H. Prigge, E.I.T.
Staff Engineer


William J. Wyzgala, P.E.
Principal

Appendix

APPENDIX

Summary of Geotechnical Data

Project Vicinity Map

USDA Surficial Soil Map

Boring / Core Location Diagram

Pavement Core Logs

(C-1 through C-4)

Boring Logs

(B-1 through B-8)

Soil Test Data Form – BBS 2640

Subgrade Support Rating Diagram

Laboratory Test Data

Summary Report on Pavement, Base, and Sub-Base Design – BBS 2630

General Notes

Soil Profiles



MSET

www.msetinc.com

MIDLAND STANDARD ENGINEERING & TESTING, INC.

558 Plate Drive, Unit 6 East Dundee, Illinois 60118
 (847) 844-1895 f(847) 844-3875

SUMMARY OF GEOTECHNICAL DATA

PROJECT INFORMATION:

Project:	Walnut Lane (Bode Road to Golf Road)
Route:	FAU Route 2556
Section:	08-00094-00-PV
County:	Cook
Location:	Schaumburg, IL

SITE SUMMARY:

Item	Data	Reference Page
Alignment	Walnut Avenue	1,2
Type of Alignment	Two Lane Residential (Urban)	2
Anticipated Work	Reconstruction	2,5
Project Length	2,431 feet	2
Existing Pavement Section	6-1/4" to 8-1/2" Bituminous Concrete over 4-1/2" to 13-3/4" Pozzolanic Stabilized Base Course	4

DESIGN CONSIDERATIONS:

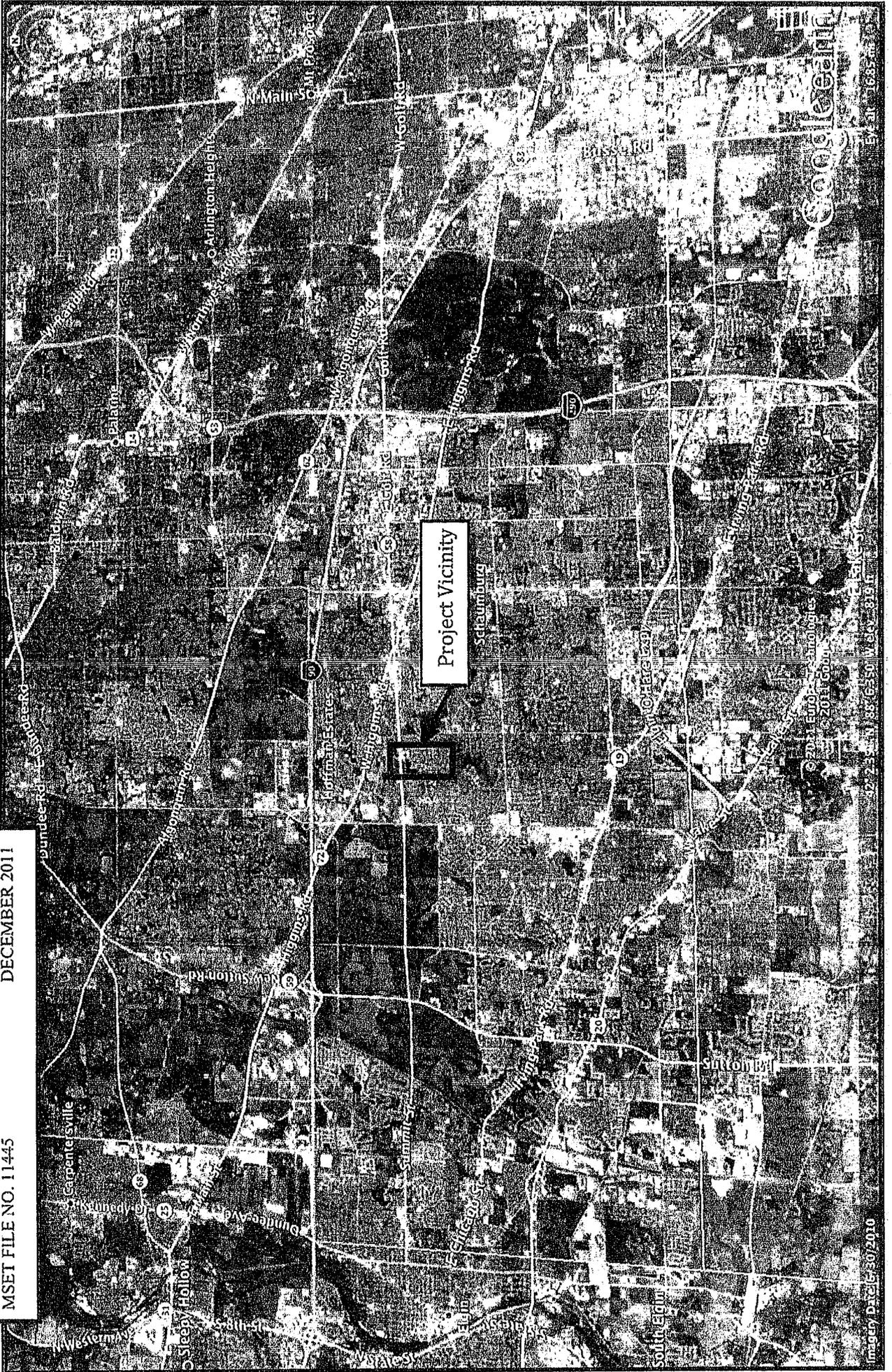
Item	Data	Reference Page
Rainfall Departure from Normal (6 months)	+10.0 inches	2
Fine Sand and Silt Content	52 to 58 percent	5
Plasticity Index	19 to 27	5
Subgrade Support Rating	FAIR	5
IBR	3.0	5

PROJECT VICINITY MAP

MIDLAND STANDARD ENGINEERING & TESTING, INC.
WALNUT LANE (BODE ROAD TO GOLF ROAD)
SCHAUMBURG, IL

MSET FILE NO. 11445

DECEMBER 2011



MAP LEGEND

	Area of Interest (AOI)		Very Stony Spot
	Soils		Wet Spot
	Soil Map Units		Other
	Special Point Features	Special Line Features	
	Blowout		Gully
	Borrow Pit		Short Steep Slope
	Clay Spot		Other
	Closed Depression	Political Features	
	Gravel Pit		Cities
	Gravelly Spot	Water Features	
	Landfill		Streams and Canals
	Lava Flow	Transportation	
	Marsh or swamp		Rails
	Mine or Quarry		Interstate Highways
	Miscellaneous Water		US Routes
	Perennial Water		Major Roads
	Rock Outcrop		Local Roads
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		
	Spoil Area		
	Stony Spot		

MAP INFORMATION

Map Scale: 1:4,460 if printed on A size (8.5" x 11") sheet.
The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cook County, Illinois
Survey Area Data: Version 6, Nov 2, 2011

Date(s) aerial images were photographed: 7/7/2007; 7/21/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cook County, Illinois (IL031)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
146B	Elliott silt loam, 2 to 4 percent slopes	0.4	0.7%
330A	Peotone silty clay loam, 0 to 2 percent slopes	1.9	3.3%
530D2	Ozaukee silt loam, 6 to 12 percent slopes, eroded	1.5	2.6%
531B	Markham silt loam, 2 to 4 percent slopes	1.3	2.2%
531C2	Markham silt loam, 4 to 6 percent slopes, eroded	0.8	1.4%
805B	Orthents, clayey, undulating	40.2	68.7%
903A	Muskego and Houghton mucks, 0 to 2 percent slopes	9.5	16.2%
W	Water	2.9	5.0%
Totals for Area of Interest		58.6	100.0%

Cook County, Illinois

805B—Orthents, clayey, undulating

Map Unit Setting

Elevation: 510 to 930 feet

Mean annual precipitation: 28 to 40 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 140 to 180 days

Map Unit Composition

Orthents, clayey, undulating, and similar soils: 91 percent

Description of Orthents, Clayey, Undulating

Setting

Landform: Ground moraines, lake plains

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Interfluvium

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Earthy fill

Properties and qualities

Slope: 1 to 6 percent

Depth to restrictive feature: 4 to 10 inches to densic material

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low (0.02 to 0.06 in/hr)

Depth to water table: About 24 to 42 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Available water capacity: Very low (about 0.8 inches)

Interpretive groups

Land capability (nonirrigated): 4s

Typical profile

0 to 7 inches: Silty clay

7 to 60 inches: Silty clay

Data Source Information

Soil Survey Area: Cook County, Illinois

Survey Area Data: Version 6, Nov 2, 2011

Cook County, Illinois

531B—Markham silt loam, 2 to 4 percent slopes

Map Unit Setting

Elevation: 540 to 930 feet

Mean annual precipitation: 28 to 40 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 140 to 180 days

Map Unit Composition

Markham and similar soils: 92 percent

Description of Markham

Setting

Landform: Ground moraines, end moraines

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Interfluvium

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Thin mantle of loess or other silty material and in the underlying till

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: 20 to 55 inches to densic material

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 24 to 42 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Available water capacity: Low (about 5.1 inches)

Interpretive groups

Land capability (nonirrigated): 2e

Typical profile

0 to 8 inches: Silt loam

8 to 21 inches: Silty clay loam

21 to 32 inches: Silty clay loam

32 to 60 inches: Silty clay loam

Data Source Information

Soil Survey Area: Cook County, Illinois

Survey Area Data: Version 6, Nov 2, 2011

Cook County, Illinois

330A—Peotone silty clay loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 510 to 930 feet

Mean annual precipitation: 28 to 40 inches

Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 140 to 180 days

Map Unit Composition

Peotone and similar soils: 94 percent

Description of Peotone

Setting

Landform: Ground moraines

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Colluvium

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

*Capacity of the most limiting layer to transmit water
(Ksat):* Moderately high (0.20 to 0.60 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 15 percent

Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability (nonirrigated): 3w

Typical profile

0 to 13 inches: Silty clay loam

13 to 50 inches: Silty clay

50 to 60 inches: Silty clay loam

Data Source Information

Soil Survey Area: Cook County, Illinois

Survey Area Data: Version 6, Nov 2, 2011



Cook County, Illinois

903A—Muskego and Houghton mucks, 0 to 2 percent slopes

Map Unit Setting

Elevation: 510 to 930 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 140 to 180 days

Map Unit Composition

Muskego and similar soils: 60 percent
Houghton and similar soils: 35 percent

Description of Muskego

Setting

Landform: Depressions, ground moraines, outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over coprogenic material

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 60 percent
Available water capacity: Very high (about 19.4 inches)

Interpretive groups

Land capability (nonirrigated): 3w

Typical profile

0 to 5 inches: Muck
5 to 36 inches: Muck
36 to 80 inches: Coprogenous silt loam

Description of Houghton

Setting

Landform: Depressions, ground moraines, outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.20 to 6.00 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Available water capacity: Very high (about 23.9 inches)

Interpretive groups

Land capability (nonirrigated): 3w

Typical profile

0 to 19 inches: Muck

19 to 60 inches: Muck

Data Source Information

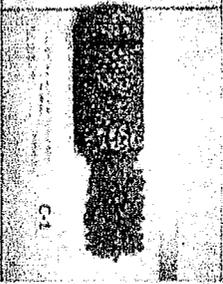
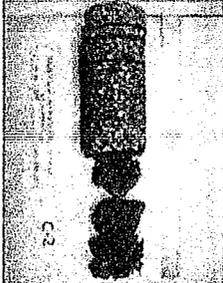
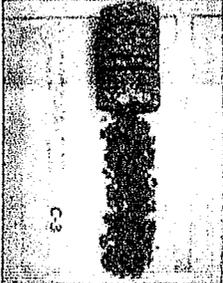
Soil Survey Area: Cook County, Illinois

Survey Area Data: Version 6, Nov 2, 2011

BORING / CORE LOCATION DIAGRAM
MIDLAND STANDARD ENGINEERING & TESTING, INC.
WALNUT LANE (BODE ROAD TO GOLF ROAD)
SCHAUMBURG, IL
IMSET FILE NO. 11445
DECEMBER 2011



PAVEMENT CORE MEASUREMENT LOG
WALNUT LANE
SCHAUMBURG, ILLINOIS

Core No. C-1								
Material	Depth (In.)		Thickness (In.)	Remarks/Condition				
Location	Walnut Lane STA. 103+50, 8' L of CL						coeff	sn
Bituminous Surface	0	to 1- 1/4	1- 1/4	Fair			0.30	0.38
Crack Control Fabric							0.00	0.00
Bituminous Surface	1- 1/4	to 2- 1/4	1	Fair			0.23	0.23
Bituminous Surface	2- 1/4	to 3- 1/2	1- 1/4	Fair			0.23	0.29
Crack Control Fabric							0.00	0.00
Bituminous Surface	3- 1/2	to 4- 3/4	1- 1/4	Fair			0.23	0.29
Bituminous Surface	4- 3/4	to 6	1- 1/4	Fair			0.23	0.29
Bituminous Binder	6	to 8	2	Fair			0.20	0.40
Granular Base Course	8	to 16	8	Pozzolanic Stabilized Crushed Limestone			0.11	<u>0.88</u>
Subgrade	6			Brown CLAY, A-6			<u>2.75</u>	
Core No. C-2							coeff	sn
Location	Walnut Lane STA. 109+50, 15' R of CL						0.30	0.38
Material	Depth (In.)		Thickness (In.)	Remarks/ Condition			0.00	0.00
Bituminous Surface	0	to 1- 1/4	1- 1/4	Fair			0.23	0.17
Crack Control Fabric							0.23	0.29
Bituminous Surface	1- 1/4	to 2	3/4	Fair			0.00	0.00
Bituminous Surface	2	to 3- 1/4	1- 1/4	Fair			0.23	0.40
Crack Control Fabric							0.23	0.35
Bituminous Surface	3- 1/4	to 5	1- 3/4	Fair			0.20	0.40
Bituminous Surface	5	to 6- 1/2	1- 1/2	Fair			0.11	<u>0.50</u>
Bituminous Binder	6- 1/2	to 8- 1/2	2	Fair			<u>2.48</u>	
Granular Base Course	8- 1/2	to 13	4- 1/2	Pozzolanic Stabilized Crushed Limestone				
Subgrade	13			Brown CLAY, A-6				
Core No. C-3							coeff	sn
Location	Walnut Lane STA. 115+50, 15' L of CL						0.30	0.45
Material	Depth (In.)		Thickness (In.)	Remarks/ Condition			0.00	0.00
Bituminous Surface	0	to 1- 1/2	1- 1/2	Fair			0.23	0.12
Crack Control Fabric							0.23	0.29
Bituminous Surface	1- 1/2	to 2	1/2	Fair			0.00	0.00
Bituminous Surface	2	to 3- 1/4	1- 1/4	Fair			0.23	0.17
Crack Control Fabric			0				0.20	<u>0.45</u>
Bituminous Surface	3- 1/4	to 4	3/4	Fair				<u>1.48</u>
Bituminous Binder	4	to 6- 1/4	2- 1/4	Fair				
Granular Base Course	6- 1/4	to 20	13- 3/4	Pozzolanic Stabilized Crushed Limestone				
				Refusal @ 20"				

PAVEMENT CORE MEASUREMENT LOG
 WALNUT LANE
 SCHAUMBURG, ILLINOIS

Core No. C-4

Location Walnut Lane STA. 121+50, 8' R

Material	Depth (in.)		Thickness (in.)	Remarks/ Condition
Bituminous Surface	0	to 1- 1/4	1- 1/4	Fair
Crack Control Fabric				
Bituminous Surface	1- 1/4	to 2	3/4	Fair
Bituminous Surface	2	to 3- 1/4	1- 1/4	Fair
Crack Control Fabric				
Bituminous Surface	3- 1/4	to 4	3/4	Fair
Bituminous Binder	4	to 6- 1/2	2- 1/2	Fair
Granular Base Course	6- 1/2	to 46	39- 1/2	Pozzolanic Stabilized Crushed Gravel



coeff	sn
0.30	0.38
0.00	0.00
0.23	0.17
0.23	0.29
0.00	0.00
0.23	0.17
0.20	0.50
1.51	

PROJECT: Walnut Lane (Bode Road to Golf Road) SITE LOCATION: Schaumburg, IL
 BORING LOCATION: STA. 102+00, 8' R of CL CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS			REMARKS
				TYPE/INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	Unconfined Compressive Strength, tsf	
0		Pavement: 7" Bituminous Concrete over 6" Brown Crushed Limestone (Pozzolanic Base Course)	845.6							
		Brown CLAY, A-6(16), hard	844.5	SS	1	10	18	105	4.07	
2.5		Brown Silt LOAM, A-6, very stiff	842.6	SS	2	9	17	--	3.0 (p)	
5										
7.5		Brown CLAY, A-6, very stiff	837.6	SS	3	7	24	102	2.72	
10		End of Boring @ 10'	835.6	SS	4	13	21	99	3.10	

WATER LEVEL OBSERVATIONS, ft.
 DURING DRILLING:  none
 IMMEDIATELY AFTER DRILLING:  dry
 DELAYED READING AFTER 



BORING STARTED: 11/29/11
 BORING COMPLETED: 11/29/11
 LOGGED BY: SPE
 BORING METHOD: CFA

PROJECT: Walnut Lane (Bode Road to Golf Road)

SITE LOCATION: Schaumburg, IL

BORING LOCATION: STA. 105+00, 15' L

CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS			REMARKS
				TYPE/ INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	Unconfined Compressive Strength, tsf	
0		Pavement: 8-1/2" Bituminous Concrete over 7-1/2" Brown Crushed Limestone (Pozzolanic Base Course)	835.4							Water encountered from Base Course
2.5		Dark Grey and Dark Grey and Olive-Grey CLAY, A-7-6: FILL, very stiff	834.1	SS	1	7	21	92	3.49	
		Brown and Grey CLAY, A-6, very stiff	832.4	SS	2	7	28	92	2.13	
5		to Silty Clay LOAM		SS	3	10	16	107	2.91	
7.5		Grey CLAY, A-6, very stiff	827.4	SS	4	14	16	114	3.30	
10		End of Boring @ 10'	825.4							

WATER LEVEL OBSERVATIONS, ft.

DURING DRILLING:  1.5'
 IMMEDIATELY AFTER DRILLING:  dry
 DELAYED READING AFTER 



BORING STARTED: 11/29/11
 BORING COMPLETED: 11/29/11
 LOGGED BY: SPE
 BORING METHOD: CFA

PROJECT: Walnut Lane (Bode Road to Golf Road)

SITE LOCATION: Schaumburg, IL

BORING LOCATION: STA. 108+00, 15' R of CL

CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS			REMARKS
				TYPE/ INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	Unconfined Compressive Strength, tsf	
0		Pavement: 9-1/2" Bituminous Concrete over 5-1/2" Brown Crushed Limestone (Pozzolanic Base Course)	832.3							
2.5		Brown Silty Clay LOAM, A-6: FILL, very stiff to hard	831.0	SS	1	7	17	113	2.72	
				SS	2A	--	15	118	5.56	
5		Grey CLAY, A-6, very stiff to stiff	827.8	SS	2B	9	15	116	2.52	
7.5				SS	3	10	16	112	1.75	
		to very stiff								
10		End of Boring @ 10'	822.3	SS	4	8	19	104	2.52	

WATER LEVEL OBSERVATIONS, ft.

DURING DRILLING:  none
 IMMEDIATELY AFTER DRILLING:  dry
 DELAYED READING AFTER 



BORING STARTED: 11/29/11

BORING COMPLETED: 11/29/11

LOGGED BY: SPE

BORING METHOD: CFA

PROJECT: Walnut Lane (Bode Road to Golf Road)

SITE LOCATION: Schaumburg, IL

BORING LOCATION: STA. 111+00, 8' L of CL

CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS			REMARKS
				TYPE/ INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	Unconfined Compressive Strength, tsf	
0	[Solid Black]	Pavement: 6" Bituminous Concrete over 30" Brown Sand and Gravel (Pozzolanic Base Course)	821.7							
2.5			SS	1	40	3	--	--		
	[Cross-hatch]	Brown and Dark Grey CLAY, A-7-6(19): FILL, very stiff	818.7							
5			SS	2	11	24	--	3.0 (p)		
	[Diagonal Lines]	Yellow-Brown and Grey CLAY, A-6, very stiff to Brown and Grey, hard	816.2							
7.5			SS	3	9	20	100	3.10		
10		End of Boring @ 10'	811.7	SS	4	8	19	107	4.66	

WATER LEVEL OBSERVATIONS, ft.
 DURING DRILLING:  none
 IMMEDIATELY AFTER DRILLING:  dry
 DELAYED READING AFTER 



BORING STARTED: 11/29/11
 BORING COMPLETED: 11/29/11
 LOGGED BY: SPE
 BORING METHOD: CFA

PROJECT: Walnut Lane (Bode Road to Golf Road) SITE LOCATION: Schaumburg, IL
 BORING LOCATION: STA. 114+00, 8' R of CL CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS			REMARKS
				TYPE/ INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	Unconfined Compressive Strength, tsf	
0		Pavement: 9" Bituminous Concrete over 14" Brown Crushed Limestone (Pozzolanic Base Course)	809.5							
2.5		Brown-Grey CLAY, A-6, hard	807.6	SS	1	10	16	108	6.21	
5		Grey CLAY, A-6, very stiff	806.5							
7.5		few intermittent silt seams		SS	2	15	12	120	3.30	
10		cobbles at 9.5'		SS	3	10	15	--	3.0 (p)	
		End of Boring @ 10'	799.5	SS	4	19	8	--	3.75 (p)	

WATER LEVEL OBSERVATIONS, ft.
 DURING DRILLING: none
 IMMEDIATELY AFTER DRILLING: dry
 DELAYED READING AFTER



BORING STARTED: 11/29/11
 BORING COMPLETED: 11/29/11
 LOGGED BY: SPE
 BORING METHOD: CFA

PROJECT: Walnut Lane (Bode Road to Golf Road)

SITE LOCATION: Schaumburg, IL

BORING LOCATION: STA. 117+00, 15' L of CL

CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS			REMARKS
				TYPE/ INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	Unconfined Compressive Strength, tsf	
0		Pavement: 8-3/4" Bituminous Concrete over 13-1/4" Brown Sand and Gravel (Pozzolanic Base Course)	802.4							
2.5		Brown and Grey CLAY, A-6: FILL, very stiff	800.6	SS	1	18	11	--	4.0 (p)	
				SS	2A	--	12	--	3.5 (p)	
5		Grey CLAY, A-6, hard to very stiff	798.4	SS	2B	9	17	111	4.07	
7.5				SS	3	7	18	107	3.10	
10				SS	4	10	17	112	3.10	
		End of Boring @ 10'	792.4							

WATER LEVEL OBSERVATIONS, ft.

DURING DRILLING:  none
 IMMEDIATELY AFTER DRILLING:  dry
 DELAYED READING AFTER 



BORING STARTED: 11/29/11
 BORING COMPLETED: 11/29/11
 LOGGED BY: SPE
 BORING METHOD: CFA

PROJECT: Walnut Lane (Bode Road to Golf Road)

SITE LOCATION: Schaumburg, IL

BORING LOCATION: STA. 120+00, 15' R of CL

CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS		REMARKS
				TYPE/ INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	
0		Pavement: 6-1/2" Bituminous Concrete over 11" Brown Crushed Limestone (Pozzolanic Base Course)	796.5						
2.5		Brown CLAY, A-6, very stiff	795.0	SS	1	10	18	--	4.5 (p)
5		Brown Gravelly LOAM, A-2-4 to A-2, medium dense	793.5	SS	2	19	7	--	--
7.5		Grey CLAY, A-6, very stiff	791.0	SS	3	11	15	112	3.49
10		End of Boring @ 10'	786.5	SS	4	10	16	109	2.72

WATER LEVEL OBSERVATIONS, ft.
 DURING DRILLING:  5.5'
 IMMEDIATELY AFTER DRILLING:  dry
 DELAYED READING AFTER 



MSET

BORING STARTED: 11/29/11
 BORING COMPLETED: 11/29/11
 LOGGED BY: SPE
 BORING METHOD: CFA

PROJECT: Walnut Lane (Bode Road to Golf Road)

SITE LOCATION: Schaumburg, IL

BORING LOCATION: STA. 123+00, 8' L of CL

CLIENT: Civiltech Engineering, Inc.

DEPTH (feet)	SOIL TYPE	Material Description	Elevation	SAMPLE			TESTS			REMARKS
				TYPE/ INTERVAL	NO.	N-VALUE Blows per ft.	Wc%	Dry Unit Weight, pcf	Unconfined Compressive Strength, tsf	
0		Pavement: 6-1/2" Bituminous Concrete over 17-1/2" Brown Sand and Gravel (Pozzolanic Base Course)	791.7							
2.5		Brown and Grey CLAY, A-6: FILL, very stiff	789.8	SS	1	31	3	--	--	
5				SS	2	16	13	--	4.5 (p)	
7.5		Dark Grey and Dark Brown Clay LOAM, trace Organics: FILL, soft	786.2	SS	3	5	22	98	0.39	
10		Dark Grey Sandy LOAM, A-2 to A-4, moist, slightly dense	783.7	SS	4	6	16	--	--	
		End of Boring @ 10'	781.7						Hole Caved at 7.7' Upon Completion	

WATER LEVEL OBSERVATIONS, ft.
 DURING DRILLING: none
 IMMEDIATELY AFTER DRILLING: 6.9'
 DELAYED READING AFTER



BORING STARTED: 11/29/11
 BORING COMPLETED: 11/29/11
 LOGGED BY: SPE
 BORING METHOD: CFA

SOIL TEST DATA

MSET JOB NUMBER: 11445
 SECTION: 08-00094-00-PV

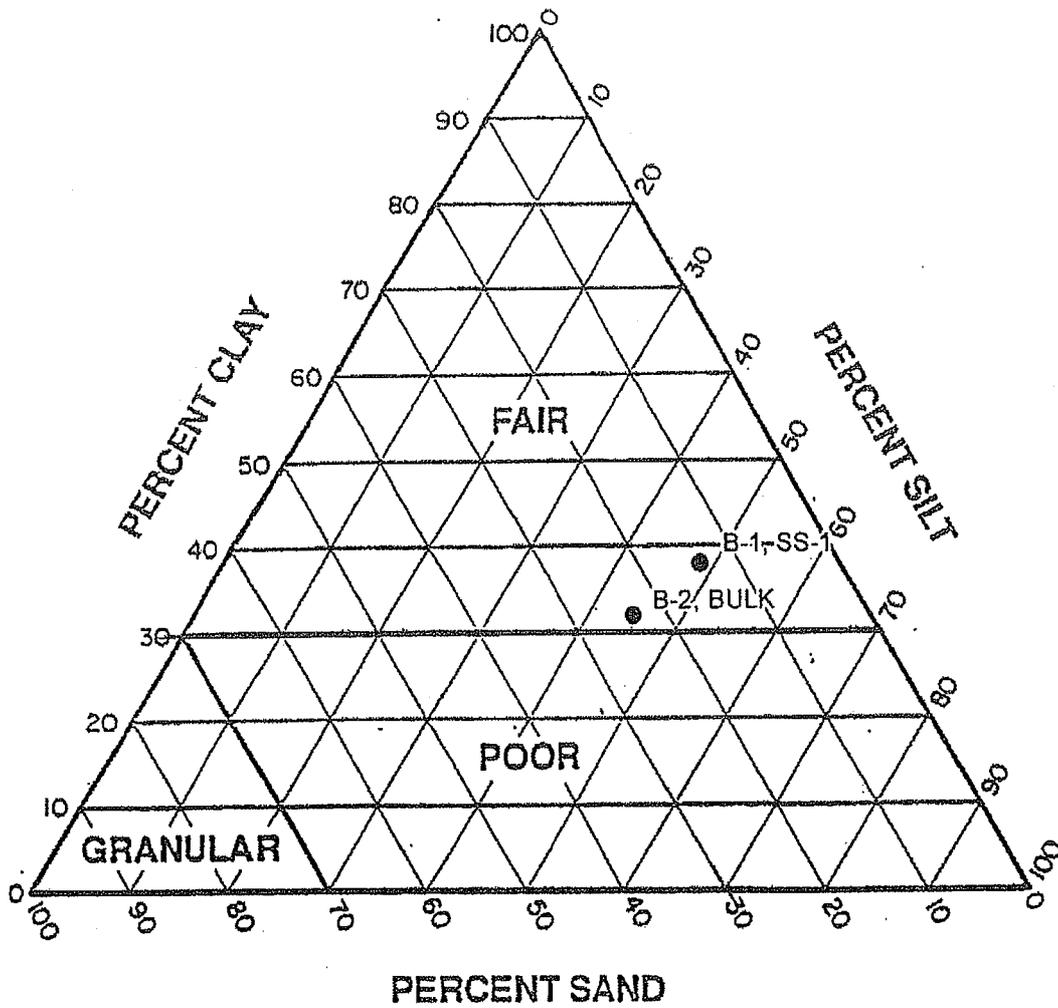
ROUTE: FAU2556 PROJECT: Walnut Lane
 CITY: Schaumburg, IL
 COUNTY: Cook

LAB. NO.		B-1	B-4			
STATION		102+00	111+00			
OFFSET		8' R of CL	8' L of CL			
DEPTH		1.0' to 2.5'	3.0' to 5.0'			
HRB CLASSIFICATION		A-6(16)	A-7-6(19)			
GRAIN SIZE CLASSIFICATION		CLAY	CLAY			
GRADATION-PASSING 1" SIEVE	%	100	100			
"	3/4" "	100	100			
"	1/2" "	100	100			
"	3/8" "	100	99			
"	NO. 4 "	99	97			
"	NO. 10 "	98	91			
"	NO. 40 "	95	83			
"	NO. 100 "	89	78			
"	NO. 200 "	86	76			
SAND	%	12	15			
SILT	%	49	45			
CLAY	%	37	31			
LIQUID LIMIT	%	37	42			
PLASTICITY INDEX	%	19	27			
SSR RATING		FAIR	FAIR			
BEARING RATIO		--	3.0			
STD. DRY DENSITY AASHTO T99	pcf	--	112.7			
OPTIMUM MOISTURE	%	--	15.1			

REMARKS:

ORGANIC CONTENT T-194 %
 FINE SAND & SILT % 58 52

WALNUT LANE (BODE ROAD TO GOLF ROAD)



Particle-Size Limits

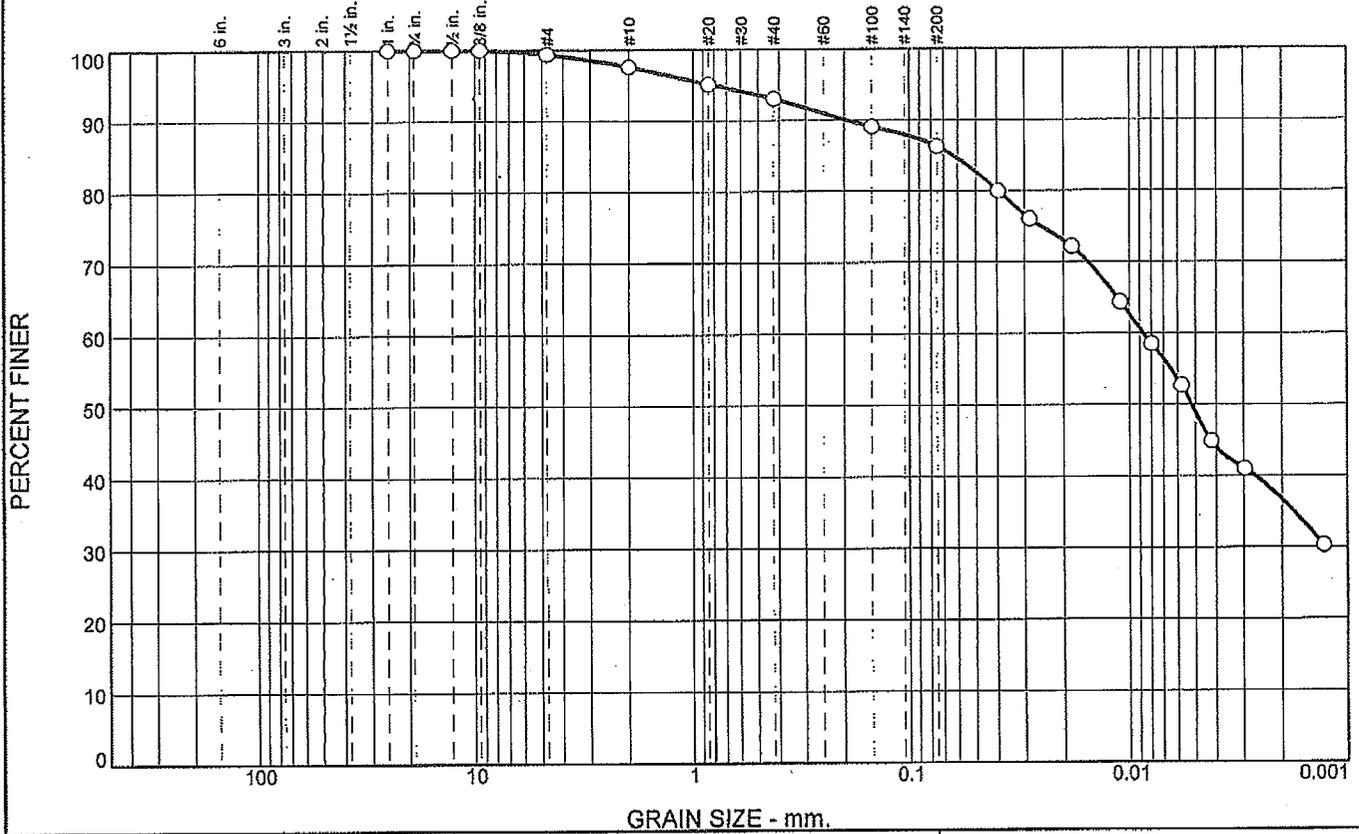
Sand 2.000 - 0.075 mm

Silt 0.075 - 0.002 mm

Clay finer than 0.002 mm

Figure 1. Subgrade Support Rating (SSR)

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	1	1	5	7	49	37

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100		
3/4"	100		
1/2"	100		
3/8"	100		
#4	99		
#10	98		
#20	95		
#40	93		
#100	89		
#200	86		
0.0396 mm.	80		
0.0286 mm.	76		
0.0184 mm.	72		
0.0110 mm.	64		
0.0080 mm.	59		
0.0058 mm.	53		
0.0042 mm.	45		
0.0030 mm.	41		
0.0013 mm.	30		

* (no specification provided)

Soil Description

Brown CLAY

Atterberg Limits

PL= 18 LL= 37 PI= 19

Coefficients

D₉₀= 0.1949 D₈₅= 0.0631 D₆₀= 0.0087
D₅₀= 0.0052 D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(16)

Remarks

Source of Sample: B-1
Sample Number: SS-1

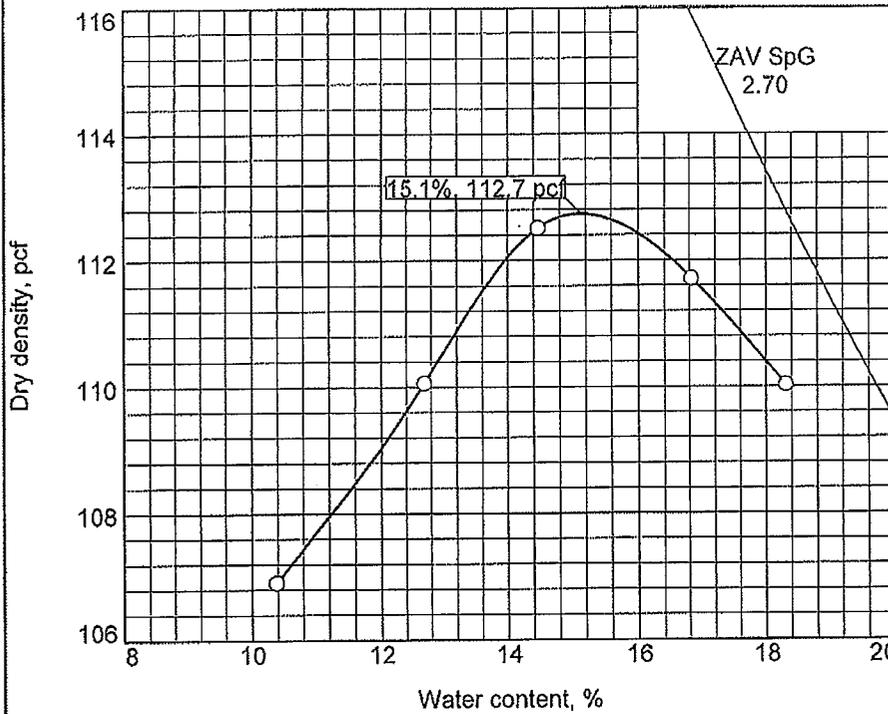
Date: 12/23/11

Midland Standard Engineering & Testing East Dundee, IL	Client: Civiltech Engineering, Inc. Project: Walnut Lane (Bode Rd. to Golf Rd.) Schaumburg, IL Project No: 11445 Figure
--	--

Tested By: JDS

Checked By: WDP

COMPACTION TEST REPORT



Curve No.
1

Test Specification:
ASTM D 698-07 Method A Standard

Hammer Wt.: 5.5 lb.
 Hammer Drop: 12 in.
 Number of Layers: three
 Blows per Layer: 25
 Mold Size: 0.03333 cu. ft.

Test Performed on Material
 Passing #4 Sieve

Soil Data

NM	<u>24</u>	Sp.G.	<u>2.70</u>
LL	<u>42</u>	PI	<u>27</u>
%>#4	<u>3</u>	%<#200	<u>76</u>
USCS	<u>CL</u>	AASHTO	<u>A-7-6(19)</u>

TESTING DATA

	1	2	3	4	5	6
WM + WS	6016.0	6107.0	6179.0	6205.0	6200.0	
WM	4232.0	4232.0	4232.0	4232.0	4232.0	
WW + T #1	986.0	1102.0	1023.0	1143.0	1097.0	
WD + T #1	895.0	980.0	896.0	981.0	930.0	
TARE #1	18.0	18.0	18.0	18.0	18.0	
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	10.4	12.7	14.5	16.8	18.3	
DRY DENSITY	106.9	110.1	112.5	111.7	110.0	

TEST RESULTS	Material Description
Maximum dry density = 112.7 pcf Optimum moisture = 15.1 %	Brown CLAY
Project No. 11445 Client: Civiltech Engineering, Inc. Project: Walnut Lane (Bode Rd. to Golf Rd.) Schaumburg, IL Location: B-4 Depth: 3.0' to 5.0' Midland Standard Engineering & Testing East Dundee, IL	Remarks: Date Received: 11/29/11 Date Tested: 12/1/11
	Figure

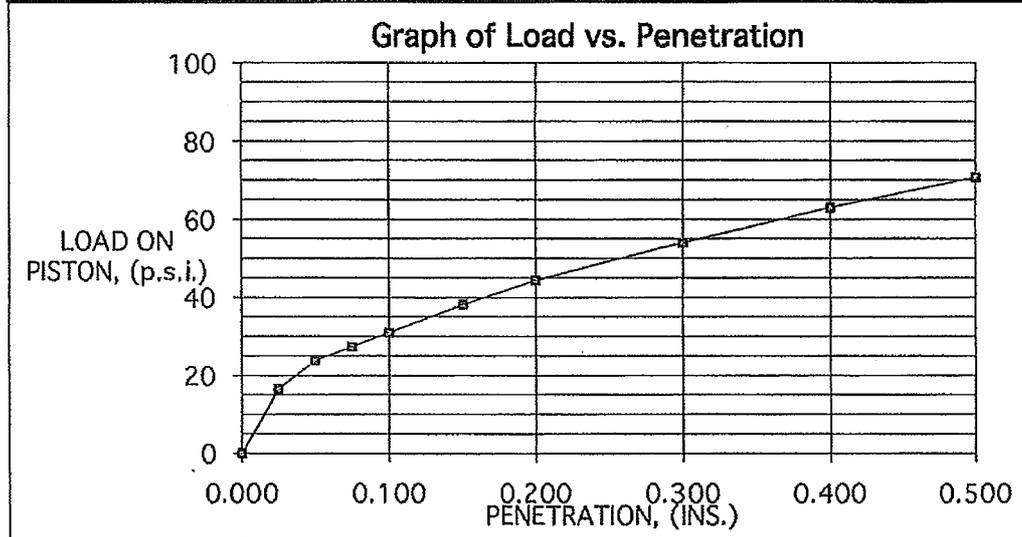
Tested By: JDS Checked By: WDP

FILE NO.:	11445
PROJECT NAME:	Walnut Lane (Bode Road to Golf Road)
SAMPLE I.D.:	B-4, 3.0' to 5.0'
CLASSIFICATION:	Brown CLAY, A-7-6(19)
MAX.UNIT WT.:	112.7 P.C.F.
OPT. M.C.:	15.1 %
TEST UNIT WT.:	110.0 P.C.F.
TEST INIT. M.C.:	17.5 %
TEST% of MAX.	97.6 %

RAW LOAD/PENETRATION DATA		
Penetration, (INS.)		Load,lbs
0	5.0	5.0
0.025	49.5	49.5
0.05	71.5	71.5
0.075	82.0	82.0
0.1	93.0	93.0
0.15	114.5	114.5
0.2	133.0	133.0
0.3	162.0	162.0
0.4	189.0	189.0
0.5	212.0	212.0

BEARING RATIO RESULTS TO GRAPH		
Penetration, (INS.)	Load on Piston, (PSI)	IBR,@penetration
0.000	0	
0.025	17	
0.050	24	
0.075	27	
0.100	31	3.1%
0.150	38	
0.200	44	3.0%
0.300	54	
0.400	63	
0.500	71	

SWELL DATA		
DATE/TIME	READING, INCHES	SWELL, %
12/2/11 15:23	0.100	0.00
12/3/11 13:00	0.105	0.11
12/5/11 15:45	0.107	0.15
12/6/11 13:45	0.107	0.15



MIDLAND STANDARD ENGINEERING & TESTING, INC.

SUMMARY REPORT ON PAVEMENT, BASE AND SUB-BASE DESIGN

MSET JOB NO. <u>11445</u>	PROJECT <u>Walnut Lane</u>	ROUTE <u>FAU2556</u>
SECT# <u>08-00094-00-PV</u>	CITY / COUNTY <u>Schaumburg / Cook</u>	DATE <u>December 2011</u>
ADT _____ CLASS _____	YEAR _____	DESIGN PERIOD _____
CARS PC/DAY _____	TRUCKS SU/DAY _____	TRUCKS MU/DAY _____

PAVEMENT STRUCTURE:	<u>ASSUMED</u>		
TYPE OF SURFACE COURSE	<u>HMA Pavement (Full Depth)</u>	THICKNESS	<u>9"</u>
TYPE OF BASE COURSE	<u>Granular Base Course</u>	THICKNESS	<u>6" to 9"</u>
TYPE SUB-BASE MATERIAL	<u>Aggregate Subgrade (PGES)</u>	THICKNESS	<u>12"</u>

WALNUT LANE	B-1	B-2	B-3	B-4
STA. TO STA.	101+16 to 103+50	103+50 to 106+50	106+50 to 109+50	109+50 to 112+50
*STATION OF TEST	102+00	**B-4	--	111+00
*DRAINAGE CLASS	FAIR	FAIR	FAIR	FAIR
*AVE FROST PENETRATION	42"	42"	42"	42"
GRAIN SIZE CLASSIFICATION	CLAY	--	--	CLAY
HRB CLASS & GROUP INDEX	A-6(16)	--	--	A-7-6(19)
PERCENT SILT	49	--	--	45
DRY DENSITY AASHO T-99	--	--	--	112.7
BEARING RATIO	--	--	--	3.0
OPTIMUM MOISTURE	--	--	--	15.1%
REMARKS: **Indicates Similar Soil Tested	Brown CLAY, A-6(19) Mc=18% Qu=4.07 tsf No Treatment Indicated	Dark Grey and Olive-Grey CLAY, A-7-6: FILL Mc=21% Qu=3.49 tsf No Treatment Indicated	Brown Silty Clay LOAM, A-6: FILL Mc=17% Qu=2.72 tsf No Treatment Indicated	Brown and Dark Grey CLAY, A-7-6(19): FILL Mc=24% Qp=3.0 tsf No Treatment Indicated

*INDICATES WORST CONDITION WITHIN THE ABOVE STATION LIMITS

MIDLAND STANDARD ENGINEERING & TESTING, INC.

SUMMARY REPORT ON PAVEMENT, BASE AND SUB-BASE DESIGN

MSET JOB NO. <u>11445</u>	PROJECT <u>Walnut Lane</u>	ROUTE <u>FAU2556</u>
SECT# <u>08-00094-00-PV</u>	CITY / COUNTY <u>Schaumburg / Cook</u>	DATE <u>December 2011</u>
ADT _____	CLASS _____	YEAR _____
CARS PC/DAY _____	TRUCKS SU/DAY _____	TRUCKS MU/DAY _____

PAVEMENT STRUCTURE:	<u>ASSUMED</u>		
TYPE OF SURFACE COURSE	<u>HMA Pavement (Full Depth)</u>	THICKNESS	<u>9"</u>
TYPE OF BASE COURSE	<u>Granular Base Course</u>	THICKNESS	<u>6" to 9"</u>
TYPE SUB-BASE MATERIAL	<u>Aggregate Subgrade (PGES)</u>	THICKNESS	<u>12"</u>

WALNUT LANE	B-5	B-6	B-7	B-8
STA. TO STA.	112+50 to 115+50	115+50 to 118+50	118+50 to 121+50	121+50 to 125+67
*STATION OF TEST	**B-1	--	**B-1	--
*DRAINAGE CLASS	FAIR	FAIR	FAIR	FAIR
*AVE FROST PENETRATION	42"	42"	42"	42"
GRAIN SIZE CLASSIFICATION	--	--	--	--
HRB CLASS & GROUP INDEX	--	--	--	--
PERCENT SILT	--	--	--	--
DRY DENSITY AASHO T-99	--	--	--	--
BEARING RATIO	--	--	--	--
OPTIMUM MOISTURE	--	--	--	--
REMARKS: **Indicates Similar Soil Tested	Brown and Grey CLAY, A-6 Mc=16% Qu=6.21 tsf No Treatment Indicated	Brown and Grey CLAY, A-6: FILL Mc=18% Qp=4.0 tsf No Treatment Indicated	Brown CLAY, A-6 Mc=18% Qp=4.5 tsf No Treatment Indicated	Brown and Grey CLAY, A-6: FILL Mc=16% Qp=4.5 tsf No Treatment Indicated

*INDICATES WORST CONDITION WITHIN THE ABOVE STATION LIMITS

GENERAL NOTES

PARTICLE SIZE DESCRIPTION & TERMINOLOGY			
<p>Coarse Grained or Granular Soils have more than 50% of their dry weight retained on a #200 sieve; they are described as: boulders, cobbles, gravel or sand. Fine Grained soils have less than 50% of their dry weight retained on a #200 sieve; they are described as: clays or clayey silts if they are cohesive and silts if they are non-cohesive. In addition to gradation, granular soils are defined on the basis of their relative in-place density and the fine grained soils on the basis of their strength or consistency and their plasticity.</p>			
Major Component of Sample	Size Range	Descriptive Term of Components Also Present in Sample	Approximate Quantity (Percent)
Boulders	Over 8 in. (200 mm)		
Cobbles	8 inches to 3 inches (200 mm to 75mm)	Trace	1 - 9
Gravel	3 inches to #4 sieve (75mm to 4.75mm)	Little	10 - 19
Sand	#4 to #200 sieve (4.75mm to 75mm)	Some	20 - 34
Silt	Passing #200 sieve (75mm to 2mm)	And	35 - 50
Clay	Smaller than 2mm		
RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION			
<i>GRANULAR SOILS</i>			
DENSITY CLASSIFICATION		APPROXIMATE RANGE OF N *	
Very Loose		0 - 3	
Slightly Dense		4 - 9	
Medium Dense		10 - 29	
Dense		30 - 49	
Very Dense		50 - 80	
Extremely Dense		80 +	
<i>COHESIVE SOILS</i>			
CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH, Qu - TSF	APPROXIMATE RANGE OF N *	
Very Soft	0.25	0 - 2	
Soft	0.25 - 0.49	3 - 4	
Firm	0.50 - 0.99	5 - 8	
Stiff	1.00 - 1.99	9 - 15	
Very Stiff	2.00 - 3.99	16 - 30	
Hard	4.00 - 8.00	31 - 50	
Very Hard	8.00 +	Over 50	
<p>* STANDARD PENETRATION TEST (ASTM D1586) - A 2.0" outside-diameter, split barrel sampler is driven into undisturbed soil by means of a 140 pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven 3 successive 6 inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).</p>			

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
COOPERATION WITH UTILITIES

Effective: January 1, 1999
Revised: January 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

Replace Article 105.07 of the Standard Specifications with the following:

"105.07 Cooperation with Utilities. 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.

When the plans or special provisions include information pertaining to the location of underground utility facilities, such information represents only the opinion of the Department as to the location of such utilities and is only included for the convenience of the bidder. The Department assumes no responsibility in respect to the sufficiency or the accuracy of the information shown on the plans relative to the location of the underground utility facilities.

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 existing 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. When utility adjustments must be performed in conjunction with construction, the utility adjustment work will be shown on the plans and/or covered by Special Provisions.

When the Contractor discovers a utility has not been adjusted by the owner or the owner's representative as indicated in the contract documents, or the utility is not shown on the plans or described in the Special Provisions as to be adjusted in conjunction with construction, the Contractor shall not interfere with said utility, and 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.

All necessary adjustments, as determined by the Engineer, of utilities not shown on the plans or not identified by markers, will be made at no cost to the Contractor except traffic structures, light poles, etc., that are normally located within the proposed construction limits as hereinafter defined will not be adjusted unless required by the proposed improvement.

(a) Limits of Proposed Construction for Utilities Paralleling the Roadway. For the purpose of this Article, limits of proposed construction for utilities extending in the same longitudinal direction as the roadway, shall be defined as follows:

(1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 600 mm (2 ft) 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 1.2 m (4 ft) 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 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. For the purpose of this Article, limits of proposed construction for utilities crossing the roadway in a generally transverse direction shall be defined as follows:

(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.

The Contractor may make arrangements for adjustment of utilities outside of the limits of proposed construction provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any adjustments made outside the limits of proposed construction shall be the responsibility of the Contractor unless otherwise provided.

The Contractor shall request all utility owners to field locate their facilities according to Article 107.31. The Engineer may make the request for location from the utility after receipt of notice from the Contractor. On request, the Engineer will make an inspection to verify that the utility company has field located its facilities, but will not assume responsibility for the accuracy of such work. The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners. This field location procedure may be waived if the utility owner has stated in writing to the Department it is satisfied the construction plans are sufficiently accurate. If the utility owner does not submit such statement to the Department, and they do not field locate their facilities in both horizontal and vertical alignment, 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 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 orally and in writing.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

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.

No additional compensation will be allowed for any delays, inconvenience, or damage sustained by the Contractor due to any interference from the said utility facilities or the operation of relocating the said utility facilities.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

Village of Schaumburg

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

AGREEMENT TO PLAN QUANTITY (BDE)

Effective: January 1, 2012

Revise the second paragraph of Article 202.07(a) of the Standard Specifications to read:

“When the plans or work have been altered, or when disagreement exists between the Contractor and the Engineer as to the accuracy of the plan quantities, either party shall, before any work is started which would affect the measurement, have the right to request in writing and thereby cause the quantities involved to be measured. When plan quantities are revised by the issuance of revised plan sheets that are made part of the contract, and the Contractor and the Engineer have agreed in writing that the revised quantities are accurate, no further measurement will be required and payment will be made for the revised quantities shown.”

80275

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: November 2, 2006

Revised: January 1, 2012

Description. Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

- Where: CA = Cost Adjustment, \$.
- BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).
- BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting, \$/ton (\$/metric ton).
- %AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.
- Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 24.99) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$
For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

- Where: A = Area of the HMA mixture, sq yd (sq m).
D = Depth of the HMA mixture, in. (mm).
G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.
V = Volume of the bituminous material, gal (L).

SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract?

Yes

No

Signature: _____ **Date:** _____

80173

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 ^{1/}	600-749	2002
	750 and up	2006
June 1, 2011 ^{2/}	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 ^{2/}	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.

80261

CONSTRUCTION AIR QUALITY - DIESEL VEHICLE EMISSIONS CONTROL (BDE)

Effective: April 1, 2009

Revised: January 2, 2012

Diesel Vehicle Emissions Control. The reduction of construction air emissions shall be accomplished by using cleaner burning diesel fuel. The term "equipment" refers to any and all diesel fuel powered devices rated at 50 hp and above, to be used on the project site in excess of seven calendar days over the course of the construction period on the project site (including any "rental" equipment).

All equipment on the jobsite, with engine ratings of 50 hp and above, shall be required to: use Ultra Low Sulfur Diesel fuel (ULSD) exclusively (15 ppm sulfur content or less).

Diesel powered equipment in non-compliance will not be allowed to be used on the project site, and is also subject to a notice of non-compliance as outlined below.

The Contractor shall certify that only ULSD will be used in all jobsite equipment. The certification shall be presented to the Department prior to the commencement of the work.

If any diesel powered equipment is found to be in non-compliance with any portion of this specification, the Engineer will issue the Contractor a notice of non-compliance and identify an appropriate period of time, as outlined below under environmental deficiency deduction, in which to bring the equipment into compliance or remove it from the project site.

Any costs associated with bringing any diesel powered equipment into compliance with these diesel vehicle emissions controls shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall also not be grounds for a claim.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists, he/she will notify the Contractor in writing, and direct the Contractor to correct the deficiency within a specified time period. The specified time-period, which begins upon Contractor notification, will be from 1/2 hour to 24 hours long, based on the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge regarding the time period.

The deficiency will be based on lack of repair, maintenance and diesel vehicle emissions control.

If the Contractor fails to correct the deficiency within the specified time frame, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

If a Contractor or subcontractor accumulates three environmental deficiency deductions in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of contract time, waiver of penalties, or be grounds for any claim.

80237

CONSTRUCTION AIR QUALITY - IDLING RESTRICTIONS (BDE)

Effective: April 1, 2009

Idling Restrictions. The Contractor shall establish truck-staging areas for all diesel powered vehicles that are waiting to load or unload material at the jobsite. Staging areas shall be located where the diesel emissions from the equipment will have a minimum impact on adjacent sensitive receptors. The Department will review the selection of staging areas, whether within or outside the existing highway right-of-way, to avoid locations near sensitive areas or populations to the extent possible. Sensitive receptors include, but are not limited to, hospitals, schools, residences, motels, hotels, daycare facilities, elderly housing and convalescent facilities. Diesel powered engines shall also be located as far away as possible from fresh air intakes, air conditioners, and windows. The Engineer will approve staging areas before implementation.

Diesel powered vehicle operators may not cause or allow the motor vehicle, when it is not in motion, to idle for more than a total of 10 minutes within any 60 minute period, except under any of the following circumstances:

- 1) The motor vehicle has a gross vehicle weight rating of less than 8000 lb (3630 kg).
- 2) The motor vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
- 3) The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.
- 4) A police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator.
- 5) The primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.
- 6) A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
- 7) When idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations, lumbering operations; oil or gas well servicing; or farming operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions.
- 8) When the motor vehicle idles due to mechanical difficulties over which the operator has no control.
- 9) The outdoor temperature is less than 32 °F (0 °C) or greater than 80 °F (26 °C).

When the outdoor temperature is greater than or equal to 32 °F (0 °C) or less than or equal to 80 °F (26 °C), a person who operates a motor vehicle operating on diesel fuel shall not cause or allow the motor vehicle to idle for a period greater than 30 minutes in any 60 minute period while waiting to weigh, load, or unload cargo or freight, unless the vehicle is in a line of vehicles that regularly and periodically moves forward.

The above requirements do not prohibit the operation of an auxiliary power unit or generator set as an alternative to idling the main engine of a motor vehicle operating on diesel fuel.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists based on non-compliance with the idling restrictions, he/she will notify the Contractor, and direct the Contractor to correct the deficiency.

If the Contractor fails to correct the deficiency a monetary deduction will be imposed. The monetary deduction will be \$1,000.00 for each deficiency identified.

80239

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: August 2, 2011

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is

based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 21.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal: or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's website at www.dot.il.gov.

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement. The failure of the bidder to comply will render the bid not responsive.

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
 - (1) The names and addresses of DBE firms that will participate in the contract;

- (2) A description, including pay item numbers, of the work each DBE will perform;
- (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
- (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
- (5) if the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
- (6) If the contract goal is not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work performance to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
- (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
- (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

- (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination.
- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is

generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement.

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217)785-4611. Telefax number (217)785-1524.
- (b) TERMINATION OR REPLACEMENT. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.
- (c) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

- (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award;
or
- (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
- (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

(e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;

- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- (6) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated, or fails to complete its work on the Contract for any reason the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal.

- (f) PAYMENT RECORDS. The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the BDE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative

| reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

| (g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.

| (h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

80029

ERRATA FOR THE 2012 STANDARD SPECIFICATIONS (BDE)

Effective: April 1, 2012

Revised: August 1, 2012

- Page 182 Article 354.12. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 183 Article 355.10. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 185 Article 356.10. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 337 Article 505.04. Revise the subparagraph "(i) Match Making." to "(i) Match Marking."
- Page 360 Article 506.07. In the first line of the second paragraph change "AASHTO/AWS D1.5/D1.5:" to "AASHTO/AWS D1.5M/D1.5:".
- Page 361 Article 506.08. In the third line of the sixth paragraph change "506.08(a)" to "506.08(b)".
- Page 531 Article 609.07. In the first paragraph delete "TYPE B, C, or D INLET BOX STANDARD 609001 or".
- Page 601 Article 701.18(h). In the first line of the first paragraph change "Standard 701426." to "Standard 701426 and 701427.".
- Page 609 Article 703.05. In the first line of the second paragraph delete "or Type II".
- Page 989 Article 1083.02(a). In the seventh line of the first paragraph change "Table 14.7.5.2-2" to "Table 14.7.5.2-1".
- Page 1019 Article 1095.01(b)(1)e. In the table for daylight reflectance for the color yellow, change "75 % min." to "45 % min.".

80296

FLAGGER AT SIDE ROADS AND ENTRANCES (BDE)

Effective: April 1, 2009

Revise the second paragraph of Article 701.13(a) of the Standard Specifications to read:

“The Engineer will determine when a side road or entrance shall be closed to traffic. A flagger will be required at each side road or entrance remaining open to traffic within the operation where two-way traffic is maintained on one lane of pavement. The flagger shall be positioned as shown on the plans or as directed by the Engineer.”

Revise the first and second paragraph of Article 701.20(i) of the Standard Specifications to read:

“Signs, barricades, or other traffic control devices required by the Engineer over and above those specified will be paid for according to Article 109.04. All flaggers required at side roads and entrances remaining open to traffic including those that are shown on the Highway Standards and/or additional barricades required by the Engineer to close side roads and entrances will be paid for according to Article 109.04.”

80228

FRICTION AGGREGATE (BDE)

Effective: January 1, 2011

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

- “(4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.
- a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).
 - b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase.”

Revise Article 1004.03(a) of the Standard Specifications to read:

“**1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA).** The aggregate shall be according to Article 1004.01 and the following.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA All Other	Stabilized Subbase or Shoulders	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete

Use	Mixture	Aggregates Allowed	
HMA High ESAL Low ESAL	Binder IL-25.0, IL-19.0, or IL-19.0L SMA Binder	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/}	
HMA High ESAL Low ESAL	C Surface and Leveling Binder IL-12.5, IL-9.5, or IL-9.5L SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/}	
HMA High ESAL	D Surface and Leveling Binder IL-12.5 or IL-9.5 SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{5/} Crushed Steel Slag ^{4/ 5/} Crushed Concrete ^{3/}	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		25% Limestone	Dolomite
		50% Limestone	Any Mixture D aggregate other than Dolomite
75% Limestone	Crushed Slag (ACBF) ^{5/} or Crushed Sandstone		

Use	Mixture	Aggregates Allowed	
HMA High ESAL	E Surface IL-12.5 or IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination:</u> Crushed Gravel Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{5/} Crushed Steel Slag ^{5/} Crushed Concrete ^{3/} No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Dolomite ^{2/}	Any Mixture E aggregate
		75% Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF) ^{5/} , Crushed Steel Slag ^{5/} , or Crystalline Crushed Stone
75% Crushed Gravel or Crushed Concrete ^{3/}	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF) ^{5/} , or Crushed Steel Slag ^{5/}		
HMA High ESAL	F Surface IL-12.5 or IL-9.5 SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination:</u> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{5/} Crushed Steel Slag ^{5/} No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>

Use	Mixture	Aggregates Allowed	
		50% Crushed Gravel, Crushed Concrete ^{3/} , or Dolomite ^{2/}	Crushed Sandstone, Crushed Slag (ACBF) ^{5/} , Crushed Steel Slag ^{5/} , or Crystalline Crushed Stone

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When either slag is used, the blend percentages listed shall be by volume."

80265

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_P = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)
FPI_L = 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:** _____

80229

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: April 1, 2012

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced ten feet apart longitudinally along the unconfined pavement edge and centered at the random density test location.”

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

"Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4%	91.0%
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0%	90.0%
IL-9.5, IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4%	90.0%

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%
All Other	Ndesign = 30	93.0 - 97.4%	90.0%”

80246

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 Concrete1006.13”

Add the following to Article 504.02 of the Standard Specifications:

“(j) Metal Hardware Cast into Concrete1006.13”

Revise Article 1006.13 of the Standard Specifications to read:

“1006.13 Metal Hardware Cast into Concrete. Unless otherwise noted, all steel hardware cast into concrete, such as inserts, brackets, cable clamps, metal casings for formed holes, and other miscellaneous items, shall be galvanized according to AASHTO M 232 or AASHTO M 111. Aluminum inserts will not be allowed. Zinc alloy inserts shall be according to ASTM B 86, Alloys 3, 5, or 7.

When stainless steel junction boxes or other stainless steel appurtenances are specified, Type 304 stainless steel hardware shall be used when cast into concrete.

The inserts shall be UNC threaded type anchorages having the following minimum certified proof load.

Insert Diameter	Proof Load
5/8 in. (16 mm)	6600 lb (29.4 kN)
3/4 in. (19 mm)	6600 lb (29.4 kN)
1 in. (25 mm)	9240 lb (41.1 kN)”

80203

PAVEMENT MARKING REMOVAL (BDE)

Effective: April 1, 2009

Add the following to the end of the first paragraph of Article 783.03(a) of the Standard Specifications:

“The use of grinders will not be allowed on new surface courses.”

80231

PAVEMENT PATCHING (BDE)

Effective: January 1, 2010

Revise the first sentence of the second paragraph of Article 701.17(e)(1) of the Standard Specifications to read:

“In addition to the traffic control and protection shown elsewhere in the contract for pavement, two devices shall be placed immediately in front of each open patch, open hole, and broken pavement where temporary concrete barriers are not used to separate traffic from the work area.”

80254

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

| 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

PORTLAND CEMENT CONCRETE (BDE)

Effective: January 1, 2012

Revise Notes 1 and 2 of Article 312.24 of the Standard Specifications to read:

"Note 1. Coarse aggregate shall be gradation CA 6, CA 7, CA 9, CA 10, or CA 11, Class D quality or better. Article 1020.05(d) shall apply.

Note 2. Fine aggregate shall be FA 1 or FA 2. Article 1020.05(d) shall apply."

Revise the first paragraph of Article 312.26 of the Standard Specifications to read:

"312.26 Proportioning and Mix Design. At least 60 days prior to start of placing CAM II, the Contractor shall submit samples of materials for proportioning and testing. The mixture shall contain a minimum of 200 lb (90 kg) of cement per cubic yard (cubic meter). Portland cement may be replaced with fly ash according to Article 1020.05(c)(1). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design."

Revise the second paragraph of Article 503.22 of the Standard Specifications to read:

Other cast-in-place concrete for structures will be paid for at the contract unit price per cubic yard (cubic meter) for CONCRETE HANDRAIL, CONCRETE ENCASEMENT, and SEAL COAT CONCRETE."

Add the following to Article 1003.02 of the Standard Specifications:

(e) Alkali Reaction.

- (1) ASTM C 1260. Each fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.03 percent will be assigned to limestone or dolomite fine aggregates (manufactured stone sand). However, the Department reserves the right to perform the ASTM C 1260 test.

- (2) ASTM C 1293 by Department. In some instances, such as chert natural sand or other fine aggregates, testing according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The laboratory performing the ASTM C 1293 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing".

The ASTM C 1293 test shall be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container, wick of absorbent material, or amount of coverage inside the container with blotting paper, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly. If the aggregate is manufactured into multiple gradation numbers, and the other gradation numbers have the same or lower ASTM C 1260 value, the ASTM C 1293 test result may apply to multiple gradation numbers.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 test result. When the Contractor performs the test, a split sample shall be provided to the Engineer. The Engineer may also independently obtain a sample at any time. The aggregate will be considered reactive if the Contractor or Engineer obtains an expansion value of 0.040 percent or greater.

Revise Article 1004.02(d) of the Standard Specifications to read:

"(d)Combining Sizes. Each size shall be stored separately and care shall be taken to prevent them from being mixed until they are ready to be proportioned. Separate compartments shall be provided to proportion each size.

- (1) When Class BS concrete is to be pumped, the coarse aggregate gradation shall have a minimum of 45 percent passing the 1/2 in. (12.5 mm) sieve. The Contractor

may combine two or more coarse aggregate sizes, consisting of CA 7, CA 11, CA 13, CA 14, and CA 16, provided a CA 7 or CA 11 is included in the blend.

- (2) If the coarse aggregate is furnished in separate sizes, they shall be combined in proportions to provide a uniformly graded coarse aggregate grading within the following limits.

Class of Concrete ^{1/}	Combined Sizes	Sieve Size and Percent Passing						
		2 1/2 in.	2 in.	1 3/4 in.	1 1/2 in.	1 in.	1/2 in.	No. 4
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

Class of Concrete ^{1/}	Combined Sizes	Sieve Size (metric) and Percent Passing						
		63 mm	50 mm	45 mm	37.5 mm	25 mm	12.5 mm	4.75 mm
PV ^{2/}	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3
SI and SC ^{2/}	CA 3 & CA 7	100	95±5	---	---	55±25	20±10	3±3
	CA 3 & CA 11	100	95±5	---	---	55±25	20±10	3±3
	CA 5 & CA 7	---	---	100	98±2	72±22	22±12	3±3
	CA 5 & CA 11	---	---	100	98±2	72±22	22±12	3±3

1/ See Table 1 of Article 1020.04.

2/ Any of the listed combination of sizes may be used."

Add the following to Article 1004.02 of the Standard Specifications:

(g) Alkali Reaction.

- (1) Each coarse aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.05 percent will

be assigned to limestone or dolomite coarse aggregates. 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
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(a) Concrete Mixers and Trucks	1103.01
(b) Batching and Weighing Equipment	1103.02
(c) Automatic and Semi-Automatic Batching Equipment	1103.03
(d) Water Supply Equipment	1103.11
(e) Membrane Curing Equipment	1101.09
(f) Mobile Portland Cement Concrete Plants	1103.04

1020.04 Concrete Classes and General Mix Design Criteria. The classes of concrete shown in Table 1 identify the various mixtures by the general uses and mix design criteria. If the class of concrete for a specific item of construction is not specified, Class SI concrete shall be used.

For the minimum cement factor in Table 1, it shall apply to portland cement, portland-pozzolan cement, and portland blast-furnace slag except when a particular cement is specified in the Table.

The Contractor shall not assume that the minimum cement factor indicated in Table 1 will produce a mixture that will meet the specified strength. In addition, the Contractor shall not assume that the maximum finely divided mineral allowed in a mix design according to Article 1020.05(c) will produce a mixture that will meet the specified strength. The Contractor shall select a cement factor within the allowable range that will obtain the specified strength. The Contractor shall take into consideration materials selected, seasonal temperatures, and other factors which may require the Contractor to submit multiple mix designs.

For a portland-pozzolan cement, portland blast-furnace slag cement, or when replacing portland cement with finely divided minerals per Articles 1020.05(c) and 1020.05(d), the portland cement content in the mixture shall be a minimum of 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). When calculating the portland cement portion in the portland-pozzolan or portland blast-furnace slag cement, the AASHTO M 240 tolerance may be ignored.

Special classifications may be made for the purpose of including the concrete for a particular use or location as a separate pay item in the contract. The concrete used in such cases shall conform to this section.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA

Class of Conc.	Use	Specification Section Reference	Cement Factor cwt/cu yd (3)		Water / Cement Ratio lb/lb	Sump in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)	
			Min.	Max			Days	3	14			28
PV	Pavement	420 or 421										
	Base Course	353										
	Base Course Widening	354	5.65 (1)	7.05	0.32 - 0.42	2 - 4	3500 (650)		5.0 - 8.0	CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14		
	Driveway Pavement	423	6.05 (2)			(5)						
	Shoulders	483										
	Shoulder Curb	662										
PP	Pavement Patching	442										
	Bridge Deck Patching (10)											
	PP-1		6.50	7.50	0.32 - 0.44	2 - 4	Article 701.17(e)(3)b.			CA 7, CA 11, CA 13, CA 14, or CA 16		
	PP-2		6.20 (TY III)	7.20 (TY III)	0.32 - 0.38	2 - 6	at 48 hours		4.0 - 7.0			
	PP-3		7.35	7.35	0.32 - 0.35	2 - 4	at 24 hours		4.0 - 6.0			
	PP-4		7.35 (TY III) (8)	7.35 (TY III) (8)	0.32 - 0.50	2 - 6	at 16 hours		4.0 - 6.0			
RR	PP-5	6.00 (9)	6.25 (9)	0.32 - 0.40	2 - 8	at 8 hours		4.0 - 6.0	CA 13, CA 14, or CA 16			
		6.75 (9)	6.75 (9)			at 4 hours						
	Railroad Crossing	422	6.50	7.50	0.32 - 0.44	2 - 4	3500 (650) at 48 hours	4.0 - 7.0	CA 7, CA 11, or CA 14			
	Bridge Superstructure	503	6.20 (TY III)	7.20 (TY III)	0.32 - 0.44	2 - 4	4000 (675)	5.0 - 8.0	CA 7, CA 11, or CA 14 (7)			
	Bridge Approach Slab		6.05	7.05		(5)						
PC	Various Precast Concrete Items	1042	5.65	7.05	0.32 - 0.44	1 - 4	See Section 1042	5.0 - 8.0	CA 7, CA 11, CA 13, CA 14, CA 16, or CA 7 & CA 16			
	Wet Cast Dry Cast		5.65 (TY III)	7.05 (TY III)	0.25 - 0.40	0 - 1		N/A				
PS	Precast Prestressed Members	504	5.65	7.05	0.32 - 0.44	1 - 4		Plans 5000	5.0 - 8.0	CA 11 (11), CA 13, CA 14 (11), or CA 16		
	Precast Prestressed Piles and Extensions	512	5.65 (TY III)	7.05 (TY III)				3500				
	Precast Prestressed Sight Screen	639										

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA																				
Class of Conc.	Use	Specification Section Reference	Cement Factor cwt/cu yd (3)		Water / Cement Ratio lb/lb	Sump in. (4)	Mix Design Compressive Strength (Flexural Strength) psi, minimum			Air Content %	Coarse Aggregate Gradations (14)									
			Min.	Max			3	14	28											
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734	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.									
												837	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
SC	Seal Coat	503																		
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																				

- 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.

Class of Conc.	Use	Specification Section Reference	Cement Factor kg/cu m (3)		Water / Cement Ratio kg/kg	Sump mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)	
			Min.	Max			Days	3	14			28
PV	Pavement	420 or 421										
	Base Course	353										
	Base Course Widening	354	335 (1)	418	0.32 - 0.42	50 - 100 (5)	Ty III 24,000 (4500)	24,000 (4500)	5.0 - 8.0	CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14		
	Driveway Pavement	423	360 (2)									
	Shoulders	483										
	Shoulder Curb	662										
PP	Pavement Patching	442										
	Bridge Deck Patching (10)											
	PP-1		365 (TY III)	445	0.32 - 0.44	50 - 100	at 48 hours	22,100 (4150)	Article 701.17(e)(3)b.	CA 7, CA 11, CA 13, CA 14, or CA 16		
	PP-2		435	435	0.32 - 0.38	50 - 150	at 24 hours					
	PP-3		435 (TY III) (8)	435 (TY III) (8)	0.32 - 0.35	50 - 100	at 16 hours					
	PP-4		355 (9)	370 (9)	0.32 - 0.50	50 - 150	at 8 hours					
PP-5	400 (9)	400 (9)	0.32 - 0.40	50 - 200	at 4 hours				CA 13, CA 14, or CA 16			
RR	Railroad Crossing	422	385 (TY III)	445	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	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)		
	Bridge Approach Slab											
PC	Various Precast Concrete Items	1042	335 (TY III)	418 (TY III)	0.32 - 0.44	25 - 100	See Section 1042		5.0 - 8.0	CA 7, CA 11, CA 13, CA 14, CA 16, or CA 7 & CA 16		
	Wet Cast Dry Cast									N/A		
PS	Precast Prestressed Members	504	335	418	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	335 (TY III)	418 (TY III)			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 kg/cu m (3)		Water / Cement Ratio kg/kg	Sump mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations (14)
			Min.	Max.			Days				
							3	14	28		
DS	Drilled Shaft (12)	516	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.	
	Metal Shell Piles (12)	512									
	Sign Structures	734									
SC	Drilled Shaft (12)	837	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	
	Light Tower Foundation (12)										
SI	Seal Coat	503	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 & CA 11, CA 7, CA 11, CA 13, CA 14, or CA 16 (13)	
	Structures (except Superstructure)	503									
	Sidewalk	424									
	Slope Wall	511									
	Encasement	512									
	Box Culverts	540									
	End Section and Collar	542									
	Curb, Gutter, Curb & Gutter, Median, and Paved Ditch	606									
	Concrete Barrier	637									
	Sign Structures	734									
	Spread Footing										
	Concrete Foundation										
	Pole Foundation (12)	836									
Traffic Signal Foundation	878										
Drilled Shaft (12)											
Square or Rectangular											

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 ≤ 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
Cast-in-Place Concrete ^{11/}			
Pavement			
Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/5/}	3	1020.13(c)
Base Course			
Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3	1020.13(c)
Driveway			
Median			
Barrier			
Curb			
Gutter	1020.13(a)(1)(2)(3)(4)(5) ^{4/5/}	3	1020.13(c) ^{16/}
Curb & Gutter			
Sidewalk			
Slope Wall			
Paved Ditch			
Catch Basin			
Manhole	1020.13(a)(1)(2)(3)(4)(5) ^{4/}	3	1020.13(c)
Inlet			
Valve Vault			
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3 ^{12/}	1020.13(c)
Bridge Deck Patching	1020.13(a)(3)(5)	3 or 7 ^{12/}	1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles and Drilled Shafts	1020.13(a)(3)(5)	7	1020.13(d)(1)(2)(3)
Foundations & Footings			
Seal Coat	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(d)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) ^{1/7/}	7	1020.13(d)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) ^{8/}	7	1020.13(d)(1)(2)
Deck			
Bridge Approach Slab	1020.13(a)(5)	7	1020.13(d)(1)(2) ^{17/}
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) ^{1/7/}	7	1020.13(d)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) ^{1/}	7	1020.13(d)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(d)(1)(2) ^{18/}
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete ^{11/}			
Bridge Slabs			
Piles and Pile Caps	1020.13(a)(3)(5) ^{9/ 10/}	As ^{13/}	9/
Other Structural Members		Required	
All Other Precast Items	1020.13(a)(3)(4)(5) ^{2/ 9/ 10/}	As ^{14/}	9/
		Required	
Precast, Prestressed Concrete ^{11/}			
All Items	1020(a)(3)(5) ^{9/ 10/}	Until Strand Tensioning is Released ^{15/}	9/

Notes-General:

- 1/ Type I, membrane curing only
- 2/ Type II, membrane curing only
- 3/ Type III, membrane curing only

- 4/ Type I, II and III membrane curing
- 5/ Membrane Curing will not be permitted between November 1 and April 15.
- 6/ The use of water to inundate foundations and footings, seal coats or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 45 °F (7 °C) or higher.
- 7/ Asphalt emulsion for waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.
- 8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed oil emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09(b).
- 9/ Steam, supplemental heat, or insulated blankets (with or without steam/supplemental heat) are acceptable and shall be according to the Bureau of Materials and Physical Research's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products" and the "Manual for Fabrication of Precast, Prestressed Concrete Products".
- 10/ A moist room according to AASHTO M 201 is acceptable for curing.
- 11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.
- 12/ Curing maintained only until opening strength is attained for pavement patching, with a maximum curing period of three days. For bridge deck patching the curing period shall be three days if Class PP concrete is used and 7 days if Class BS concrete is used.
- 13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.

- 15/ The producer has the option to continue curing after strand release.
- 16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(d)(1).
- 17/ When Article 1020.13(d)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(d)(1).
- 18/ For culverts having a waterway opening of 10 sq ft (1 sq m) or less, the culverts may be protected according to Article 1020.13(d)(3).
- (a) Methods of Curing. Except as provided for in the Index Table of Curing and Protection of Concrete Construction, curing shall be accomplished by one of the following described methods. When water is required to wet the surface, it shall be applied as a fine spray so that it will not mar or pond on the surface. Except where otherwise specified, the curing period shall be at least 72 hours.
- (1) Waterproof Paper Method. The surface of the concrete shall be covered with waterproof paper as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the paper is placed. The blankets shall be lapped at least 12 in. (300 mm) end to end, and these laps shall be securely weighted with a windrow of earth, or other approved method, to form a closed joint. The same requirements shall apply to the longitudinal laps where separate strips are used for curing edges, except the lap shall be at least 9 in. (225 mm). The edges of the blanket shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Any torn places or holes in the paper shall be repaired immediately by patches cemented over the openings, using a bituminous cement having a melting point of not less than 180 °F (82 °C). The blankets may be reused, provided they are air-tight and kept serviceable by proper repairs.
- A longitudinal pleat shall be provided in the blanket to permit shrinkage where the width of the blanket is sufficient to cover the entire surface. The pleat will not be required where separate strips are used for the edges. Joints in the blanket shall be sewn or cemented together in such a manner that they will not separate during use.
- (2) Polyethylene Sheeting Method. The surface of the concrete shall be covered with white polyethylene sheeting as soon as the concrete has hardened sufficiently to prevent marring the surface. The surface of the concrete shall be wetted immediately before the sheeting is placed. The edges of the sheeting shall be weighted securely with a continuous windrow of earth or any other means satisfactory to the Engineer to provide an air-tight cover. Adjoining sheets shall overlap not less than 12 in. (300 mm) and the laps shall be securely weighted with earth, or any other means satisfactory to the Engineer, to provide an air tight cover.

For surface and base course concrete, the polyethylene sheets shall be not less than 100 ft (30 m) in length nor longer than can be conveniently handled, and shall be of such width that, when in place, they will cover the full width of the surface, including the edges, except that separate strips may be used to cover the edges. Any tears or holes in the sheeting shall be repaired. When sheets are no longer serviceable as a single unit, the Contractor may select from such sheets and reuse those which will serve for further applications, provided two sheets are used as a single unit; however, the double sheet units will be rejected when the Engineer deems that they no longer provide an air tight cover.

- (3) Wetted Burlap Method. The surface of the concrete shall be covered with wetted burlap blankets as soon as the concrete has hardened sufficiently to prevent marring the surface. The blankets shall overlap 6 in. (150 mm). At least two layers of wetted burlap shall be placed on the finished surface. The burlap shall be kept saturated by means of a mechanically operated sprinkling system. In place of the sprinkling system, at the Contractor's option, two layers of burlap covered with impermeable covering shall be used. The burlap shall be kept saturated with water. Plastic coated burlap may be substituted for one layer of burlap and impermeable covering.

The blankets shall be placed so that they are in contact with the edges of the concrete, and that portion of the material in contact with the edges shall be kept saturated with water.

- (4) Membrane Curing Method. Membrane curing will not be permitted where a protective coat, concrete sealer, or waterproofing is to be applied, or at areas where rubbing or a normal finish is required, or at construction joints other than those necessary in pavement or base course. Concrete at these locations shall be cured by another method specified in Article 1020.13(a).

After the concrete has been finished and the water sheen has disappeared from the surface, the concrete shall be immediately sealed with membrane curing compound of the type specified. The seal shall be maintained for the specified curing period. The edges of the concrete shall, likewise, be sealed immediately after the forms are removed. Two separate applications, applied at least one minute apart, each at the rate of not less than 1 gal/250 sq ft (0.16 L/sq m) will be required upon the surfaces and edges of the concrete. These applications shall be made with the mechanical equipment specified. Type III compound shall be agitated immediately before and during the application.

At locations where the coating is discontinuous or where pin holes show or where the coating is damaged due to any cause and on areas adjacent to sawed joints, immediately after sawing is completed, an additional coating of membrane curing compound shall be applied at the above specified rate. The equipment used may be of the same type as that used for coating variable widths of pavement. Before the additional coating is applied adjacent to sawed joints, the cut faces of the joint shall be protected by inserting a suitable flexible material in the joint, or placing an

adhesive width of impermeable material over the joint, or by placing the permanent sealing compound in the joint. Material, other than the permanent sealing compound, used to protect cut faces of the joint, shall remain in place for the duration of the curing period. In lieu of applying the additional coating, the area of the sawed joint may be cured according to any other method permitted.

When rain occurs before an application of membrane curing compound has dried, and the coating is damaged, the Engineer may require another application be made in the same manner and at the same rate as the original coat. The Engineer may order curing by another method specified, if unsatisfactory results are obtained with membrane curing compound.

- (5) **Wetted Cotton Mat Method.** After the surface of concrete has been textured or finished, it shall be covered immediately with dry or damp cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without marring the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 4 ft (1.2 m) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3).

- (b) **Removing and Replacing Curing Covering.** When curing methods specified above in Article 1020.13(a), (1), (2), or (3) are used for concrete pavement, the curing covering for each day's paving shall be removed to permit testing of the pavement surface with a profilograph or straightedge, as directed by the Engineer.

Immediately after testing, the surface of the pavement shall be wetted thoroughly and the curing coverings replaced. The top surface and the edges of the concrete shall not be left unprotected for a period of more than 1/2 hour.

- (c) Protection of Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 32 °F (0 °C), or lower, or if the actual temperature drops to 32 °F (0 °C), or lower, concrete less than 72 hours old shall be provided at least the following protection.

Minimum Temperature	Protection
25 – 32 °F (-4 – 0 °C)	Two layers of polyethylene sheeting, one layer of polyethylene and one layer of burlap, or two layers of waterproof paper.
Below 25 °F (-4 °C)	6 in. (150 mm) of straw covered with one layer of polyethylene sheeting or waterproof paper.

These protective covers shall remain in place until the concrete is at least 96 hours old. When straw is required on pavement cured with membrane curing compound, the compound shall be covered with a layer of burlap, polyethylene sheeting or waterproof paper before the straw is applied.

After September 15, there shall be available to the work within four hours, sufficient clean, dry straw to cover at least two days production. Additional straw shall be provided as needed to afford the protection required. Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (d) Protection of Concrete Structures From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low below 45 °F (7 °C), or if the actual temperature drops below 45 °F (7 °C), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities, and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. When winter construction is specified, the Contractor shall proceed with the construction, including excavation, pile driving, concrete, steel erection, and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (1) Protection Method I. The concrete shall be completely covered with insulating material such as fiberglass, rock wool, or other approved commercial insulating material having the minimum thermal resistance R, as defined in ASTM C 168, for

the corresponding minimum dimension of the concrete unit being protected as shown in the following table.

Minimum Pour Dimension		Thermal Resistance R
in.	(mm)	
6 or less	(150 or less)	R=16
> 6 to 12	(> 150 to 300)	R=10
> 12 to 18	(> 300 to 450)	R=6
> 18	(> 450)	R=4

The insulating material manufacturer shall clearly mark the insulating material with the thermal resistance R value.

The insulating material shall be completely enclosed on sides and edges with an approved waterproof liner and shall be maintained in a serviceable condition. Any tears in the liner shall be repaired in a manner approved by the Engineer. The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period.

On formed surfaces, the insulating material shall be attached to the outside of the forms with wood cleats or other suitable means to prevent any circulation of air under the insulation and shall be in place before the concrete is placed. The blanket insulation shall be applied tightly against the forms. The edges and ends shall be attached so as to exclude air and moisture. If the blankets are provided with nailing flanges, the flanges shall be attached to the studs with cleats. Where tie rods or reinforcement bars protrude, the areas adjacent to the rods or bars shall be adequately protected in a manner satisfactory to the Engineer. Where practicable, the insulation shall overlap any previously placed concrete by at least 1 ft (300 mm). Insulation on the underside of floors on steel members shall cover the top flanges of supporting members. On horizontal surfaces, the insulating material shall be placed as soon as the concrete has set, so that the surface will not be marred and shall be covered with canvas or other waterproof covering. The insulating material shall remain in place for a period of seven days after the concrete is placed.

The Contractor may remove the forms, providing the temperature is 35 °F (2 °C) and rising and the Contractor is able to wrap the particular section within two hours from the time of the start of the form removal. The insulation shall remain in place for the remainder of the seven days curing period.

- (2) Protection Method II. The concrete shall be enclosed in adequate housing and the air surrounding the concrete kept at a temperature of not less than 50 °F (10 °C) nor more than 80 °F (27 °C) for a period of seven days after the concrete is placed. The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period. All exposed surfaces within the housing shall be cured according to the Index Table.

The Contractor shall provide adequate fire protection where heating is in progress and such protection shall be accessible at all times. The Contractor shall maintain labor to keep the heating equipment in continuous operation.

At the close of the heating period, the temperature shall be decreased to the approximate temperature of the outside air at a rate not to exceed 15 °F (8 °C) per 12 hour period, after which the housing may be removed. The surface of the concrete shall be permitted to dry during the cooling period.

- (3) Protection Method III. As soon as the surface is sufficiently set to prevent marring, the concrete shall be covered with 12 in. (300 mm) of loose, dry straw followed by a layer of impermeable covering. The edges of the covering shall be sealed to prevent circulation of air and prevent the cover from flapping or blowing. The protection shall remain in place until the concrete is seven days old. If construction operations require removal, the protection removed shall be replaced immediately after completion or suspension of such operations.

1020.14 Temperature Control for Placement. Temperature control for concrete placement shall be according to the following.

- (a) Concrete other than Structures. Concrete may be placed when the air temperature is above 35 °F (2 °C) and rising, and concrete placement shall stop when the falling temperature reaches 40 °F (4 °C) or below, unless otherwise approved by the Engineer.

The temperature of concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete as placed in the forms shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). A maximum concrete temperature shall not apply to Class PP concrete.

- (b) Concrete in Structures. Concrete may be placed when the air temperature is above 40 °F (4 °C) and rising, and concrete placement shall stop when the falling temperature reaches 45 °F (7 °C) or below, unless otherwise approved by the Engineer.

The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete as placed in the forms shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

When insulated forms are used, the maximum temperature of the concrete mixture immediately before placement shall be 80 °F (25 °C).

When concrete is placed in contact with previously placed concrete, the temperature of the mixed concrete may be increased to 80 °F (25 °C) by the Contractor to offset anticipated heat loss.

- (c) All Classes of Concrete. Aggregates and water shall be heated or cooled uniformly and as necessary to produce concrete within the specified temperature limits. No frozen aggregates shall be used in the concrete.
- (d) Temperature. The concrete temperature shall be determined according to Illinois Modified AASHTO T 309.

1020.15 Heat of Hydration Control for Concrete Structures. The Contractor shall control the heat of hydration for concrete structures when the least dimension for a drilled shaft, foundation, footing, substructure, or superstructure concrete pour exceeds 5.0 ft (1.5 m). The work shall be according to the following.

- (a) Temperature Restrictions. The maximum temperature of the concrete after placement shall not exceed 150 °F (66 °C). The maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface shall not exceed 35 °F (19 °C). The Contractor shall perform temperature monitoring to ensure compliance with the temperature restrictions.
- (b) Thermal Control Plan. The Contractor shall provide a thermal control plan a minimum of 28 calendar days prior to concrete placement for review by the Engineer. Acceptance of the thermal control plan by the Engineer shall not preclude the Contractor from specification compliance, and from preventing cracks in the concrete. At a minimum, the thermal control plan shall provide detailed information on the following requested items and shall comply with the specific specifications indicated for each item.
 - (1) Concrete mix design(s) to be used. Grout mix design if post-cooling with embedded pipe.

The mix design requirements in Articles 1020.04 and 1020.05 shall be revised to include the following additional requirements to control the heat of hydration.

- a. The concrete mixture shall be uniformly graded and preference for larger size aggregate shall be used in the mix design. Article 1004.02(d)(2) and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" shall be used to develop the uniformly graded mixture.
- b. The following shall apply to all concrete except Class DS concrete or when self-consolidating concrete is desired. For central-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 520 lbs/cu yd (309 kg/cu m) of cement and finely divided minerals summed together. For truck-mixed or shrink-mixed concrete, the Contractor shall have the option to develop a mixture with a minimum of 550 lbs/cu yd (326 kg/cu m) of cement and finely divided minerals summed together. A water-reducing or high range water-reducing admixture shall be used in the central mixed, truck-mixed or shrink-mixed concrete mixture. For any mixture to be placed underwater, the minimum

cement and finely divided minerals shall be 550 lbs/cu yd (326 kg/cu m) for central-mixed concrete, and 580 lbs/cu yd (344 kg/cu m) for truck-mixed or shrink-mixed concrete.

For Class DS concrete, CA 11 may be used. If CA 11 is used, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 605 lbs/cu yd (360 kg/cu m) summed together. If CA 11 is used and either Class DS concrete is placed underwater or a self-consolidating concrete mixture is desired, the Contractor shall have the option to develop a mixture with a minimum cement and finely divided minerals of 635 lbs/cu yd (378 kg/cu m) summed together.

- c. The minimum portland cement content in the mixture shall be 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). For a drilled shaft, foundation, footing, or substructure, the minimum portland cement may be reduced to as low as 330 lbs/cu yd (196 kg/cu m) if the concrete has adequate freeze/thaw durability. The Contractor shall provide freeze/thaw test results according to AASHTO T 161 Procedure A or B, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Freeze/thaw testing will not be required for concrete that will not be exposed to freezing and thawing conditions as determined by the Engineer.
- d. The maximum cement replacement with fly ash shall be 40.0 percent. The maximum cement replacement with ground granulated blast-furnace slag shall be 65.0 percent. When cement replacement with ground granulated blast-furnace slag exceeds 35.0 percent, only Grade 100 shall be used.
- e. The mixture may contain a maximum of two finely divided minerals. The finely divided mineral in portland-pozzolan cement or portland blast-furnace slag cement shall count toward the total number of finely divided minerals allowed. The finely divided minerals shall constitute a maximum of 65.0 percent of the total cement plus finely divided minerals. The fly ash portion shall not exceed 40.0 percent. The ground granulated blast-furnace slag portion shall not exceed 65.0 percent. The microsilica or high-reactivity metakaolin portion used together or separately shall not exceed 5.0 percent.
- f. The time to obtain the specified strength may be increased to a maximum 56 days, provided the curing period specified in Article 1020.13 is increased to a minimum of 14 days.

The minimum grout strength for filling embedded pipe shall be as specified for the concrete, and testing shall be according to AASHTO T 106.

- (2) The selected mathematical method for evaluating heat of hydration thermal effects, which shall include the calculated adiabatic temperature rise, calculated maximum concrete temperature, and calculated maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface. The time when the maximum concrete temperature and maximum temperature differential will occur is required if the time frame will be more than seven days.

Acceptable mathematical methods include ACI 207.2R "Report on Thermal and Volume Change Effects on Cracking of Mass Concrete" as well as other proprietary methods. The Contractor shall perform heat of hydration testing on the cement and finely divided minerals to be used in the concrete mixture. The test shall be according to ASTM C 186 or other applicable test methods, and the result for heat shall be used in the equation to calculate adiabatic temperature rise.

The Contractor has the option to propose a higher maximum temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface, but the proposed value shall not exceed 50 °F (10 °C). In addition, based on strength gain of the concrete, multiple maximum temperature differentials at different times may be proposed. The proposed value shall be justified through a mathematical method.

- (3) Proposed maximum concrete temperature or temperature range prior to placement.

Article 1020.14 shall apply except a minimum 40 °F (10 °C) concrete temperature will be permitted.

- (4) Pre-cooling, post-cooling, and surface insulation methods that will be used to ensure the concrete will comply with the specified maximum temperature and specified or proposed temperature differential. For reinforcement that extends beyond the limits of the pour, the Contractor shall indicate if the reinforcement is required to be covered with insulation.

Refer to ACI 207.4R "Cooling and Insulating Systems for Mass Concrete" for acceptable methods that will be permitted. A copy of the ACI document shall be provided to the Engineer at the construction site. If embedded pipe is used for post-cooling, the material shall be polyvinyl chloride or polyethylene. The embedded pipe system shall be properly supported, and the Contractor shall subsequently inspect glued joints to ensure they are able to withstand free falling concrete. The embedded pipe system shall be leak tested after inspection of the glued joints, and prior to the concrete placement. The leak test shall be performed at maximum service pressure or higher for a minimum of 15 minutes. All leaks shall be repaired. The embedded pipe cooling water may be from natural sources such as streams and rivers, but shall be filtered to prevent system stoppages. When the embedded pipe is no longer needed, the surface connections to the pipe shall be removed to a depth of 4 in. (100 mm) below the surface of the concrete. The remaining pipe shall be

completely filled with grout. The 4 in. (100 mm) deep concrete hole shall be filled with nonshrink grout. Form and insulation removal shall be done in a manner to prevent cracking and ensure the maximum temperature differential is maintained. Insulation shall be in good condition as determined by the Engineer and properly attached.

- (5) Dimensions of each concrete pour, location of construction joints, placement operations, pour pattern, lift heights, and time delays between lifts.

Refer to ACI 207.1R "Guide to Mass Concrete" for acceptable placement operations that will be permitted. A copy of the ACI document shall be provided to the Engineer at the construction site.

- (6) Type of temperature monitoring system, the number of temperature sensors, and location of sensors.

A minimum of two independent temperature monitoring systems and corresponding sensors shall be used.

The temperature monitoring system shall have a minimum temperature range of 32 °F (0 °C) to 212 °F (100 °C), an accuracy of ± 2 °F (± 1 °C), and be able to automatically record temperatures without external power. Temperature monitoring shall begin once the sensor is encased in concrete, and with a maximum interval of one hour. Temperature monitoring may be discontinued after the maximum concrete temperature has been reached, post-cooling is no longer required, and the maximum temperature differential between the internal concrete core and the ambient air temperature does not exceed 35 °F (19 °C). The Contractor has the option to select a higher maximum temperature differential, but the proposed value shall not exceed 50 °F (28 °C). The proposed value shall be justified through a mathematical method.

At a minimum, a temperature sensor shall be located at the theoretical hottest portion of the concrete, normally the geometric center, and at the exterior face that will provide the maximum temperature differential. At the exterior face, the sensor shall be located 2 to 3 in. (50 to 75 mm) from the surface of the concrete. Sensors shall also be located a minimum of 1 in. (25 mm) away from reinforcement, and equidistant between cooling pipes if either applies. A sensor will also be required to measure ambient air temperature. The entrant/exit cooling water temperature for embedded pipe shall also be monitored.

Temperature monitoring results shall be provided to the Engineer a minimum of once each day and whenever requested by the Engineer. The report may be electronic or hard copy. The report shall indicate the location of each sensor, the temperature recorded, and the time recorded. The report shall be for all sensors and shall include ambient air temperature and entrant/exit cooling water temperatures. The temperature data in the report may be provided in tabular or graphical format, and the report shall indicate any corrective actions during the monitoring period. At the

completion of the monitoring period, the Contractor shall provide the Engineer a final report that includes all temperature data and corrective actions.

- (7) Indicate contingency operations to be used if the maximum temperature or temperature differential of the concrete is reached after placement.
- (c) Temperature Restriction Violations. If the maximum temperature of the concrete after placement exceeds 150 °F (66 °C), but is less than 158 °F (70 °C), the concrete will be accepted if no cracking or other unacceptable defects are identified. If cracking or unacceptable defects are identified, Article 105.03 shall apply. If the concrete temperature exceeds 158 °F (70 °C), Article 105.03 shall apply.

If a temperature differential between the internal concrete core and concrete 2 to 3 in. (50 to 75 mm) from the exposed surface exceeds the specified or proposed maximum value allowed, the concrete will be accepted if no cracking or other unacceptable defects are identified. If unacceptable defects are identified, Article 105.03 shall apply.

When the maximum 150 °F (66 °C) concrete temperature or the maximum allowed temperature differential is violated, the Contractor shall implement corrective action prior to the next pour. In addition, the Engineer reserves the right to request a new thermal control plan for acceptance before the Contractor is allowed to pour again.

- (d) Inspection and Repair of Cracks. The Engineer will inspect the concrete for cracks after the temperature monitoring is discontinued, and the Contractor shall provide access for the Engineer to do the inspection. A crack may require repair by the Contractor as determined by the Engineer. The Contractor shall be responsible for the repair of all cracks. Protective coat or a concrete sealer shall be applied to a crack less than 0.007 in. (0.18 mm) in width. A crack that is 0.007 in. (0.18 mm) or greater shall be pressure injected with epoxy according to Section 590.

80279

PORTLAND CEMENT CONCRETE SIDEWALK (BDE)

Effective: January 1, 2012

Revise Article 424.07 of the Standard Specifications to read:

“424.07 Expansion Joints. Expansion joints shall be 1/2 in. (13 mm) thick and consist of preformed joint filler. The top of the joint filler shall be 1/4 in. (6 mm) below the surface of the sidewalk.

Expansion joints shall be placed in locations as follows.

- (a) Expansion joints shall be placed between the sidewalk and all structures such as light poles, traffic signal poles, traffic poles and subway columns, which extend through the sidewalk.
- (b) Transverse expansion joints shall be placed at maximum intervals of 50 ft (15 m) in the sidewalk. Where the sidewalk is constructed adjacent to pavement or curb having expansion joints, the expansion joints in the sidewalk shall be placed in line with the adjacent expansion joints as nearly as practicable.
- (c) Expansion joints shall also be placed where the sidewalk abuts existing sidewalks, between driveway pavement and sidewalk, and between sidewalk accessibility ramps and curbs where the ramp abuts a curb.”

80280

QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Add the following to Section 1020 of the Standard Specifications:

1020.16 Quality Control/Quality Assurance of Concrete Mixtures. This Article specifies the quality control responsibilities of the Contractor for concrete mixtures (except Class PC and PS concrete), cement aggregate mixture II, and controlled low-strength material incorporated in the project, and defines the quality assurance and acceptance responsibilities of the Engineer.

A list of quality control/quality assurance (QC/QA) documents is provided in Article 1020.16(g), Schedule D.

A Level I Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete testing.

A Level II Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete proportioning.

A Level III Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete mix design.

A Concrete Tester shall be defined as an individual who has successfully completed the Department's training to assist with concrete testing and is monitored on a daily basis.

Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving aggregate production and mixtures.

Mixture Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving mixtures.

Gradation Technician shall be defined as an individual who has successfully completed the Department's training to assist with gradation testing and is monitored on a daily basis.

- (a) Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing.

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Private Laboratory Requirements for Construction Materials Testing or Mix Design". Production of a mixture shall not begin until the Engineer provides written approval of the laboratory.

The Contractor shall refer to the Department's "Required Sampling and Testing Equipment for Concrete" for equipment requirements.

Test equipment shall be maintained and calibrated as required by the appropriate test method, and when required by the Engineer. This information shall be documented on the Department's "Calibration of Concrete Testing Equipment" form.

Test equipment used to determine compressive or flexural strength shall be calibrated each 12 month period by an independent agency, using calibration equipment traceable to the National Institute of Standards and Technology (NIST). The Contractor shall have the calibration documentation available at the test equipment location.

The Engineer will have unrestricted access to the plant and laboratory at any time to inspect measuring and testing equipment, and will notify the Contractor of any deficiencies. Defective equipment shall be immediately repaired or replaced by the Contractor.

- (b) Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan to the Engineer. The QC Plan shall be submitted a minimum of 45 calendar days prior to the production of a mixture. The QC Plan shall address the quality control of the concrete, cement aggregate mixture II, and controlled low-strength material incorporated in the project. The Contractor shall refer to the Department's "Model Quality Control Plan for Concrete Production" to prepare a QC Plan. The Engineer will respond in writing to the Contractor's proposed QC Plan within 15 calendar days of receipt.

Production of a mixture shall not begin until the Engineer provides written approval of the QC Plan. The approved QC Plan shall become a part of the contract between the Department and the Contractor, but shall not be construed as acceptance of any mixture produced.

The QC Plan may be amended during the progress of the work, by either party, subject to mutual agreement. The Engineer will respond in writing to a Contractor's proposed QC Plan amendment within 15 calendar days of receipt. The response will indicate the approval or denial of the Contractor's proposed QC Plan amendment.

- (c) Quality Control by Contractor. The Contractor shall perform quality control inspection, sampling, testing, and documentation to meet contract requirements. Quality control includes the recognition of obvious defects and their immediate correction. Quality control also includes appropriate action when passing test results are near specification limits, or to resolve test result differences with the Engineer. Quality control may require increased testing, communication of test results to the plant or the jobsite, modification of operations, suspension of mixture production, rejection of material, or other actions as appropriate. The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported no later than the start of the next work day.

When a mixture does not comply with specifications, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03.

- (1) Personnel Requirements. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for quality control. The jobsite and plant personnel shall be able to contact the QC Manager by cellular phone, two-way radio or other methods approved by the Engineer.

The QC Manager shall visit the jobsite a minimum of once a week. A visit shall be performed the day of a bridge deck pour, the day a non-routine mixture is placed as determined by the Engineer, or the day a plant is anticipated to produce more than 1000 cu yd (765 cu m). Any of the three required visits may be used to meet the once per week minimum requirement.

The Contractor shall provide personnel to perform the required inspections, sampling, testing and documentation in a timely manner. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

A Level I PCC Technician shall be provided at the jobsite during mixture production and placement, and may supervise concurrent pours on the project. For concurrent pours, a minimum of one Concrete Tester shall be required at each pour location. If the Level I PCC Technician is at one of the pour locations, a Concrete Tester is still required at the same location. Each Concrete Tester shall be able to contact the Level I PCC Technician by cellular phone, two-way radio or other methods approved by the Engineer. A single Level I PCC Technician shall not supervise concurrent pours for multiple contracts.

A Level II PCC Technician shall be provided at the plant, or shall be available, during mixture production and placement. A Level II PCC Technician may supervise a maximum of three plants. Whenever the Level II PCC Technician is not at the plant during mixture production and placement, a Concrete Tester or Level I PCC Technician shall be present at the plant to perform any necessary concrete tests. The Concrete Tester, Level I PCC Technician, or other individual shall also be trained to perform any necessary aggregate moisture tests, if the Level II PCC Technician is not at the plant during mixture production and placement. The Concrete Tester, Level I PCC Technician, plant personnel, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

For a mixture which is produced and placed with a mobile portland cement concrete plant as defined in Article 1103.04, a Level II PCC Technician shall be provided. The Level II PCC Technician shall be present at all times during mixture production and placement.

A Concrete Tester, Mixture Aggregate Technician, and Aggregate Technician may provide assistance with sampling and testing. A Gradation Technician may provide assistance with testing. A Concrete Tester shall be supervised by a Level I or Level II PCC Technician. A Gradation Technician shall be supervised by a Level II PCC Technician, Mixture Aggregate Technician, or Aggregate Technician.

- (2) Required Plant Tests. Sampling and testing shall be performed at the plant, or at a location approved by the Engineer, to control the production of a mixture. The required minimum Contractor plant sampling and testing is indicated in Article 1020.16(g) Schedule A.
- (3) Required Field Tests. Sampling and testing shall be performed at the jobsite to control the production of a mixture, and to comply with specifications for placement. For standard curing, after initial curing, and for strength testing; the location shall be approved by the Engineer. The required minimum Contractor jobsite sampling and testing is indicated in Article 1020.16(g), Schedule B.
- (d) Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing is indicated in Article 1020.16(g), Schedule C.
- (1) Strength Testing. For strength testing, Article 1020.09 shall apply, except the Contractor and Engineer beam strength specimens may be cured in the same tank.
- (2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will not be considered extreme if within the following limits:

Test Parameter	Acceptable Limits of Precision
Slump	0.75 in. (20 mm)
Air Content	0.9%
Compressive Strength	900 psi (6200 kPa)
Flexural Strength	90 psi (620 kPa)
Aggregate Gradation	See "Guideline for Sample Comparison" in Appendix "A" of the Manual of Test Procedures for Materials.

When acceptable limits of precision have been met, but only one party is within specification limits, the failing test shall be resolved before the material may be considered for acceptance.

(3) Test Results and Specification Limits.

a. Split Sample Testing. If either the Engineer's or the Contractor's split sample test result is not within specification limits, and the other party is within specification limits; immediate retests on a split sample shall be performed for slump, air content, or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength test result is a failure, and the other party is within specification limits; the following actions shall be initiated to investigate the test failure:

1. The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.
2. The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.
3. The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

For aggregate gradation, jobsite slump, and jobsite air content; if the failing split sample test result is not resolved according to 1., 2., or 3., and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed, or if a failing strength test result is not resolved according to 1., 2., or 3., the material will be considered unacceptable.

If a continued trend of difference exists between the Engineer's and the Contractor's split sample test results, or if split sample test results exceed the acceptable limits of precision, the Engineer and the Contractor shall investigate according to items 1., 2., and 3.

b. Independent Sample Testing. For aggregate gradation, jobsite slump, and jobsite air content; if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits, and the mixture has not been placed, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed or the Engineer obtains a failing strength test result, the material will be considered unacceptable.

(e) Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:

- (1) The Contractor's compliance with all contract documents for quality control.
- (2) Validation of Contractor quality control test results by comparison with the Engineer's quality assurance test results using split samples. Any quality control or quality assurance test determined to be flawed may be declared invalid only when reviewed and approved by the Engineer. The Engineer will declare a test result invalid only if it is proven that improper sampling or testing occurred. The test result is to be recorded and the reason for declaring the test invalid will be provided by the Engineer.
- (3) Comparison of the Engineer's quality assurance test results with specification limits using samples independently obtained by the Engineer.

The Engineer may suspend mixture production, reject materials, or take other appropriate action if the Contractor does not control the quality of concrete, cement aggregate mixture II, or controlled low-strength material for acceptance. The decision will be determined according to (1), (2), or (3).

(f) Documentation.

- (1) Records. The Contractor shall be responsible for documenting all observations, inspections, adjustments to the mix design, test results, retest results, and corrective actions in a bound hardback field book, bound hardback diary, or appropriate Department form, which shall become the property of the Department. The documentation shall include a method to compare the Engineer's test results with the Contractor's results. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the consultants, the subcontractors, or the producer of the mixture. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

The Department's form MI 504M, form BMPR MI654, and form BMPR MI655 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed form MI 504M, form BMPR MI654, and form BMPR MI655 are required to authorize payment by the Engineer, for applicable pay items.

- (2) Delivery Truck Ticket. The following information shall be recorded on each delivery ticket or in a bound hardback field book: initial/final revolution counter reading, at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; total amount of water added at the jobsite; and total amount of cement added at the jobsite if the air content needed adjustment.

(g) Basis of Payment and Schedules. Quality Control/Quality Assurance of portland cement concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various concrete contract items.

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING			
Item	Test	Frequency	IL Modified AASHTO or Department Test Method ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2,500 cu yd (1,900 cu m) for each gradation number ^{3/}	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture ^{4/} : Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pycnometer Jar, or T 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or T 255
Mixture ^{5/}	Slump, Air Content, Unit Weight / Yield, and Temperature	As needed to control production	T 141 and T 119 T 141 and T 152 or T 196 T 141 and T 121 T 141 and T 309

- 1/ Refer to the Department's "Manual of Test Procedures for Materials".
- 2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.
- 3/ One per week (Sunday through Saturday) minimum unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.
- 4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests, using the Dunagan or Illinois Modified AASHTO T 255 test method. The Department's "Water/Cement Ratio Worksheet" form shall be completed when applicable.
- 5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO T 141, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318; or other tests at the plant to control mixture production.

SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant ^{2/}	IL Modified AASHTO Test Method
Pavement, Shoulder, Base Course, Base Course Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump ^{3/4/}	1 per 500 cu yd (400 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/5/} _{6/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/8/} or Flexural Strength ^{7/8/}	1 per 1250 cu yd (1000 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
Bridge Approach Slab ^{9/} , Bridge Deck ^{9/} , Bridge Deck Overlay ^{9/} , Superstructure ^{9/} , Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump ^{3/4/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/5/} _{6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/8/} or Flexural Strength ^{7/8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
Seal Coat	Slump ^{3/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/6/}	As needed to control production	T 141 And T 152 or T 196
	Compressive Strength ^{7/8/} or Flexural Strength ^{7/8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Formed Concrete Revetment Mat ^{10/} , Miscellaneous Items, Incidental Items	Slump ^{3/ 4/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 400 cu yd (300 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
All	Temperature ^{3/}	As needed to control production	T 141 and T 309
Controlled Low-Strength Material (CLSM)	Flow, Air Content and Compressive Strength	As needed to control production	Illinois Test Procedure 307

- 1/ Sampling and testing of small quantities of curb, gutter, median, barrier, sidewalk, slope wall, paved ditch, miscellaneous items, and incidental items may be waived by the Engineer if requested by the Contractor. However, quality control personnel are still required according to Article 1020.16(c)(1) The Contractor shall also provide recent evidence that similar material has been found to be satisfactory under normal sampling and testing procedures. The total quantity that may be waived for testing shall not exceed 100 cu yd (76 cu m) per contract.
- 2/ If one mix design is being used for several construction items during a day's production, one testing frequency may be selected to include all items. The construction items shall have the same slump, air content, and water/cement ratio specifications. The frequency selected shall equal or exceed the testing required for the construction item.

One sufficiently sized sample shall be taken to perform the required test(s). Random numbers shall be determined according to the Department's "Method for Obtaining Random Samples for Concrete". The Engineer will provide random sample locations.
- 3/ The temperature, slump, and air content tests shall be performed on the first truck load delivered, for each pour. Unless a random sample is required for the first truck load, testing the first truck load does not satisfy random sampling requirements.
- 4/ The slump random sample testing frequency shall be a minimum 1/day for a construction item which is slipformed.
- 5/ If a pump or conveyor is used for placement, a correction factor shall be established to allow for a loss of air content during transport. The first three truck loads delivered shall be tested, before and after transport by the pump or conveyor, to establish the correction factor. Once the correction is determined, it shall be re-checked after an additional

50 cu yd (40 cu m) is pumped, or an additional 100 cu yd (80 cu m) is conveyed. This shall continue throughout the pour. If the re-check indicates the correction factor has changed, a minimum of two truckloads is required to re-establish the correction factor. The correction factor shall also be re-established when significant changes in temperature, distance, pump or conveyor arrangement, and other factors have occurred. If the correction factor is 3.0 percent or more, the Contractor shall take corrective action to reduce the loss of air content during transport by the pump or conveyor. The Contractor shall record all air content test results, correction factors and corrected air contents. The corrected air content shall be reported on form BMPR MI654.

- 6/ If the Contractor's or Engineer's air content test result is within the specification limits, and 0.2 percent or closer to either limit, the next truck load delivered shall be tested by the Contractor. For example, if the specified air content range is 5.0 to 8.0 percent and the test result is 5.0, 5.1, 5.2, 7.8, 7.9 or 8.0 percent, the next truck shall be tested by the Contractor.

If the Contractor's or Engineer's air content or slump test result is not within the specification limits, all subsequent truck loads delivered shall be tested by the Contractor until the problem is corrected.

- 7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of at least two cylinder or two beam breaks for field tests.
- 8/ In addition to the strength test, an air test, slump test, and temperature test shall be performed on the same sample. For mixtures pumped or conveyed, the Contractor shall sample according to Illinois Modified AASHTO T 141.
- 9/ The air content test will be required for each delivered truck load.
- 10/ For fabric formed concrete revetment mat, the slump test is not required and the flexural strength test is not applicable.

SCHEDULE C

ENGINEER QUALITY ASSURANCE INDEPENDENT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins, Slump and Air Content	As determined by the Engineer.
Jobsite	Slump, Air Content and Strength	As determined by the Engineer.

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump and Air Content	As determined by the Engineer.
Jobsite	Slump ^{2/} and Air Content ^{2/3/}	At the beginning of the project, the first three tests performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Strength ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness and take immediate possession of or otherwise secure the Department's split sample obtained by the Contractor.
- 3/ Before transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant. After transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant.

SCHEDULE D

CONCRETE QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTS

- (a) Model Quality Control Plan for Concrete Production (*)
- (b) Qualifications and Duties of Concrete Quality Control Personnel (*)
- (c) Development of Gradation Bands on Incoming Aggregate at Mix Plants (*)
- (d) Required Sampling and Testing Equipment for Concrete (*)
- (e) Method for Obtaining Random Samples for Concrete (*)
- (f) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09) (*)
- (g) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)
- (h) Field/Lab Gradations (MI 504M) (*)
- (i) Concrete Air, Slump and Quantity (BMPR MI654) (*)
- (j) P.C. Concrete Strengths (BMPR MI655) (*)
- (k) Aggregate Technician Course or Mixture Aggregate Technician Course (*)
- (l) Portland Cement Concrete Tester Course (*)
- (m) Portland Cement Concrete Level I Technician Course - Manual of Instructions for Concrete Testing (*)
- (n) Portland Cement Concrete Level II Technician Course - Manual of Instructions for Concrete Proportioning (*)
- (o) Portland Cement Concrete Level III Technician Course - Manual of Instructions for Design of Concrete Mixtures (*)
- (p) Manual of Test Procedures for Materials

* Refer to Appendix C of the Manual of Test Procedures for Materials for more information."

80281

SELF-CONSOLIDATING CONCRETE FOR PRECAST AND PRECAST PRESTRESSED PRODUCTS (BDE)

Effective: July 1, 2004

Revised: April 1, 2012

Description. This work shall consist of constructing precast and precast prestressed concrete products with self-consolidating concrete. The concrete shall be according to the special provision, "Portland Cement Concrete", except as modified herein.

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Mix Design Criteria. Article 1020.04 shall apply, except as follows:

- (a) If the maximum cement factor is not specified for the product, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).
- (b) If the maximum allowable water/cement ratio is not specified for the product, it shall not exceed 0.44.
- (c) The slump requirements shall not apply.
- (d) The concrete mixture shall be uniformly graded, and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" shall be used to develop the uniformly graded mix design. The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. However, the final gradation when using a single coarse aggregate or combination of coarse aggregates shall have 100 percent pass the 1 in. (25 mm) sieve, and 95 percent pass the 3/4 in. (19 mm) sieve. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be 22 in. (560 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 2 in. (50 mm).
- (h) The L-box blocking ratio shall be a minimum of 80 percent.
- (i) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-6, SCC-8, (Option C) and Illinois Modified AASHTO T 22, 23, 121, 141, 152, 196, and 309 shall be used for testing of self-consolidating mixtures.

Mixing Portland Cement Concrete. In addition to Article 1020.11, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed and truck-mixed concrete.

Concrete Placement for Precast Products. The maximum distance of horizontal flow from the point of deposit shall not exceed 25 ft (7.6 m) for precast products. However, when the maximum distance of horizontal flow from the point of discharge exceeds 15 ft (4.6 m), the dynamic segregation index shall be a maximum 10.0 percent. If the maximum is exceeded, the maximum distance of horizontal flow from the point of deposit will not be allowed to exceed 15 ft (4.6 m).

Concrete Placement for Precast Prestressed Products. The maximum distance of horizontal flow from the point of deposit shall not exceed 15 ft (4.6 m) for precast prestressed products. In addition, the placement operation shall be moved as required to ensure the leading edge of the flowing concrete does not exceed 15 ft (4.6 m). For a bed of beams, a single beam shall be completely filled with concrete before placement of concrete in the next beam. For deck beams with void tubes installed in place prior to the pour, the concrete shall be placed on one side of the void tube until the concrete flows completely under the void tube to the other side. Once this has been completed, the concrete placement operation may be moved to the other side.

Consolidation. Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator will be permitted if it can be used in a manner that does not cause coarse aggregate separation from the mortar as determined by the Engineer. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

80132

SIDEWALK, CORNER OR CROSSWALK CLOSURE (BDE)

Effective: January 1, 2012

Add the following to Article 701.03 of the Standard Specifications:

“(p) Detectable Pedestrian Channelizing Barricades1106.02(k)”

Add the following to Article 701.15 of the Standard Specifications:

“(n) Detectable Pedestrian Channelizing Barricade. Detectable pedestrian channelizing barricades are cane detectable and visible to persons having low vision. These barricades are used to channelize pedestrian traffic.”

Add the following to Article 1106.02 of the Standard Specifications:

“(m) Detectable Pedestrian Channelizing Barricades. The top and bottom panels shall have alternating white and orange stripes sloping at 45 degrees on the side exposed to pedestrian traffic. Barricade stripes shall be 6 in. (150 mm) in width. The predominant color for other barricade components shall be white, orange, or silver.

The top and bottom rails shall be continuous to allow for detection for hand trailing and cane trailing, respectively.

The faces of the barricade rails shall be vertical.”

80285

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: April 1, 2009

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form or failure to indicate contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where: MPI_M = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

MPI_L = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the MPI_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the MPI_L and MPI_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling)	
Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness)	23 lb/ft (34 kg/m)
Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness)	32 lb/ft (48 kg/m)
Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness)	37 lb/ft (55 kg/m)
Other piling	See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail	
Steel Plate Beam Guardrail, Type A w/steel posts	20 lb/ft (30 kg/m)
Steel Plate Beam Guardrail, Type B w/steel posts	30 lb/ft (45 kg/m)
Steel Plate Beam Guardrail, Types A and B w/wood posts	8 lb/ft (12 kg/m)
Steel Plate Beam Guardrail, Type 2	305 lb (140 kg) each
Steel Plate Beam Guardrail, Type 6	1260 lb (570 kg) each
Traffic Barrier Terminal, Type 1 Special (Tangent)	730 lb (330 kg) each
Traffic Barrier Terminal, Type 1 Special (Flared)	410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms	
Traffic Signal Post	11 lb/ft (16 kg/m)
Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m)	14 lb/ft (21 kg/m)
Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m)	21 lb/ft (31 kg/m)
Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m)	13 lb/ft (19 kg/m)
Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m)	19 lb/ft (28 kg/m)
Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m)	31 lb/ft (46 kg/m)
Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m)	65 lb/ft (97 kg/m)
Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence)	
Steel Railing, Type SM	64 lb/ft (95 kg/m)
Steel Railing, Type S-1	39 lb/ft (58 kg/m)
Steel Railing, Type T-1	53 lb/ft (79 kg/m)
Steel Bridge Rail	52 lb/ft (77 kg/m)
Frames and Grates	
Frame	250 lb (115 kg)
Lids and Grates	150 lb (70 kg)

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form or properly complete contract number, company name, and sign and date the form shall make this contract exempt of steel cost adjustments for all items of steel. Failure to indicate "Yes" for any item of work will make that item of steel exempt from steel cost adjustment. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans for the following items of work?

- | | | |
|--|-----|--------------------------|
| Metal Piling | Yes | <input type="checkbox"/> |
| Structural Steel | Yes | <input type="checkbox"/> |
| Reinforcing Steel | Yes | <input type="checkbox"/> |
| Dowel Bars, Tie Bars and Mesh Reinforcement | Yes | <input type="checkbox"/> |
| Guardrail | Yes | <input type="checkbox"/> |
| Steel Traffic Signal and Light Poles, Towers and Mast Arms | Yes | <input type="checkbox"/> |
| Metal Railings (excluding wire fence) | Yes | <input type="checkbox"/> |
| Frames and Grates | Yes | <input type="checkbox"/> |

Signature: _____ **Date:** _____

80127

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: April 2, 2005

Revised: April 1, 2011

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting according to Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

The mobilization payment to the subcontractor is an advance payment of the reported amount of the subcontract and is not a payment in addition to the amount of the subcontract; therefore, the amount of the advance payment will be deducted from future progress payments.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

80143

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.

80286

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: August 1, 2011

Revise the third sentence of the third paragraph of Article 105.03(b) of the Standard Specifications to read:

“The daily monetary deduction will be \$2,500.”

80273

TRAINING SPECIAL PROVISIONS (BDE) This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 1 . In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

WARM MIX ASPHALT (BDE)

Effective: January 1, 2012

Revised: November 1, 2012

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Materials.

Add the following to Article 1030.02 of the Standard Specifications.

“(h) Warm Mix Asphalt (WMA) Technologies (Note 3)”

Add the following note to Article 1030.02 of the Standard Specifications.

“Note 3. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, “Warm-Mix Asphalt Technologies”.”

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, “Approval of Hot-Mix Asphalt Plants and Equipment”. Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing

by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements.”

Add the following to Article 1102.01(a) of the Standard Specifications.

“(13) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.
- b. Additives. Additives shall be introduced into the plant according to the supplier’s recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes.”

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

“(d) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification. Additional mixture verification requirements include Hamburg Wheel testing according to Illinois Modified AASHTO T324 and tensile strength testing according to Illinois Modified AASHTO T283 which shall meet the criteria in Tables 1 and 2 respectively herein. The Contractor shall provide the additional material as follows:
 - a. Four gyratory specimens to be prepared in the Contractor’s lab according to Illinois Modified AASHTO T324.
 - b. Sufficient mixture to conduct tensile strength testing according to Illinois Modified AASHTO T283.

Table 1. Illinois Modified AASHTO T324 Requirements ^{1/}

Asphalt Binder Grade	# Wheel Passes	Max Rut Depth in. (mm)
PG 76-XX	20,000	1/2 in. (12.5 mm)
PG 70-XX	15,000	1/2 in. (12.5 mm)

PG 64-XX	7,500	1/2 in. (12.5 mm)
PG 58-XX	5,000	1/2 in. (12.5 mm)

1/ Loose WMA shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

Table 2. Tensile Strength Requirements

Asphalt Binder Grade	Tensile Strength psi (kPa)	
	Minimum	Maximum
PG 76-XX	80 (552)	200 (1379)
PG 70-XX		
PG 64-XX	60 (414)	200 (1379)"
PG 58-XX		

Production.

Revise the second paragraph of Article 1030.06(a) of the Standard Specifications to read:

“At the start of mix production for HMA, WMA, and HMA using WMA technologies, QC/QA mixture start-up will be required for the following situations; at the beginning of production of a new mix of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix.”

Insert the following after the sixth paragraph of Article 1030.06(a) of the Standard Specifications:

“Warm mix technologies shall be as follows.

- (1) Mixture sampled to represent the test strip shall include additional material sufficient for the Department to conduct Hamburg Wheel testing according to Illinois Modified AASHTO T324 and tensile strength testing according to Illinois Modified AASHTO T283 (approximately 110 lb (50 kg) total).
- (2) Upon completion of the start-up, WMA, or HMA using WMA technologies, production shall cease. The Contractor may revert to conventional HMA production provided a start-up has been previously completed for the current construction season for the mix design. WMA, or HMA using WMA technologies, may resume once all the test results, including Hamburg Wheel results are completed and found acceptable by the Engineer.”

Add the following after the first paragraph of Article 1030.05(d)(2)c. of the Standard Specifications:

“During production of each WMA mixture or HMA utilizing WMA technologies, the Engineer will request a minimum of one randomly located sample, identified by

the Engineer, for Hamburg Wheel testing to determine compliance with the requirements specified in Table 1 herein.”

Quality Control/Quality Assurance Testing.

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

Parameter	Frequency of Tests		Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
Aggregate Gradation % passing sieves: 1/2 in. (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), No. 30 (600 μm) No. 200 (75 μm) Note 1.	1 washed ignition oven test on the mix per half day of production Note 4.	1 washed ignition oven test on the mix per day of production Note 4.	Illinois Procedure
Asphalt Binder Content by Ignition Oven Note 2.	1 per half day of production	1 per day	Illinois-Modified AASHTO T 308
VMA Note 3.	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	N/A	Illinois-Modified AASHTO R 35
Air Voids Bulk Specific Gravity of Gyratory Sample Note 5.	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	1 per day	Illinois-Modified AASHTO T 312

Parameter	Frequency of Tests	Frequency of Tests	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
Maximum Specific Gravity of Mixture	Day's production ≥ 1200 tons: 1 per half day of production	1 per day	Illinois-Modified AASHTO T 209
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

Note 1. The No. 8 (2.36 mm) and No. 30 (600 μm) sieves are not required for All Other Mixtures.

Note 2. The Engineer may waive the ignition oven requirement for asphalt binder content if the aggregates to be used are known to have ignition asphalt binder content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the asphalt binder content.

Note 3. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design.

Note 4. The Engineer reserves the right to require additional hot bin gradations for batch

Note 5. The WMA compaction temperature for mixture volumetric testing shall be 270 ± 5 °F (132 ± 3 °C) for quality control testing. The WMA compaction temperature for quality assurance testing will be 270 ± 5 °F (132 ± 3 °C) if the mixture is not allowed to cool to room temperature. If the mixture is allowed to cool to room temperature it shall be reheated to standard HMA compaction temperatures."

Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C). WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

80288

WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

The Contractor shall provide a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used on the jobsite; or used for the delivery and/or removal of equipment/material to and from the jobsite. The jobsite shall also include offsite locations, such as plant sites or storage sites, when those locations are used solely for this contract.

The report shall be submitted on the form provided by the Department within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur. The report shall be submitted to the Engineer and a copy shall be provided to the district EEO Officer.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

80302

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If

the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color,

religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. Davis-Bacon and Related Act Provisions

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such

action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for

debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such

contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded,"

as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with

commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the

certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.state.il.us/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.state.il.us/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.