

BID PROPOSAL INSTRUCTIONS

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

PREQUALIFICATION

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

WHO CAN BID ?

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

REQUESTS FOR AUTHORIZATION TO BID

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

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?

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

ABOUT AUTHORIZATION TO BID

Firms that have not received an Authorization to Bid or Not For Bid Report within a reasonable time of complete and correct original document submittal should contact the Department as to the status. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

ADDENDA AND REVISIONS

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

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

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

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

STANDARD GUIDELINES FOR SUBMITTING BIDS

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

BID SUBMITTAL CHECKLIST

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

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

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

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

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

QUESTIONS: pre-letting up to execution of the contract

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

QUESTIONS: following contract execution

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

78

RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting November 8, 2013

NOTICE TO PROSPECTIVE BIDDERS

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

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL

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



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 63868
LAKE County
Section 00-00025-00-FP (Round Lake)
Route FAU 201 (Hart Road)
Project M-9003(482)
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. 63868
LAKE County
Section 00-00025-00-FP (Round Lake)
Project M-9003(482)
Route FAU 201 (Hart Road)
District 1 Construction Funds**

HMA widening and reconstruction, storm sewer installation, curb and gutter, sidewalk, driveway, traffic signal replacement, parkway restoration and all other incidental items to complete the work on Hart Road from Illinois Route 134 to Cedar Lake Road in the Village of Round Lake.

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

RETURN WITH BID

3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned bidder further declares that he/she has carefully examined the proposal, plans, specifications, addenda form of contract and contract bond, and special provisions, and that he/she has inspected in detail the site of the proposed work, and that he/she has familiarized themselves with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this bid proposal he/she waives all right to plead any misunderstanding regarding the same.

4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned bidder further agrees to execute a contract for this work and present the same to the department within fifteen (15) days after the contract has been mailed to him/her. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen (15) days after the contract has been mailed to him/her contract bond satisfactory to and in the form prescribed by the Department of Transportation, in the penal sum of the full amount of the contract, or as specified in the special provisions, guaranteeing the faithful performance of the work in accordance with the terms of the contract.

5. **PROPOSAL GUARANTY.** Accompanying this proposal is either a bid bond on the department form, executed by a corporate surety company satisfactory to the department, or a proposal guaranty check consisting of a bank cashier's check or a properly certified check for not less than 5 per cent of the amount bid or for the amount specified in the following schedule:

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

Bank cashier's checks or properly certified checks accompanying bid proposals will be made payable to the Treasurer, State of Illinois.

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

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

Attach Cashier's Check or Certified Check Here

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

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

Item _____

Section No. _____

County _____

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

RETURN WITH BID

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices will govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **AUTHORITY TO DO BUSINESS IN ILLINOIS.** Section 20-43 of the Illinois Procurement Code (the Code) (30 ILCS 500/20-43) provides that a person (other than an individual acting as a sole proprietor) must be a legal entity authorized to do business in the State of Illinois prior to submitting the bid.
9. **EXECUTION OF CONTRACT:** The Department of Transportation will, in accordance with the rules governing Department procurements, execute the contract and shall be the sole entity having the authority to accept performance and make payments under the contract. Execution of the contract by the Chief Procurement Officer (CPO) or the State Purchasing Officer (SPO) is for approval of the procurement process and execution of the contract by the Department. Neither the CPO nor the SPO shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Code.
10. **The services of a subcontractor will be used.**

Check box Yes
 Check box No

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

STATE JOB # - C-91-070-10
PPS NBR -

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 1
RUN DATE - 10/02/13
RUN TIME - 183103

COUNTY NAME	CODE	DIST	SECTION NUMBER	ROUND LAKE	PROJECT NUMBER	ROUTE	
LAKE	097	01	00-00025-00-FP	ROUND LAKE	M-9003/482/000	FAU 201	
ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE DOLLARS	CENTS	TOTAL PRICE DOLLARS	CTS
B2000778	T-AMELAN LAEV TF 3"	EACH	10.000 X	=			
B2001624	T-CRAT CRU-I TF 3	EACH	11.000 X	=			
XX003643	BASE REPAIR SPECIAL	SQ YD	581.000 X	=			
XX005928	TRAF SIGL P 10FT SPL	EACH	2.000 X	=			
XX005931	TRAF SIGL P 16FT SPL	EACH	1.000 X	=			
XX005937	LED INT IL S-NAME SGN	EACH	3.000 X	=			
XX005940	REMOTE CONTR VIDEO SY	EACH	1.000 X	=			
XX008131	ELCBL C VIDEO 18 3C	FOOT	580.000 X	=			
XX008253	VIDEO ENCODER	EACH	1.000 X	=			
XX008392	OUTDR RTD NTRK CABLE	FOOT	53.000 X	=			
XX008536	PREPARATION OF BSE SP	SQ YD	5,810.000 X	=			
XX008904	STORM SEW PILE SUP 36	FOOT	160.000 X	=			
XX008905	PRC FL-END SEC P S 36	EACH	1.000 X	=			
XX008906	S C MAA&P DMA 22&34SP	EACH	1.000 X	=			
XX008907	EC C EPR TYPE 2-1C 10	FOOT	345.000 X	=			

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
XZ127900	RETAINING WALL REMOV	FOOT	270.000	=		
X0324085	EM VEH P S LSC 20 3C	FOOT	302.000	=		
X0325366	STORM SEWER REPAIR	FOOT	65.000	=		
X0326950	INST EXSTG ELEC CABLE	FOOT	624.000	=		
X0327566	ROADSIDE DETECTOR	EACH	1.000	=		
X2130010	EXPLOR TRENCH SPL	FOOT	500.000	=		
X4021000	TEMP ACCESS- PRIV ENT	EACH	3.000	=		
X4022000	TEMP ACCESS- COM ENT	EACH	33.000	=		
X4023000	TEMP ACCESS- ROAD	EACH	10.000	=		
X5610680	WATER MAIN PROTECTION	FOOT	80.000	=		
X6022120	MAN DT 7 DIA T1F CL	EACH	1.000	=		
X6023102	MAN TA 5D T1F CL SPL	EACH	1.000	=		
X6026050	SANITARY MANHOLE ADJ	EACH	8.000	=		
X6640306	CH LK FENCE RELOC	FOOT	180.000	=		
X7010216	TRAF CONT & PROT SPL	L SUM	1.000	=		

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
X8570226	FAC T4 CAB SPL	EACH	1.000	=			
X8620200	UNINTER POWER SUP SPL	EACH	1.000	=			
X8730571	EC C COAXIAL	FOOT	105.000	=			
X8730800	ELCBL C VIDEO 20 4C	FOOT	105.000	=			
X8770139	S C MA&P 44 SPL	EACH	1.000	=			
Z0004562	COMB C C&G REM & REPL	FOOT	300.000	=			
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000	=			
Z0018500	DRAINAGE STR CLEANED	EACH	4.000	=			
Z0030850	TEMP INFO SIGNING	SQ FT	230.000	=			
Z0033046	RE-OPTIMIZE SIG SYS 2	EACH	1.000	=			
Z0033072	VIDEO VEH DET SYS	EACH	1.000	=			
Z0048665	RR PROT LIABILITY INS	L SUM	1.000	=			
Z0056608	STORM SEW WM REQ 12	FOOT	82.000	=			
Z0062456	TEMP PAVEMENT	SQ YD	500.000	=			
Z0073510	TEMP TR SIGNAL TIMING	EACH	1.000	=			

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECRM003 PAGE 4
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
20076600	TRAINEES	HOUR	1,000.000	0.80	=	800.00
20076604	TRAINEES TPG	HOUR	1,000.000	10.00	=	10,000.00
20100110	TREE REMOV 6-15	UNIT	135.000		=	
20100210	TREE REMOV OVER 15	UNIT	20.000		=	
20101100	TREE TRUNK PROTECTION	EACH	28.000		=	
20101200	TREE ROOT PRUNING	EACH	28.000		=	
20101300	TREE PRUN 1-10	EACH	14.000		=	
20101350	TREE PRUN OVER 10	EACH	14.000		=	
20200100	EARTH EXCAVATION	CU YD	5,474.000		=	
20201200	REM & DISP UNS MATL	CU YD	3,396.000		=	
20800150	TRENCH BACKFILL	CU YD	15,826.000		=	
21001000	GEOTECH FAB F/GR STAB	SQ YD	12,260.000		=	
21101615	TOPSOIL F & P 4	SQ YD	6,249.000		=	
25000200	SEEDING CL 2	ACRE	0.260		=	
25000310	SEEDING CL 4	ACRE	0.130		=	

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 5
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
25000314	SEEDING CL 4B	ACRE	0.370	=			
25000322	SEEDING CL 5A	ACRE	0.130	=			
25000400	NITROGEN FERT NUTR	POUND	89.000	=			
25000600	POTASSIUM FERT NUTR	POUND	89.000	=			
25100630	EROSION CONTR BLANKET	SQ YD	3,524.000	=			
25100900	TURF REINF MAT	SQ YD	35.000	=			
25200110	SODDING SALT TOLERANT	SQ YD	5,046.000	=			
25200200	SUPPLE WATERING	UNIT	100.000	=			
28000250	TEMP EROS CONTR SEED	POUND	338.000	=			
28000400	PERIMETER EROS BAR	FOOT	2,522.000	=			
28000510	INLET FILTERS	EACH	54.000	=			
28001100	TEMP EROS CONTR BLANK	SQ YD	18,780.000	=			
30300001	AGG SUBGRADE IMPROVE	CU YD	1,482.000	=			
30300112	AGG SUBGRADE IMPR 12	SQ YD	12,311.000	=			
35101400	AGG BASE CSE B	TON	320.000	=			

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECRM003 PAGE 6
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
35101600	AGG BASE CSE B 4	SQ YD	4,048.000	=		
35501288	HMA BASE CSE 2 1/2	SQ YD	4,030.000	=		
35501308	HMA BASE CSE 6	SQ YD	112.000	=		
35501316	HMA BASE CSE 8	SQ YD	452.000	=		
40600200	BIT MATLS PR CT	TON	23.000	=		
40600300	AGG PR CT	TON	74.000	=		
40600990	TEMPORARY RAMP	SQ YD	660.000	=		
40603080	HMA BC IL-19.0 N50	TON	1,698.000	=		
40603335	HMA SC "D" N50	TON	1,206.000	=		
40701871	HMA PAVT FD 9 1/2	SQ YD	6,630.000	=		
40800050	INCIDENTAL HMA SURF	TON	50.000	=		
42001300	PROTECTIVE COAT	SQ YD	5,132.000	=		
42300400	PCC DRIVEWAY PAVT 8	SQ YD	182.000	=		
42400200	PC CONC SIDEWALK 5	SQ FT	24,822.000	=		
42400300	PC CONC SIDEWALK 6	SQ FT	644.000	=		

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 7
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
42400410	PC CONC SIDEWALK 8	SQ FT	3,445.000	=			
42400800	DETECTABLE WARNINGS	SQ FT	140.000	=			
44000100	PAVEMENT REM	SQ YD	8,740.000	=			
44000165	HMA SURF REM 4	SQ YD	5,810.000	=			
44000200	DRIVE PAVEMENT REM	SQ YD	1,038.000	=			
44000300	CURB REM	FOOT	233.000	=			
44000500	COMB CURB GUTTER REM	FOOT	5,203.000	=			
44000600	SIDEWALK REM	SQ FT	10,055.000	=			
48102100	AGG WEDGE SHLD TYPE B	TON	13.000	=			
50105220	PIPE CULVERT REMOV	FOOT	37.000	=			
550A0050	STORM SEW CL A 1 12	FOOT	509.000	=			
550A0070	STORM SEW CL A 1 15	FOOT	542.000	=			
550A0160	STORM SEW CL A 1 36	FOOT	26.000	=			
550A0340	STORM SEW CL A 2 12	FOOT	280.000	=			
550A0450	STORM SEW CL A 2 36	FOOT	242.000	=			

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECRM003 PAGE 8
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
550A0750	STORM SEW CL A 3 36	FOOT	2,000.000	=			
550A1050	STORM SEW CL A 4 36	FOOT	467.000	=			
550A1320	STORM SEW CL A 5 36	FOOT	809.000	=			
550A2320	SS RG CL A 1 12	FOOT	31.000	=			
55100200	STORM SEWER REM 6	FOOT	4.000	=			
55100400	STORM SEWER REM 10	FOOT	55.000	=			
55100500	STORM SEWER REM 12	FOOT	613.000	=			
55100700	STORM SEWER REM 15	FOOT	560.000	=			
55101600	STORM SEWER REM 36	FOOT	48.000	=			
55201300	STORM SEWERS JKD 36	FOOT	187.000	=			
56300100	ADJ SAN SEWER 8 LESS	FOOT	22.000	=			
56300200	ADJ SAN SEWER OVER 8	FOOT	40.000	=			
56300300	ADJ WATER SERV LINES	FOOT	422.000	=			
56400100	FIRE HYDNITS TO BE MVD	EACH	3.000	=			
56400300	FIRE HYDNITS TO BE ADJ	EACH	1.000	=			

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
56500600	DOM WAT SER BOX ADJ	EACH	1.000 X	=			
60107600	PIPE UNDERDRAINS 4	FOOT	450.000 X	=			
60200105	CB TA 4 DIA T1F OL	EACH	1.000 X	=			
60200205	CB TA 4 DIA T1F CL	EACH	3.000 X	=			
60201105	CB TA 4 DIA T11F&G	EACH	3.000 X	=			
60201110	CB TA 4 DIA T11V F&G	EACH	5.000 X	=			
60205515	CB TA 5D M INL 604106	EACH	1.000 X	=			
60207905	CB TC T11F&G	EACH	5.000 X	=			
60207915	CB TC T11V F&G	EACH	4.000 X	=			
60218300	MAN TA 4 DIA T1F OL	EACH	1.000 X	=			
60221100	MAN TA 5 DIA T1F CL	EACH	10.000 X	=			
60223800	MAN TA 6 DIA T1F CL	EACH	1.000 X	=			
60224446	MAN TA 7 DIA T1F CL	EACH	2.000 X	=			
60224469	MAN TA 9 DIA T1F CL	EACH	1.000 X	=			
60234200	INLETS TA T1F OL	EACH	2.000 X	=			

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 10
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
60236825	INLETS TA T11V F&G	EACH	4.000			
60255500	MAN ADJUST	EACH	2.000			
60260100	INLETS ADJUST	EACH	1.000			
60261300	INLETS ADJ NEW T11F&G	EACH	2.000			
60262700	INLETS RECONST	EACH	2.000			
60263900	INL RECON NEW T11F&G	EACH	3.000			
60265700	VV ADJUST	EACH	1.000			
60266600	VALVE BOX ADJ	EACH	9.000			
60500040	REMOV MANHOLES	EACH	2.000			
60500060	REMOV INLETS	EACH	18.000			
60500070	REMOV MAN - MAIN FLOW	EACH	1.000			
60600605	CONC CURB TB	FOOT	192.000			
60603800	COMB CC&G TB6.12	FOOT	6,994.000			
60605000	COMB CC&G TB6.24	FOOT	97.000			
63300575	R&R RAIL ELEM EX GDRL	FOOT	50.000			

FAU 201
00-00025-00-FP ROUND LAKE
LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 11
RUN DATE - 10/02/13
RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
66300105	CALCIUM CHLORIDE APPLD	TON	21.000 X	=			
66900200	NON SPL WASTE DISPOSL	CU YD	6,100.000 X	=			
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000 X	=			
66900530	SOIL DISPOSAL ANALY	EACH	2.000 X	=			
67100100	MOBILIZATION	L SUM	1.000 X	=			
70106800	CHANGEABLE MESSAGE SN	CAL MO	30.000 X	=			
70300100	SHORT TERM PAVT MKING	FOOT	2,077.000 X	=			
70300210	TEMP PVT MK LTR & SYM	SQ FT	770.000 X	=			
70300220	TEMP PVT MK LINE 4	FOOT	18,458.000 X	=			
70300240	TEMP PVT MK LINE 6	FOOT	2,044.000 X	=			
70300260	TEMP PVT MK LINE 12	FOOT	1,648.000 X	=			
70300280	TEMP PVT MK LINE 24	FOOT	338.000 X	=			
70300520	PAVT MARK TAPE T3 4	FOOT	1,800.000 X	=			
70301000	WORK ZONE PAVT MK REM	SQ FT	938.000 X	=			
72000100	SIGN PANEL T1	SQ FT	205.000 X	=			

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 12
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
72400100	REMOV SIN PAN ASSY TA	EACH	21.000		=		
72800100	TELES STL SIN SUPPORT	FOOT	512.000		=		
78000100	THPL PVT MK LTR & SYM	SQ FT	385.000		=		
78000200	THPL PVT MK LINE 4	FOOT	9,184.000		=		
78000300	THPL PVT MK LINE 5	FOOT	90.000		=		
78000400	THPL PVT MK LINE 6	FOOT	1,022.000		=		
78000600	THPL PVT MK LINE 12	FOOT	824.000		=		
78000650	THPL PVT MK LINE 24	FOOT	169.000		=		
78100100	RAISED REFL PAVT MKR	EACH	16.000		=		
78300100	PAVT MARKING REMOVAL	SQ FT	710.000		=		
78300200	RAISED REF PVT MK REM	EACH	10.000		=		
80500020	SERV INSTALL POLE MT	EACH	1.000		=		
81028200	UNDRGRD C GALVS 2	FOOT	218.000		=		
81028210	UNDRGRD C GALVS 2 1/2	FOOT	66.000		=		
81028230	UNDRGRD C GALVS 3 1/2	FOOT	50.000		=		

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 13
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
81028240	UNDRGRD C GALVS 4	FOOT	196.000	X	=		
81400100	HANDHOLE	EACH	2.000	X	=		
81400300	DBL HANDHOLE	EACH	1.000	X	=		
82103250	LUM SV HOR MT PC 250W	EACH	2.000	X	=		
87301215	ELCBL C SIGNAL 14 2C	FOOT	660.000	X	=		
87301225	ELCBL C SIGNAL 14 3C	FOOT	583.000	X	=		
87301245	ELCBL C SIGNAL 14 5C	FOOT	1,330.000	X	=		
87301255	ELCBL C SIGNAL 14 7C	FOOT	375.000	X	=		
87301805	ELCBL C SERV 6 2C	FOOT	48.000	X	=		
87301900	ELCBL C EGRDC 6 1C	FOOT	394.000	X	=		
87800100	CONC FDN TY A	FOOT	12.000	X	=		
87800150	CONC FDN TY C	FOOT	4.000	X	=		
87800415	CONC FDN TY E 36D	FOOT	31.000	X	=		
87900200	DRILL EX HANDHOLE	EACH	1.000	X	=		
88030020	SH LED 1F 3S MAM	EACH	5.000	X	=		

FAU 201
 00-00025-00-FP ROUND LAKE
 LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECMR003 PAGE 14
 RUN DATE - 10/02/13
 RUN TIME - 183103

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
88030050	SH LED 1F 3S BM	EACH	3.000			
88030100	SH LED 1F 5S BM	EACH	1.000			
88030110	SH LED 1F 5S MAM	EACH	1.000			
88102717	PED SH LED 1F BM CDT	EACH	2.000			
88200210	TS BACKPLATE LOU ALUM	EACH	6.000			
88700200	LIGHT DETECTOR	EACH	2.000			
88700300	LIGHT DETECTOR AMP	EACH	1.000			
88800100	PED PUSH-BUTTON	EACH	2.000			
89000100	TEMP TR SIG INSTALL	EACH	1.000			
89500120	REM EX SERV INSTALL	EACH	1.000			
89502300	REM ELCBL FR CON	FOOT	6,403.000			
89502375	REMOV EX TS EQUIP	EACH	1.000			
89502380	REMOV EX HANDHOLE	EACH	4.000			
89502382	REMOV EX DBL HANDHOLE	EACH	1.000			
89502385	REMOV EX CONC FDN	EACH	6.000			

TOTAL \$

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

FAU 201
00-00025-00-FP ROUND LAKE
LAKE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 63868

ECMS002 DTGECM03 ECRM003 PAGE
RUN DATE - 10/02/13
RUN TIME - 183103

15

NOTE:

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

RETURN WITH BID

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

I. GENERAL

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

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

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

I acknowledge, understand and accept these terms and conditions.

II. ASSURANCES

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

A. Conflicts of Interest

Section 50-13. Conflicts of Interest.

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

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

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

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

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

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

RETURN WITH BID

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

B. Negotiations

Section 50-15. Negotiations.

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

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

C. Inducements

Section 50-25. Inducement.

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

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

D. Revolving Door Prohibition

Section 50-30. Revolving door prohibition.

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

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

E. Reporting Anticompetitive Practices

Section 50-40. Reporting anticompetitive practices.

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

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

F. Confidentiality

Section 50-45. Confidentiality.

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

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

RETURN WITH BID

G. Insider Information

Section 50-50. Insider information.

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

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

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

III. CERTIFICATIONS

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

A. Bribery

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 2012.

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

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

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

B. Felons

Section 50-10. Felons.

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

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

RETURN WITH BID

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

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

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

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

F. Educational Loan

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

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

G. Bid-Rigging/Bid Rotating

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

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

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

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

RETURN WITH BID

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

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

H. International Anti-Boycott

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

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

I. Drug Free Workplace

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

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

J. Disclosure of Business Operations in Iran

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

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

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

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

Check the appropriate statement:

Company has no business operations in Iran to disclose.

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

RETURN WITH BID

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

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

NA-FEDERAL

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

RETURN WITH BID

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

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

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

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

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

M. Lobbyist Disclosure

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

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

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

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

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

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

Or

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

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

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

RETURN WITH BID

IV. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

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

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

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

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

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

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

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

RETURN WITH BID

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

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

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

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

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Financial Information & Potential Conflicts of Interest Disclosure

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

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

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

DISCLOSURE OF FINANCIAL INFORMATION

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

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

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

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

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

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

RETURN WITH BID

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

(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: _____
Signature of Individual or Authorized Representative Date

NOT APPLICABLE STATEMENT

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

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

Signature of Authorized Representative Date

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

RETURN WITH BID

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Other Contracts & Financial Related Information Disclosure

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

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

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature of Authorized Representative, Date

OWNERSHIP CERTIFICATION

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

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

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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

RETURN WITH BID

**Contract No. 63868
LAKE County
Section 00-00025-00-FP (Round Lake)
Project M-9003(482)
Route FAU 201 (Hart Road)
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. 63868
LAKE County
Section 00-00025-00-FP (Round Lake)
Project M-9003(482)
Route FAU 201 (Hart Road)
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 _____
Attest _____
Signature _____
(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW) Business Address _____

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

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



Return with Bid

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

Item No. _____

Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

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

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

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

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

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

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

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By _____
(Signature & Title)

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

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
County of _____

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

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

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

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

My commission expires _____

Notary Public

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

Electronic Bid Bond ID#

Company / Bidder Name



Signature and Title

(1) Policy

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

(2) Obligation

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

(3) Project and Bid Identification

Complete the following information concerning the project and bid:

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

(4) Assurance

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

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

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

Failed to meet contract award goals and has included good faith effort documentation to meet the goals and that my company has provided participation as follows:

Disadvantaged Business Participation _____ percent

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

Company

By _____

Title _____

Date _____

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

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

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

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



**Illinois Department
of Transportation**

DBE Participation Statement

Subcontractor Registration _____

Letting _____

Participation Statement

Item No. _____

(1) Instructions

Contract _____

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

(2) Work

Pay Item No.	Description	Quantity	Unit Price	Total
Total				

(3) Partial Payment Items

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

(4) Commitment

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

Signature for Prime Contractor

Title _____

Date _____

Contact _____

Phone _____

Firm Name _____

Address _____

City/State/Zip _____

Signature for DBE Firm

Title _____

Date _____

Contact Person _____

Phone _____

Firm Name _____

Address _____

City/State/Zip _____

E _____

WC _____

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

PROPOSAL ENVELOPE



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

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. 63868
LAKE County
Section 00-00025-00-FP (Round Lake)
Project M-9003(482)
Route FAU 201 (Hart Road)
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

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, or which is signatory to the contract to which the subcontract relates, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 2012.

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

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

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

B. Felons

Section 50-10. Felons.

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

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

RETURN WITH SUBCONTRACT

C. Debt Delinquency

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

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

D. Prohibited Bidders, Contractors and Subcontractors

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

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

E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

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

Name of Subcontracting Company

Authorized Officer

Date

RETURN WITH SUBCONTRACT
SUBCONTRACTOR DISCLOSURES

I. DISCLOSURES

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

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

B. Financial Interests and Conflicts of Interest

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

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

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

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

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

C. Disclosure Form Instructions

Form A Instructions for Financial Information & Potential Conflicts of Interest

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

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

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

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

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

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

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

DISCLOSURE OF FINANCIAL INFORMATION

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

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

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

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

Yes ___ No ___

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

Yes ___ No ___

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

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

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

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

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

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

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

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

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

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

RETURN WITH SUBCONTRACT

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

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

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

3 Communication Disclosure.

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

Name and address of person(s): _____

RETURN WITH SUBCONTRACT

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

Name of person(s): _____

Nature of disclosure: _____

APPLICABLE STATEMENT

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

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

NOT APPLICABLE STATEMENT

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

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

_____ Date _____
Signature of Authorized Officer

RETURN WITH SUBCONTRACT

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Subcontractor: Other Contracts & Financial Related Information Disclosure

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

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

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

Signature box with fields: Signature of Authorized Officer, Date

OWNERSHIP CERTIFICATION

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

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

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



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation. Electronic bids are to be submitted to the electronic bidding system (ics-Integrated Contractors Exchange). Paper-based bids are to be submitted to the Chief Procurement Officer for the Department of Transportation in care of the Chief Contracts Official at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m. November 8, 2013. 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. 63868
LAKE County
Section 00-00025-00-FP (Round Lake)
Project M-9003(482)
Route FAU 201 (Hart Road)
District 1 Construction Funds**

HMA widening and reconstruction, storm sewer installation, curb and gutter, sidewalk, driveway, traffic signal replacement, parkway restoration and all other incidental items to complete the work on Hart Road from Illinois Route 134 to Cedar Lake Road in the Village of Round Lake.

- 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, 2013

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-12) (Revised 1-1-13)

SUPPLEMENTAL SPECIFICATIONS

<u>Std. Spec. Sec.</u>	<u>Page No.</u>
105 Control of Work	1
107 Legal Regulations and Responsibility to Public	2
202 Earth and Rock Excavation	4
211 Topsoil and Compost	5
407 Hot-Mix Asphalt Pavement (Full-Depth)	6
420 Portland Cement Concrete Pavement	10
424 Portland Cement Concrete Sidewalk	12
503 Concrete Structures	13
504 Precast Concrete Structures	14
540 Box Culverts	15
603 Adjusting Frames and Grates of Drainage and Utility Structures	16
610 Shoulder Inlets with Curb	18
642 Shoulder Rumble Strips	19
643 Impact Attenuators	20
701 Work Zone Traffic Control and Protection	22
706 Impact Attenuators, Temporary	24
780 Pavement Striping	26
860 Master Controller	27
1006 Metals	28
1042 Precast Concrete Products	29
1073 Controller	30
1083 Elastomeric Bearings	31
1101 General Equipment	32
1106 Work Zone Traffic Control Devices	34

RECURRING SPECIAL PROVISIONS

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

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
1 X Additional State Requirements for Federal-Aid Construction Contracts (Eff. 2-1-69) (Rev. 1-1-10)	35
2 X Subletting of Contracts (Federal-Aid Contracts) (Eff. 1-1-88) (Rev. 5-1-93)	38
3 X EEO (Eff. 7-21-78) (Rev. 11-18-80)	39
4 Specific Equal Employment Opportunity Responsibilities Non Federal-Aid Contracts (Eff. 3-20-69) (Rev. 1-1-94)	49
5 Required Provisions - State Contracts (Eff. 4-1-65) (Rev. 1-1-13)	54
6 Asbestos Bearing Pad Removal (Eff. 11-1-03)	59
7 Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal (Eff. 6-1-89) (Rev. 1-1-09)	60
8 Haul Road Stream Crossings, Other Temporary Stream Crossings, and In-Stream Work Pads (Eff. 1-2-92) (Rev. 1-1-98)	61
9 Construction Layout Stakes Except for Bridges (Eff. 1-1-99) (Rev. 1-1-07)	62
10 X Construction Layout Stakes (Eff. 5-1-93) (Rev. 1-1-07)	65
11 Use of Geotextile Fabric for Railroad Crossing (Eff. 1-1-95) (Rev. 1-1-07)	68
12 Subsealing of Concrete Pavements (Eff. 11-1-84) (Rev. 1-1-07)	70
13 Hot-Mix Asphalt Surface Correction (Eff. 11-1-87) (Rev. 1-1-09)	74
14 Pavement and Shoulder Resurfacing (Eff. 2-1-00) (Rev. 1-1-09)	76
15 PCC Partial Depth Hot-Mix Asphalt Patching (Eff. 1-1-98) (Rev. 1-1-07)	77
16 Patching with Hot-Mix Asphalt Overlay Removal (Eff. 10-1-95) (Rev. 1-1-07)	79
17 Polymer Concrete (Eff. 8-1-95) (Rev. 1-1-08)	80
18 PVC Pipeliner (Eff. 4-1-04) (Rev. 1-1-07)	82
19 X Pipe Underdrains (Eff. 9-9-87) (Rev. 1-1-07)	83
20 Guardrail and Barrier Wall Delineation (Eff. 12-15-93) (Rev. 1-1-12)	84
21 Bicycle Racks (Eff. 4-1-94) (Rev. 1-1-12)	88
22 Temporary Modular Glare Screen System (Eff. 1-1-00) (Rev. 1-1-07)	90
23 Temporary Portable Bridge Traffic Signals (Eff. 8-1-03) (Rev. 1-1-07)	92
24 Work Zone Public Information Signs (Eff. 9-1-02) (Rev. 1-1-07)	94
25 Night Time Inspection of Roadway Lighting (Eff. 5-1-96)	95
26 English Substitution of Metric Bolts (Eff. 7-1-96)	96
27 English Substitution of Metric Reinforcement Bars (Eff. 4-1-96) (Rev. 1-1-03)	97
28 Calcium Chloride Accelerator for Portland Cement Concrete (Eff. 1-1-01) (Rev. 1-1-13)	98
29 Portland Cement Concrete Inlay or Overlay for Pavements (Eff. 11-1-08) (Rev. 1-1-13)	99
30 Quality Control of Concrete Mixtures at the Plant (Eff. 8-1-00) (Rev. 1-1-11)	102
31 Quality Control/Quality Assurance of Concrete Mixtures (Eff. 4-1-92) (Rev. 1-1-11)	110
32 Digital Terrain Modeling for Earthwork Calculations (Eff. 4-1-07)	122

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

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

Table of Contents

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
LRS 1 Reserved	125
LRS 2 <input type="checkbox"/> Furnished Excavation	126
LRS 3 <input checked="" type="checkbox"/> Work Zone Traffic Control Surveillance	127
LRS 4 <input checked="" type="checkbox"/> Flaggers in Work Zones	128
LRS 5 <input type="checkbox"/> Contract Claims	129
LRS 6 <input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals	130
LRS 7 <input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals	136
LRS 8 Reserved	142
LRS 9 <input type="checkbox"/> Bituminous Surface Treatments	143
LRS 10 Reserved	144
LRS 11 <input type="checkbox"/> Employment Practices	145
LRS 12 <input type="checkbox"/> Wages of Employees on Public Works (Eff. 1-1-99) (Rev. 1-1-13).....	147
LRS 13 <input type="checkbox"/> Selection of Labor	149
LRS 14 <input type="checkbox"/> Paving Brick and Concrete Paver Pavements and Sidewalks	150
LRS 15 <input type="checkbox"/> Partial Payments	153
LRS 16 <input type="checkbox"/> Protests on Local Lettings	154
LRS 17 <input type="checkbox"/> Substance Abuse Prevention Program.....	155
LRS 18 <input type="checkbox"/> Multigrade Cold Mix Asphalt	156

INDEX OF SPECIAL PROVISIONS

PAGE NO.

LOCATION OF PROJECT	1
DESCRIPTION OF WORK.....	1
MAINTENANCE OF ROADWAYS	1
STATUS OF UTILITIES TO BE ADJUSTED	2
HIGHWAY PERMIT	5
RAILROAD PERMIT	5
COOPERATION WITH OTHER CONTRACTORS	5
COMPLETION DATE PLUS WORKING DAYS.....	5
PUBLIC CONVENIENCE AND SAFETY (DIST 1)	6
EMBANKMENT II.....	7
COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1)	8
AGGREGATE SUBGRADE IMPROVEMENT (D-1)	8
BITUMINOUS PRIME COAT FOR HOT-MIX ASPHALT PAVEMENT (FULL DEPTH) (D-1).....	11
FINE AGGREGATE FOR HOT- MIX ASPHALT (HMA) (D-1).....	11
FRICTION SURFACE AGGREGATE (D1).....	11
HMA MIXTURE DESIGN REQUIREMENTS (D-1).....	15
RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1).....	19
GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1).....	31
FIRE HYDRANTS TO BE ADJUSTED.....	32
DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED	33
ADJUSTMENTS AND RECONSTRUCTIONS	34
DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 1).....	35
TRAFFIC CONTROL PLAN	36
REMOVE EXISTING HANDHOLE	37
REMOVE EXISTING CONCRETE FOUNDATION.....	37
COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	38
CLEANING EXISTING DRAINAGE STRUCTURES.....	38
TEMPORARY INFORMATION SIGNING.....	38

INDEX OF SPECIAL PROVISIONS (CONT.)

	<u>PAGE NO.</u>
STORM SEWER ADJACENT TO OR CROSSING WATER MAIN.....	40
TEMPORARY PAVEMENT.....	40
RETAINING WALL REMOVAL	41
STORM SEWER REPAIR.....	42
INSTALL EXISTING ELECTRICAL CABLE	42
ROADSIDE DETECTOR.....	43
EXPLORATION TRENCH, SPECIAL.....	43
AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS	44
WATER MAIN PROTECTION.....	45
MANHOLES, DROP TYPE	46
MANHOLES, SPECIAL.....	46
SANITARY MANHOLES TO BE ADJUSTED	47
CHAIN LINK FENCE TO BE RELOCATED.....	48
TRAFFIC CONTROL AND PROTECTION (ARTERIALS).....	49
BASE REPAIR, SPECIAL	49
PREPARATION OF BASE (SPECIAL).....	50
STORM SEWERS, PILE SUPPORTED	51
PRECAST REINFORCED CONCRETE FLARED END SECTION, PILE SUPPORTED	52
ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW), 2-1/C NO. 10.....	52
TRAFFIC SIGNAL SPECIAL PROVISIONS (LAKE COUNTY DOT)	53
....SUBMITTALS.....	54
....MARKING PROPOSED LOCATIONS	55
....INSPECTION OF ELECTRICAL SYSTEMS	56
....MAINTENANCE AND RESPONSIBILITY	56
....LIQUIDATED DAMAGES FOR UNTIMELY WORK.....	59
....DAMAGE TO TRAFFIC SIGNAL SYSTEM.....	59
....TRAFFIC SIGNAL INSPECTION (TURN-ON)	59
....LOCATING UNDERGROUND FACILITIES	61
....MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	61
....TEMPORARY TRAFFIC SIGNAL INSTALLATION.....	63

INDEX OF SPECIAL PROVISIONS (CONT.)

	<u>PAGE NO.</u>
.....REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT.....	67
.....RESTORATION OF WORK AREA	67
.....CABINET NEATNESS	67
.....VENDOR REPRESENTATION.....	68
.....INTERRUPTION OF COMMUNICATION	68
.....ELECTRIC SERVICE INSTALLATION	69
.....GROUNDING OF TRAFFIC SIGNAL SYSTEMS.....	72
.....GROUNDING EXISTING HANDHOLE FRAME AND COVER	73
.....UNDERGROUND CONDUIT	73
.....CONCRETE FOUNDATIONS.....	74
.....HANDHOLES	75
.....COILABLE NON-METALLIC CONDUIT	75
.....DETECTOR LOOP	76
.....ELECTRIC CABLE	78
.....GROUNDING CABLE	78
.....RAILROAD INTERCONNECT CABLE	79
.....ELECTRIC CABLE IN CONDUIT, COAXIAL	79
.....EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	80
.....ELECTRICAL CABLE IN CONDUIT, VIDEO NO 20 4 C.....	80
.....OUTDOOR RATED NETWORK CABLE	80
.....TRAFFIC-ACTUATED CONTROLLER.....	81
.....CONTROLLER CABINET AND PERIPHERAL EQUIPMENT.....	81
.....FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	83
.....TRAFFIC ACTUATED CONTROLLER & CABINET INTERCONNECTED WITH RAILROADS.....	83
.....MASTER CONTROLLER	84
.....INTERSECTION MONITOR	84
.....INDUCTIVE LOOP DETECTOR.....	84
.....UNINTERRUPTABLE POWER SUPPLY, SPECIAL.....	85
.....EMERGENCY VEHICLE PRIORITY SYSTEM	87

INDEX OF SPECIAL PROVISIONS (CONT.)

	<u>PAGE NO.</u>
.....STEEL MAST ARM ASSEMBLY AND POLE	88
.....STEEL MAST ARM ASSEMBLY AND POLE (SPECIAL)	89
.....LUMINAIRE.....	90
.....TRAFFIC SIGNAL POST.....	91
.....TRAFFIC SIGNAL POST (SPECIAL)	91
.....PEDESTRIAN PUSH-BUTTON	92
.....ILLUMINATED SIGN, LIGHT EMITTING DIODE.....	93
.....LED INTERNALLY ILLUMINATED STREET NAME SIGN	93
.....MAST ARM SIGN PANELS	97
.....SIGNAL HEADS.....	97
.....PEDESTRIAN SIGNAL HEAD, LED.....	98
.....SIGNAL HEAD, LED, RETROFIT	99
.....TRAFFIC SIGNAL BACKPLATE	99
.....VIDEO VEHICLE DETECTION SYSTEM	99
.....REMOTE-CONTROLLED VIDEO SYSTEM	101
.....CAMERA MOUNTING ASSEMBLY.....	102
.....VIDEO TRANSMISSION SYSTEM.....	102
.....COMMUNICATIONS CABINET	103
.....LAYER II (DATA LINK) SWITCH	105
.....LAYER III (NETWORK) SWITCH	106
.....FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, LONG DISTANCE	106
.....FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, EXTRA LONG DISTANCE	107
.....FIBER OPTIC TRANSCEIVER MODULE, GBIC TYPE, LONG DISTANCE	107
.....FIBER OPTIC TRANSCEIVER MODULE, GBIC TYPE, EXTRA LONG DISTANCE	107
.....VIDEO ENCODER	108
.....MEDIA CONVERTER.....	108
.....TERMINAL SERVER.....	109
.....FIBER OPTIC CABLE	109
.....TERMINATE FIBER IN CABINET	111
.....SPLICE FIBER IN CABINET	111

INDEX OF SPECIAL PROVISIONS (CONT.)

	<u>PAGE NO.</u>
.....FIBER OPTIC TRACER CABLE.....	112
.....WIRELESS TRANSMISSION SYSTEM SHORT RANGE.....	112
.....WIRELESS TRANSMISSION SYSTEM LONG RANGE.....	113
.....WIRELESS TRANSMISSION SYSTEM EXTRA LONG RANGE.....	114
.....WIRELESS TRANSMISSION SYSTEM POINT TO POINT.....	115
.....WIRELESS TRANSMISSION SYSTEM BACKHAUL.....	116
.....WIRELESS TRANSMISSION SYSTEM BASE STATION.....	117
.....RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION).....	117
.....RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM.....	118
.....RELOCATE EXISTING SWITCH.....	118
.....TEMPORARY TRAFFIC SIGNAL TIMING.....	119
.....RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM.....	120
.....OPTIMIZE TRAFFIC SIGNAL SYSTEM.....	122
.....ELECTRIC CABLE IN CONDUIT, VIDEO NO. 18 3C.....	125
LAKE COUNTY D.O.T. TRAFFIC CONTROL AND PROTECTION SPECIAL PROVISION.....	125

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROV. (TPG)

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
NOTICE OF INTENT FOR CONSTRUCTION (NOI)
METRA RIGHT-OF-ENTRY PERMIT APPLICATION FORM
CCDD SOIL TESTING RESULTS

INDEX LOCAL ROADS AND STREETS SPECIAL PROVISIONS

<u>LR #</u>	<u>Pg #</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
LR SD12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR SD406		<input type="checkbox"/> Safety Edge	April 1, 2011	
LR 105	229	<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	232	<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. 2, 2013
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 109		<input type="checkbox"/> Equipment Rental Rates	Jan. 1, 2012	
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Bituminous Stabilized Base Course, Plant Mix	Feb. 20, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2007	Apr. 1, 2012
LR 400-2		<input type="checkbox"/> Bituminous Surface Plant Mix (Class B)	Jan. 1, 2008	
LR 400-3		<input type="checkbox"/> Hot In-Place Recycling (HIR) – Surface Recycling	Jan. 1, 2012	
LR 400-4		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-5		<input type="checkbox"/> Cold In-Place Recycling (CIR) With Emulsified Asphalt	Apr. 1, 2012	Jun. 1, 2012
LR 400-6		<input type="checkbox"/> Cold In Place Recycling (CIR) with Foamed Asphalt	June 1, 2012	
LR 400-7		<input type="checkbox"/> Full-Depth Reclamation (FDR) with Foamed Asphalt	June 1, 2012	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-1		<input type="checkbox"/> Surface Profile Milling of Existing, Recycled or Reclaimed Flexible Pavement	Apr. 1, 2012	Jan. 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	233	<input checked="" type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1000-1		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures	Apr. 1, 2012	Jun. 1, 2012
LR 1000-2		<input type="checkbox"/> Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures	June 1, 2012	
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	Jan. 1, 2010
LR 1032-1		<input type="checkbox"/> Emulsified Asphalts	Jan. 1, 2007	Feb. 7, 2008
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plan Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the November 8, 2013 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
80274			Aggregate Subgrade Improvement	April 1, 2012	Jan. 1, 2013
80309			Anchor Bolts	Jan. 1, 2013	
80192	235	X	Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2013
80241			Bridge Demolition Debris	July 1, 2009	
80276			Bridge Relief 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
80292			Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	April 1, 2013
80310			Coated Galvanized Steel Conduit	Jan. 1, 2013	
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293			Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	
80294			Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	April 1, 2012	
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	
80277			Concrete Mix Design – Department Provided	Jan. 1, 2012	
80261	237	X	Construction Air Quality – Diesel Retrofit	June 1, 2010	
80029	240	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80312			Drain Pipe, Tile, Drainage Mat, and Wall Drain	Jan. 1, 2013	
80313			Fabric Bearing Pads	Jan. 1, 2013	
80265			Friction Aggregate	Jan. 1, 2011	
80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80303	250	X	Granular Materials	Nov. 1, 2012	
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
80169			High Tension Cable Median Barrier	Jan. 1, 2007	Jan. 1, 2013
80246	251	X	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
* 80322			Hot-Mix Asphalt – Mixture Design Composition and Volumetric Requirements	Nov 1, 2013	
* 80323			Hot-Mix Asphalt – Mixture Design Verification and Production	Nov 1, 2013	
* 80315			Insertion Lining of Culverts	Jan. 1, 2013	Nov 1, 2013
80320	253	X	Liquidated Damages	April 1, 2013	
* 80324			LRFD Pipe Culvert Burial Tables	Nov 1, 2013	
* 80325	254	X	LRFD Storm Sewer Burial Tables	Nov 1, 2013	
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
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, 2013
80231	264	X	Pavement Marking Removal	April 1, 2009	
80298			Pavement Marking Tape Type IV	April 1, 2012	
80254			Pavement Patching	Jan. 1, 2010	
80321	265	X	Pavement Removal	April 1, 2013	
80022	266	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80316	268	X	Placing and Consolidating Concrete	Jan. 1, 2013	
80278	271	X	Planting Woody Plants	Jan. 1, 2012	Aug. 1, 2012
80305			Polyurea Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
* 80279	273	X	Portland Cement Concrete	Jan. 1, 2012	Nov. 1, 2013
* 80326	316	X	Portland Cement Concrete Equipment	Nov. 1, 2013	
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
* 80328	316A	X	Progress Payments	Nov. 2, 2013	
* 80281	317	X	Quality Control/Quality Assurance of Concrete Mixtures	Jan. 1, 2012	Nov. 1, 2013
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	333	X	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306			Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)	Nov. 1, 2012	Nov. 1, 2013
* 80327	335	X	Reinforcement bars	Nov. 1, 2013	
80283	337	X	Removal and Disposal of Regulated Substances	Jan. 1, 2012	Nov. 2, 2012
80319	341	X	Removal and Disposal of Surplus Materials	Nov. 2, 2012	
80224			Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	Jan. 1, 2012
80307			Seeding	Nov. 1, 2012	
80127			Steel Cost Adjustment	April 2, 2004	April 1, 2009
80255			Stone Matrix Asphalt	Jan. 1, 2010	Aug. 1, 2013
80143	342	X	Subcontractor Mobilization Payments	April 2, 2005	April 1, 2011
80317			Surface Testing of Hot-Mix Asphalt Overlays (NOTE: This special provision was previously named "Surface Testing of Pavements".)	Jan. 1, 2013	
80308			Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Nov. 1, 2012	
80286	343	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, 2013
80301	344	X	Tracking the Use of Pesticides	Aug. 1, 2012	
80273	345	X	Traffic Control Deficiency Deduction	Aug. 1, 2011	
20338	346	X	Training Special Provisions	Oct. 15, 1975	
80318			Traversable Pipe Grate	Jan. 1, 2013	April 1, 2013
80270			Utility Coordination and Conflicts	April 1, 2011	Jan. 1, 2012
* 80288	349	X	Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2013
80302	353	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:

80271 Safety Edge

The following special provisions are either in the 2013 Standard Specifications, the 2013 Recurring Special Provisions, or the special provisions Portland Cement Concrete, QC/QA of Concrete Mixtures, or Placing and Consolidating Concrete:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80275	Agreement to Plan Quantity	Article 202.07	Jan. 1, 2012	
80291	Calcium Chloride Accelerator for Class PP-2 Concrete	Recurring CS #28	April 1, 2012	
80237	Construction Air Quality – Diesel Vehicle Emissions Control	Articles 105.03 and 107.41	April 1, 2009	Jan. 2, 2012

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80239	Construction Air Quality – Idling Restrictions	Articles 105.03 and 107.41	April 1, 2009	
80177	Digital Terrain Modeling for Earthwork Calculations	Recurring CS #32	April 1, 2007	
80272	Drainage and Inlet Protection Under Traffic	Articles 603.02 and 603.07	April 1, 2011	Jan. 1, 2012
80228	Flagger at Side Roads and Entrances	Articles 701.13 and 701.20	April 1, 2009	
80109	Impact Attenuators	Section 643	Nov. 1, 2003	Jan. 1, 2012
80110	Impact Attenuators, Temporary	Section 706	Nov. 1, 2003	Jan. 1, 2012
80203	Metal Hardware Cast into Concrete	Articles 503.02, 504.02, and 1006.13	April 1, 2008	Jan. 1, 2012
80290	Payrolls and Payroll Records	Recurring CS #5	Jan. 2, 2012	
80299	Portland Cement Concrete Inlay or Overlay	Recurring CS #29	April 1, 2012	
80280	Portland Cement Concrete Sidewalk	Article 424.07	Jan. 1, 2012	
80152	Self-Consolidating Concrete for Cast-In-Place Construction	The following special provisions: Portland Cement Concrete, QC/QA of Concrete Mixtures and Placing and Consolidating Concrete	Nov. 1, 2005	April 1, 2012
80132	Self-Consolidating Concrete for Precast and Precast Prestressed Products	The following special provisions: Portland Cement Concrete, QC/QA of Concrete Mixtures and Placing and Consolidating Concrete	July 1, 2004	April 1, 2012
80284	Shoulder Rumble Strips	Article 642.05	Jan. 1, 2012	
80285	Sidewalk, Corner or Crosswalk Closure	Articles 701.03, 701.15, and 1106.02	Jan. 1, 2012	
80075	Surface Testing of Pavements (Section 406 overlay portion will remain a special provision and will now be called "Surface Testing of HMA Overlays".)	Articles 407.09, 407.12, 420.10, 420.20, and 1101.10	April 1, 2002	Jan. 1, 2007
80287	Type G Inlet Box	Article 610.09	Jan. 1, 2012	

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

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

**STATE OF ILLINOIS
SPECIAL PROVISIONS**

CONTRACT NO: 63868

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2012, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAU Route 201 (Hart Road); Section: 00-00025-00-FP; Project: M-9003(482), Job: C-91-070-10; County: Lake; and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT:

The project is located on FAU 201 Hart Road, from FAU 186 (Illinois Route 134) to FAU 192 (Cedar Lake Road), in the Village of Round Lake, Lake County, Illinois. The gross length of improvement is 4,393 feet (0.833 miles), the net length of improvement is 4,393 feet (0.833 miles).

DESCRIPTION OF WORK:

The work consists of furnishing all labor, materials, equipment, and other incidentals necessary for the completion of urban hot-mix asphalt roadway reconstruction; storm sewer installation; curb and gutter; sidewalk; driveways; traffic signal replacement; parkway restoration; and other incidental and miscellaneous items of work in accordance with the Plans, Standard Specifications, and these Special Provisions.

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: January 24, 2013

Utilities companies involved in this project have provided the following estimated durations:

<u>Name of Utility</u>	<u>Type</u>	<u>Location</u>	<u>Estimated Duration of Time for the Completion of Relocation or Adjustments</u>
Nicor Gas 1844 Ferry Road Naperville, IL 60563 Constance Lane (630) 388-3830 clane@agresources.com Phil Doll EN Engineering (630) 967-6764 pdoll@enengineering.com	6" gas main 2" gas main Relocations: Other Potential Conflicts:	North side of Hart Rd. West parkway of Sunset Drive 6" Gas Main Sta 102+08 LT to Sta 117+00 LT Sta 117+20 LT Sta 50+30 to 66+00 LT Sta 74+50 to 75+80 LT	No schedule provided at this time. Projected start date early Spring 2014. Nicor Eng# N7161
ComEd 1500 Franklin Blvd. Libertyville, IL 60048 Terri Bleck (847) 816-5239 terri.bleck@ComEd.com Tim Tamason (815) 477-5258	Power poles & aerial power lines UG Cable Xings Abn UG Cable Relocations:	South ROW of Hart Road Sta 104+35 Sta 112+90 Sta 114+75 PP Sta 104+32 RT UG Sta 104+32 PP Sta 115+20 RT PP Sta 116+55 RT	Start March 10, 2014 End March 20, 2014 ComEd Ref# H9354LIB
Comcast 688 Industrial Drive Elmhurst, IL 60126 Tony Curtis (847) 789-0974 Ted Wyman	Aerial cable lines UG Cable Xings UG Cable	On ComEd poles along south ROW Hart Road Sta 102+95 Sta 109+23 Sta 115+20 Sta 115+20 to 116+55 RT	Relocation Schedule to follow ComEd Schedule.

Village of Round Lake
 FAU 201 Hart Road
 Section No.: 00-00025-00-FP
 County: Lake
 Contract No.: 63868

<p>(630) 600-6349 Ted_wyman@cable.comcast.com</p>	<p>Relocations:</p>	<p>PP Sta 104+32 RT PP Sta 115+20 RT PP Sta 116+55 RT UG Sta 115+20 to 116+55 RT</p>	
<p>AT&T Civic Project Engineering 1000 Commerce Drive Oak Brook, IL 60523 Hector Garcia (630) 573-5465 Hg2929@att.com</p>	<p>29 Duct Fiber 15 Duct Fiber 13 Duct Fiber 1 Duct Fiber UG phone lines UG Cable Xings Several Pedestals MH lid ADJ's: Relocations: Potential Conflicts:</p>	<p>South side of Hart Road West side of Cedar Lake Rd S. of Hart West side of Cedar Lake Rd & crossing Hart Rd at 117+00 Crossing Hart Rd. at Sta 110+60. North parkway of Hart Road & West ROW of Sunset Dr. Sta 103+90 Sta 104+25 Sta 104+55 Sta 114+30 Both side of Hart Rd. & West side of Sunset Dr Sta 104+53 RT Sta 110+60 RT Sta 116+82 RT Sta 116+88 RT Ped Sta 106+25 RT XingSta 103+00 to 104+55 Sta 105+50 RT Sta 107+09 RT Sta 109+00 RT Xing Sta 110+60 Sta 110+60 RT Sta 112+58 RT Sta 113+25 RT Sta 111+50 to 114+30 LT Xing Sta 114+30 Sta 116+90 RT</p>	<p>Conflict review ongoing. Contact for Adjustment of Manhole lids.</p>

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

- 5) Any time within the 90 day relocation period the utility company may request a waiver for additional time to complete their relocation. The Department has 10 days to review and respond to a waiver request.

HIGHWAY PERMIT:

A Lake County Division of Transportation permit is required for the work on Cedar Lake Road. The Contractor shall execute all necessary permit forms, provide and pay for any fee and bond requirements, and execute and comply with all insurance and performance guarantee requirements. Work required to comply with these permit requirements shall be included as part of the contract.

RAILROAD PERMIT:

A Right-of-Entry (ROE) permit is required from the Metra Railroad for the work within the right-of-way of the Metra Milwaukee District North Line. The Contractor shall execute all necessary permit forms, provide and pay for any fee and bond requirements, and execute and comply with all insurance and performance guarantee requirements. A Metra ROE application form is included in these documents. Work required to comply with these permit requirements will be paid for according to Article 107.12 and reimbursed according to Article 109.05. Insurance will be paid for separately as RAILROAD PROTECTIVE LIABILITY INSURANCE.

COOPERATION WITH OTHER CONTRACTORS:

Washington Street will be improved by others at the same time as Hart Road. The Contractor shall cooperate with other Contractors that are working on the Washington Street improvements. The Contractor shall schedule his construction to minimize conflicts in common work areas and to maintain continuity in construction and traffic management. The Contractor will be given the names of any other contractors who will work on or near the project site. It is the Contractor's responsibility to contact each contractor and coordinate the sequence of work with them.

COMPLETION DATE PLUS WORKING DAYS:

This contract shall be substantially completed by the specified dates plus the specified number of working days for final completion as outlined below and in accordance with Article 108.05 (b) of the Standard Specifications except as modified herein.

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

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

contract items and safely open all roadways to traffic as specified in the contract. The Contractor shall complete all remaining work as specified in the contract within the specified number of working days.”

Substantial completion dates are based on the Staging Plan in the Maintenance of Traffic Plans and all work for each stage shall be completed as follows:

All work for Stage 1 (Sunset Drive), including binder course and temporary pavement markings as required for a full-width re-opening of Sunset Drive to two-way traffic shall be completed by 11:59 pm on June 30, 2014.

All work for Stage 2 (Hart Road east of Sunset Drive), including binder course and temporary pavement markings as required to re-open Hart Road to two-way traffic shall be completed by 11:59 pm on August 30, 2014. Furthermore, the portion of Hart Road between the Magee Middle School entrance and Cedar Lake Road shall be safely re-opened to traffic by 11:59 pm on August 18, 2014 to provide full access to the school at the beginning of the school year.

All work for Stage 3 (Hart Road west of Sunset Drive), including binder course and temporary pavement markings as required to re-open Hart Road to two-way traffic shall be completed by 11:59 pm on September 30, 2014.

All work for Stage 4, including surface course, permanent pavement markings, proposed signs, traffic signals, and any remaining sidewalk and driveways, shall be completed by 11:59 pm on November 15, 2014. Temporary lane closures for this work in accordance with the appropriate Highway Standard may be allowed at the discretion of the Engineer.

The Contractor will be allowed to complete restoration, tree planting, all clean-up work and punch list items within 10 working days after the completion date for Stage 4. 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 these working days allowed. 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" shall apply to both the specified completion dates listed and the number of working days.

PUBLIC CONVENIENCE AND SAFETY (DIST 1):

Effective: May 1, 2012
Revised: July 15, 2012

Add the following to the end of the fourth paragraph of Article 107.09:

"If the holiday is on a Saturday or Sunday, and is legally observed on a Friday or Monday, the length of Holiday Period for Monday or Friday shall apply."

Add the following sentence after the Holiday Period table in the fourth paragraph of Article 107.09:

"The Length of Holiday Period for Thanksgiving shall be from 5:00 AM the Wednesday prior to 11:59 PM the Sunday After"

Delete the fifth paragraph of Article 107.09 of the Standard Specifications:

"On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical."

EMBANKMENT II:

Effective: March 1, 2011

Description. This work shall be according to Section 205 of the Standard Specifications except for the following.

Material. Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present.

CONSTRUCTION REQUIREMENTS

Samples. Embankment material shall be sampled and tested before use. The contractor shall identify embankment sources, and provide equipment as the Engineer requires, for the collection of samples from those sources. Samples will be furnished to the Geotechnical Engineer a minimum of three weeks prior to use in order that laboratory tests for compaction can be performed. Embankment material placement cannot begin until tests are completed.

Placing Material. In addition to Article 202.03, broken concrete, reclaimed asphalt with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities shall be placed in 6 inches (150 mm) lifts and disked with the underlying lift until a uniform homogenous material is formed. This process also applies to the overlying lifts. The disk must have a minimum blade diameter of 24 inches (600 mm).

When embankments are to be constructed on hillsides or existing slopes that are steeper than 3H:1V, steps shall be keyed into the existing slope by stepping and benching as shown in the plans or as directed by the Engineer.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

Compaction. Soils classification for moisture content control will be determined by the Soils Inspector using visual field examination techniques and the IDH Textural Classification Chart.

When tested for density in place each lift shall have a maximum moisture content as follows.

- a) A maximum of 110 percent of the optimum moisture for all forms of clay soils.
- b) A maximum of 105 percent of the optimum moisture for all forms of clay loam soils.

Stability. The requirement for embankment stability in article 205.04 will be measured with a Dynamic Cone Penetrometer (DCP) according to the test method in the IDOT Geotechnical Manual. The penetration rate must be equal or less than 1.5 inches (38 mm) per blow.

Basis of Payment. This work will not be paid separately but will be considered as included in the various items of excavation.

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: January 1, 2013

Add the following Section to the Standard Specifications:

"SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

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

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.06
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2)	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 Coarse 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. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

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. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

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.

Grad No.	COARSE AGGREGATE SUBGRADE GRADATIONS				
	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

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

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

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).”

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.

FRICTION SURFACE AGGREGATE (D1):

Effective: January 1, 2011

Revised: February 26, 2013

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 revisions.

(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	Shoulders	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/} Crushed Concrete

Use	Mixture	Aggregates Allowed								
HMA High ESAL Low ESAL	C Surface IL-12.5,IL-9.5, or IL-9.5L	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/} Crushed Concrete								
HMA High ESAL	D Surface IL-12.5 or IL-9.5	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone (other than Limestone) Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/} Crushed Concrete								
		<u>Other Combinations Allowed:</u>								
		<table border="1"> <thead> <tr> <th>Up to...</th> <th>With...</th> </tr> </thead> <tbody> <tr> <td>25% Limestone</td> <td>Dolomite</td> </tr> <tr> <td>50% Limestone</td> <td>Any Mixture D aggregate other than Dolomite</td> </tr> <tr> <td>75% Limestone</td> <td>Crushed Slag (ACBF)^{1/} or Crushed Sandstone</td> </tr> </tbody> </table>	Up to...	With...	25% Limestone	Dolomite	50% Limestone	Any Mixture D aggregate other than Dolomite	75% Limestone	Crushed Slag (ACBF) ^{1/} or Crushed Sandstone
		Up to...	With...							
		25% Limestone	Dolomite							
50% Limestone	Any Mixture D aggregate other than Dolomite									
75% Limestone	Crushed Slag (ACBF) ^{1/} or Crushed Sandstone									

Use	Mixture	Aggregates Allowed		
HMA High ESAL	F Surface IL-12.5 or IL-9.5	<u>Allowed Alone or in Combination:</u> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) ^{1/} Crushed Steel Slag ^{1/} No Limestone or no Crushed Gravel alone.		
		<u>Other Combinations Allowed:</u>		
		<table border="1"> <thead> <tr> <th><i>Up to...</i></th> <th><i>With...</i></th> </tr> </thead> <tbody> <tr> <td>50% Crushed Gravel, or Dolomite</td> <td>Crushed Sandstone, Crushed Slag (ACBF)^{1/}, Crushed Steel Slag^{1/}, or Crystalline Crushed Stone</td> </tr> </tbody> </table>	<i>Up to...</i>	<i>With...</i>
<i>Up to...</i>	<i>With...</i>			
50% Crushed Gravel, or Dolomite	Crushed Sandstone, Crushed Slag (ACBF) ^{1/} , Crushed Steel Slag ^{1/} , or Crystalline Crushed Stone			
HMA High ESAL	SMA Ndesign 80 Surface	Crystalline Crushed Stone Crushed Sandstone Crushed Steel Slag		

1/ When either slag is used, the blend percentages listed shall be by volume.

Add to Article 1004.03 (b) of the Standard Specifications to read:

“ When using Crushed Concrete, the quality shall be determined as follows. The Contractor shall obtain a representative sample from the stockpile, witnessed by the Engineer, at a frequency of 2500 tons (2300 metric tons). The sample shall be a minimum of 50 lb (25 kg). The Contractor shall submit the sample to the District Office. 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 by weight will be applied for acceptance. The stockpile shall be sealed until test results are complete and found to meet the specifications above.”

HMA MIXTURE DESIGN REQUIREMENTS (D-1):

Effective: January 1, 2013.
 Revised: January 16, 2013

1) Design Composition and Volumetric Requirements

Revise Article 1030.04(a)(1) of the Standard Specifications to read.

“(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/}										
Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm		IL-9.5 mm		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in. (37.5 mm)		100								
1 in. (25 mm)	90	100		100						
3/4 in. (19 mm)		90	82	100		100				
1/2 in. (12.5 mm)	45	75	50	85	90	100		100		100
3/8 in. (9.5 mm)						89	90	100		100
#4 (4.75 mm)	24	42 ^{2/}	24	50 ^{2/}	28	65	28	65	90	100
#8 (2.36 mm)	16	31	20	36	28	48 ^{3/}	32	52 ^{3/}	70	90
#16 (1.18 mm)	10	22	10	25	10	32	10	32	50	65
#50 (300 μm)	4	12	4	12	4	15	4	15	15	30
#100 (150 μm)	3	9	3	9	3	10	3	10	10	18
#200 (75 μm)	3	6	3	6	4	6	4	6	7	9
Ratio Dust/Asphalt Binder		1.0		1.0		1.0		1.0		1.0 ^{4/}

1/ Based on percent of total aggregate weight.

2/ The mixture composition shall not exceed 40 percent passing the #4 (4.75 mm) sieve for binder courses with Ndesign ≥ 90.

- 3/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign ≥ 90.
- 4/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.”

Delete Article 1030.04(a)(4) of the Standard Specifications.

Revise Article 1030.04(b)(1) of the Standard Specifications to read.

“(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix, and shall conform to the following requirements.

VOLUMETRIC REQUIREMENTS High ESAL						
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum					Voids Filled with Asphalt Binder (VFA), %
	IL-25.0	IL-19.0	IL-12.5	IL-9.5	IL-4.75 ^{1/}	
50	12.0	13.0	14.0	15	18.5	65 – 78 ^{2/}
70					65 - 75	
90						
105						

1/ Maximum Draindown for IL-4.75 shall be 0.3%
 2/ VFA for IL-4.75 shall be 72-85%”

Delete Article 1030.04(b)(4) of the Standard Specifications.

Revise the Control Limits Table in Article 1030.05(d)(4) of the Standard Specifications to read.

“CONTROL LIMITS

Parameter	High ESAL Low ESAL	High ESAL Low ESAL	All Other	IL-4.75	IL-4.75
	Individual Test	Moving Avg. of 4	Individual Test	Individual Test	Moving Avg. of 4
% Passing: ^{1/}					
1/2 in. (12.5 mm)	± 6 %	± 4 %	± 15 %		
No. 4 (4.75 mm)	± 5 %	± 4 %	± 10 %		
No. 8 (2.36 mm)	± 5 %	± 3 %			
No. 16 (1.18 mm)				± 4 %	± 3 %
No. 30 (600 µm)	± 4 %	± 2.5 %			
Total Dust Content No. 200 (75 µm)	± 1.5 %	± 1.0 %	± 2.5 %	± 1.5 %	± 1.0 %
Asphalt Binder Content	± 0.3 %	± 0.2 %	± 0.5 %	± 0.3 %	± 0.2 %
Voids	± 1.2 %	± 1.0 %	± 1.2 %	± 1.2 %	± 1.0 %
VMA	-0.7 % ^{2/}	-0.5 % ^{2/}		-0.7 % ^{2/}	-0.5 % ^{2/}

1/ Based on washed ignition oven

2/ Allowable limit below minimum design VMA requirement"

2) Design Verification and Production

Description. The following states the requirements for Hamburg Wheel and Tensile Strength testing for High ESAL, IL-4.75, and SMA hot mix asphalt (HMA) mixes during mix design verification and production.

When the options of Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement are used by the Contractor, the Hamburg Wheel and tensile strength requirements in this special provision will be superseded by the special provisions for Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement as applicable.

Mix Design Testing. Add the following to Article 1030.04 of the Standard Specifications:

“(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department’s verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification meeting the following requirements:

(1)Hamburg Wheel Test criteria.

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions. For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

(2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 415 kPa (60 psi) for non-polymer modified performance graded (PG) asphalt binder and 550 kPa (80 psi) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 1380 kPa (200 psi).”

Production Testing. Add the following to Article 1030.06 of the Standard Specifications:

“(c) Hamburg Wheel Test. All HMA mixtures shall be sampled within the first 500 tons (450 metric 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 the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day’s production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract. The Department may conduct additional Hamburg Wheel Tests on production material as determined by the Engineer. If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria”

Basis of Payment. Revise the seventh paragraph of Article 406.14 of the Standard Specifications to read:

“For all mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing

and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive.”

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1):

Effective: November 1, 2012

Revise: January 2, 2013

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES

1031.01 Description. Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting by cold milling or crushing 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.
- (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Bureau of Materials and Physical Research Policy Memorandum “Reclaimed Asphalt Shingle (RAS) Sources”, by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve . RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
 - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
 - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission

Standards for Hazardous Air Pollutants (NESHAP).

1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

- (a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and Processed FRAP) shall be identified by signs indicating the type as listed below (i.e. "Non- Quality, FRAP -#4 or Type 2 RAS", etc...).
- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave HMA (High and Low 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 sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the RAP will be used in.
 - (2) 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.
 - (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave HMA (High and Low 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.
 - (4) 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 round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by

the Department.

- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, plant cleanout etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

- (b) RAS Stockpiles. The Contractor shall construct individual, sealed RAS stockpiles meeting one of the following definitions. No additional RAS shall be added to the pile after the pile has been sealed. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. 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 accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be maintained by project contract number and kept for a minimum of three years.

1031.03 Testing. RAP/FRAP and RAS testing shall be according to the following.

- (a) RAP/FRAP Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during processing or after stockpiling.

- (1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

(2) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restocking. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample whether 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.

(b) RAS Testing. RAS shall be sampled and tested either during or after stockpiling.

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 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be stockpiled in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

1031.04 Evaluation of Tests. Evaluation of tests results shall be according to the following.

(a) Evaluation of RAP/FRAP Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable (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
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1 in. (25 mm)		± 5 %
1/2 in. (12.5 mm)	± 8 %	± 15 %
No. 4 (4.75 mm)	± 6 %	± 13 %
No. 8 (2.36 mm)	± 5 %	
No. 16 (1.18 mm)		± 15 %
No. 30 (600 μm)	± 5 %	
No. 200 (75 μm)	± 2.0 %	± 4.0 %
Asphalt Binder	± 0.4 % ^{1/}	± 0.5 %
G _{mm}	± 0.03 ^{2/}	

1/ The tolerance for FRAP shall be ± 0.3 %.

2/ For slag and steel slag

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

- (b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 μm)	± 4 %
No. 200 (75 μm)	± 2.0 %
Asphalt Binder Content	± 1.5 %

If more than 20 percent of the individual sieves and/or asphalt binder content tests are out of the above tolerances, the RAS shall not be used in Department projects 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.

1031.05 Quality Designation of Aggregate in RAP/FRAP.

- (a) RAP. The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
 - (2) RAP from Superpave (High 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)/HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
 - (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.
- (b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMR 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.

1031.06 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.

- (a) RAP/FRAP. The use of RAP/FRAP in HMA shall be as follows.
- (1) Coarse Aggregate Size (after extraction). The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
 - (2) Steel Slag Stockpiles. RAP/FRAP 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) mixtures regardless of lift or mix type.
 - (3) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that 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.
 - (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.
 - (5) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be RAP, Restricted FRAP, conglomerate, or conglomerate DQ.
- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.
- (c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with RAP or FRAP in HMA mixtures up to a maximum of 5.0% by weight of the total mix.

When the Contractor chooses the RAP option, the percentage of 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/, 2/}	Maximum % Asphalt Binder replacement (ABR)
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Ndesign	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
4.75 mm N-50			15
SMA N-80			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 constructing full depth HMA and the ABR is less than 15 percent, the required virgin asphalt binder grade shall be PG64-28.

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 ^{1/, 2/}	Maximum % ABR			
	Ndesign	Binder/Leveling Binder	Surface	Polymer ^{3/, 4/} Modified
30L	35	30	15	15
50	30	25	15	15
70	30	20	15	15
90	20	15	15	15
105	20	15	15	15
4.75 mm N-50				25
SMA N-80				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). When constructing full depth HMA and the ABR is less than 15 percent, the required virgin asphalt binder grade shall be PG64-28.

3/ When the ABR for SMA is 15 percent or less, the required virgin asphalt binder grade shall be SBS PG76-22.

4/ When the ABR for IL-4.75 mix is 15 percent or less, the required virgin asphalt binder grade shall be SBS PG76-22. When the ABR for the IL-4.75 mix exceeds 15 percent, the virgin asphalt binder grade shall be SBS 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 ^{1/, 2/}	Maximum % ABR		
	Binder/Leveling Binder	Surface	Polymer Modified ^{3/, 4/}
30L	50	40	30
50	40	35	30
70	40	30	30
90	40	30	30
105	40	30	30
4.75 mm N-50			40
SMA N-80			30

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/ When the ABR for SMA is 15 percent or less, the required virgin asphalt binder shall be SBS PG76-22. When the ABR for SMA exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28.

4/ When the ABR for IL-4.75 mix is 15 percent or less, the required virgin asphalt binder grade shall be SBS PG76-22. When the ABR for the IL-4.75 mix exceeds 15 percent, the virgin asphalt binder grade shall be SBS PG70-28.

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the above detailed requirements.

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
PG52-XX	10,000	12.5
PG46-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.

1031.08 HMA Production. All HMA mixtures shall be sampled within the first 500 tons (450 metric 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 the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a 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.

- (a) RAP/FRAP. The coarse aggregate in all RAP/FRAP used shall be equal to or less than the maximum size requirement for the HMA mixture being produced.
- (b) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.
- (c) RAS, RAP and FRAP. HMA plants utilizing RAS, RAP and FRAP shall be capable of automatically recording and printing the following information.
 - (1) Dryer Drum Plants.
 - a. Date, month, year, and time to the nearest minute for each print.
 - b. HMA mix number assigned by the Department.
 - c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
 - d. Accumulated dry weight of RAS, RAP and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
 - e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
 - f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
 - g. Residual asphalt binder in the RAS, RAP and FRAP material as a percent of the

total mix to the nearest 0.1 percent.

- h. Aggregate RAS, RAP and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS, RAP and FRAP are printed in wet condition.)
- i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
- j. Accumulated mixture tonnage.
- k. Dust Removed (accumulated to the nearest 0.1 ton)

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- f. RAS, RAP and FRAP weight to the nearest pound (kilogram).
- g. Virgin asphalt binder weight to the nearest pound (kilogram).
- h. 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.

1031.09 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."

GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1):

Effective: June 26, 2006

Revised: January 1, 2013

Add the following to the end of article 1032.05 of the Standard Specifications:

"(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois modified AASHTO T 27, a 50 g sample of the GTR shall conform

to the following gradation requirements:

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 μm)	95 ± 5
No. 50 (300 μm)	> 20

Add the following to the end of Note 1. of article 1030.03 of the Standard Specifications:

“A dedicated storage tank for the Ground Tire Rubber (GTR) modified asphalt binder shall be provided. This tank must be capable of providing continuous mechanical mixing throughout by continuous agitation and recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of ± 0.40 percent.”

Revise 1030.02(c) of the Standard Specifications to read:

“(c) RAP Materials (Note 3)1031”

Add the following note to 1030.02 of the Standard Specifications:

Note 3. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

FIRE HYDRANTS TO BE ADJUSTED:

This work shall include adjustment of the existing fire hydrant and valve vertically to the finished grade as determined by the Engineer. This work shall be done in accordance with the applicable portions of Section 564 of the Standard Specifications except as modified herein.

564.01 Description. Revise this Article to read:

“**564.01 Description.** This work shall include excavation, trench dewatering; removal of the existing fire hydrant (and adjacent piping, if necessary); adjustment and/or relocation of the

existing fire hydrant valve box; furnishing and installing the necessary pipe and fittings; installing, flushing and swabbing new riser pipe; backfilling the entire excavation with trench backfill up to the proposed subgrade; and disposal of all surplus materials.”

564.03 General. Add the following to the first paragraph of this Article:

“The hydrant shall be installed vertically so that the lowest hose connection is not less than 18 inches nor more than 26 inches above the finished grade ground level. The hydrant barrel shall be braced in such a manner to hold it plumb during backfilling.”

564.03 General. Add the following to the fourth paragraph of this Article:

“Trench backfill material shall be carefully placed and compacted in 6-inch layers around the hydrant to ensure protection and plumbness of the hydrant barrel.”

564.03 General. Add the following paragraphs to this Article:

“The Contractor shall provide ductile iron pipe complying with ANSI A21.51, thickness Class 52, with joints complying with ANSI A21.11. Ductile iron mechanical joint fittings shall be in accordance with ANSI A21.10 or A21.53. Cement linings complying with ANSI 21.4 or AWWA C104, standard thickness shall be used.

Swab the piping, valves, and fittings with a 5% solution of calcium hypochlorite prior to assembly and flush thoroughly.

564.04 Basis of Payment. Revise this Article to read:

“**564.04 Basis of Payment.** This work will be paid for at the contract unit price each for FIRE HYDRANTS TO BE ADJUSTED.”

DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED:

This work shall include the vertical adjustment of a cast iron extension for the domestic water service box to the finished elevation or as determined by the Engineer, and shall be done in accordance with Article 565.03 of the Standard Specifications. Sufficient space and length along the extension must be provided in order to freely raise or lower the extension. Extreme care shall be taken to keep the inside of the extension and box completely free of any material which would prevent the opening and closing of the water valve.

Basis of Payment. This work will be paid for at the contract unit price each for DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED.

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."

TRAFFIC CONTROL PLAN:

This work shall be done in accordance with applicable portions of Section 701 of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", and any details and Highway Standards contained in the Plans and Special Provisions, and the Special Provisions contained herein, except as modified herein.

Special Attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Recurring Local Roads and Streets Special Provisions, and Special Provisions contained herein, relating to traffic control.

HIGHWAY STANDARDS: 701001, 701006, 701301, 701311, 701501, 701701, 701801, 701901

DETAILS:

Traffic Control and Protection for Side Roads, Intersections, and Driveways (TC-10)
 District One Typical Pavement Markings (TC-13)

Pavement Marking Letters and Symbols for Traffic Staging (TC-16)
Arterial Road Information Sign (TC-22)
Driveway Entrance Signing (TC-26)
Lake County Traffic Control Details

SPECIAL PROVISIONS (Included in these Special Provisions):

Maintenance of Roadways
Public Convenience and Safety (Dist 1)
Temporary Information Signing
Traffic Control and Protection (Arterials)
Work Zone Traffic Control (LRS 3)
Flaggers in Work Zones (LRS 4)
Traffic Control Deficiency Deduction (BDE)
Pavement Marking Removal (BDE)
Lake County D.O.T. Traffic Control and Protection Special Provision

The Contractor shall contact the Engineer at least 72 hours in advance of beginning work. Construction operations shall be conducted in a manner such that streets will be open to emergency traffic and accessible as required to local traffic.

Unless otherwise indicated in Section 701, the above standards, details and special provisions shall be considered included in the contract, except work paid for as TRAFFIC CONTROL AND PROTECTION (SPECIAL).

REMOVE EXISTING HANDHOLE:

This work shall be done in accordance to Section 895, except as modified herein:

895.07 Method of Measurement. Add the following to the end of the Article:

“This work will be measured for payment in place for each handhole removed.”

REMOVE EXISTING CONCRETE FOUNDATION:

This work shall be done in accordance to Section 895, except as modified herein:

895.07 Method of Measurement. Add the following to the end of the Article:

“This work will be measured for payment in place for each concrete foundation removed.”

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT:

This work shall be done in accordance with Sections 440 and 606 of the Standard Specifications and the Detail shown in the Plans, except as modified herein.

This work shall include sawcutting at limits of removal as determined by the Engineer; careful removal of the damaged curb and gutter; grading, shaping, and compaction of existing or proposed subgrade; forming; and installing new concrete curb and gutter to match the existing type.

Method of Measurement. This work will be measured for payment in feet along the gutter line to the marked removal limits as determined by the Engineer. Curb and gutter damaged outside the limits approved by the Engineer due to Contractor's operations shall be removed and replaced in accordance with this special provision, but will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT.

CLEANING EXISTING DRAINAGE STRUCTURES

Effective: September 30, 1985

Revised: December 1, 2011

All existing storm sewers, pipe culverts, manholes, catch basins and inlets shall be considered as drainage structures insofar as the interpretation of this Special Provision is concerned. When specified for payment, the location of drainage structures to be cleaned will be shown on the plans.

All existing drainage structures which are to be adjusted or reconstructed shall be cleaned in accordance with Article 602.15 of the Standard Specifications. This work will be paid for in accordance with Article 602.16 of the Standard Specifications.

All other existing drainage structures which are specified to be cleaned on the plans will be cleaned according to Article 602.15 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price each for DRAINAGE STRUCTURES TO BE CLEANED, and at the contract unit price per foot (meter) for STORM SEWERS TO BE CLEANED, of the diameter specified.

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:

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

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

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

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

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

GENERAL CONSTRUCTION REQUIREMENTS

Installation.

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

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

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.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

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 SEWER ADJACENT TO OR CROSSING WATER MAIN:

Effective: February 1, 1996

Revised: January 1, 2007

This work consists of constructing storm sewer adjacent to or crossing a water main, at the locations shown on the plans. The material and installation requirements shall be according to the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and the applicable portions of Section 550 of the Standard Specifications; which may include concrete collars and encasing pipe with seals if required.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

Encasing of standard type storm sewer, according to the details for "Water and Sewer Separation Requirements (Vertical Separation)" in the "STANDARD DRAWINGS" Division of the "Standard Specifications for Water and Sewer Main Construction in Illinois", may be used for storm sewers crossing water mains.

Basis of Payment: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be STORM SEWER (WATER MAIN REQUIREMENTS), of the diameter specified.

TEMPORARY PAVEMENT:

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

The contractor shall use HMA according to Sections 355, 356, 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 "Hot-Mix Asphalt Mixture Requirements" table 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 Specifications and included in the cost of this work.

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 shall be included in the cost of this work.

RETAINING WALL REMOVAL:

Description. This work shall consist of removal, salvaging if required, and disposal of an existing segmental block or stone retaining wall at the location(s) shown on the Plans in its entirety to the limits of the project or as determined by the Engineer.

The removal shall include removal and proper disposal of existing segmental concrete blocks, stones, soil reinforcement, drains, drain pipe, cap stones, and any other components that make up the construction of the existing wall, except items to be salvaged. No additional compensation will be allowed for variations in assumed depth, thickness, amount of reinforcement on the existing wall.

Existing segmental blocks and cap stones in good condition shall be salvaged, stacked on pallets and delivered to the Village of Round Lake Public Works Facility at 751 W. Townline Road as part of the cost of this work. All other materials resulting from removal of retaining walls shall be properly disposed of.

Method of Measurement. This work will be measured for payment in feet to the limits as shown on the Plans or as determined by the Engineer, regardless of height. Retaining wall removed outside the limits shown on the Plans or approved by the Engineer will not be measured for payment.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

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

STORM SEWER REPAIR:

Description. This work shall consist of removal and replacement of existing lateral storm sewers in conflict with proposed storm sewer trench in accordance with Sections 550 and 551 of the Standard Specifications. This work shall include trenching, dewatering, bracing, shoring, backfilling, and connections to existing pipes to remain.

The limits of storm sewer repair shall be at least two feet wider than the edges of the proposed trench. Replacement pipe shall match the existing size and type as the existing except clay pipe shall be replaced with PVC, Ductile Iron, or Concrete. The existing pipe sizes are anticipated to range from 8" to 15". The replacement pipe shall be connected to the existing pipe with a flexible, water-tight pipe coupling with stainless steel bands. Pipe shall be replaced immediately upon completion of trench work below the existing pipe.

Method of Measurement. This work will be measured for payment in feet to the limits as shown on the Plans or as determined by the Engineer, regardless of size or depth.

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

INSTALL EXISTING ELECTRICAL CABLE:

This work shall be done in accordance with Sections 871 and 873 of the Standard Specifications and the Lake County DOT Traffic Signal Specifications and shall consist of installing fiber optic cable and tracer cable that has previously been installed by others.

Coordination will be required with the Contractor working on the proposed traffic signal at Washington Street and Cedar Lake Road, who will be installing the fiber optic and tracer cable for the proposed interconnect between Hart Road and Washington Street. If the permanent Hart Road signal is not ready when the Washington Street contractor installs the permanent interconnect, the Washington Street contractor will coil up the cables in the closest unaffected handhole north of the Hart Road Improvements.

The Contractor on this project will be required to uncoil the cables, install the cables through the remaining conduit to the permanent Hart Road control cabinet, and make the required connections to the permanent Hart Road controller.

Method of Measurement. Measurement for payment shall be according to Articles 871.05 and 873.05 of the Standard Specifications. Each type of cable (fiber or tracer) will each be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per foot for INSTALL EXISTING ELECTRICAL CABLE.

ROADSIDE DETECTOR:

This work shall consist of furnishing and installing a complete, permanent Bluetooth Roadside Detector system, connected by Ethernet to the Layer II Switch, operating in Power over Ethernet (PoE) configuration. The Bluetooth Roadside Detector must be compatible with the Lake County PASSAGE central traffic signal management system. The equipment shall be mounted at the location shown in the plans and shall be in accordance with the manufacturer's recommendations or as directed by the Engineer. The minimum allowable mounting height shall be 10 feet above the finished grade.

The Bluetooth Roadside Detector shall be installed in a NEMA 4 type enclosure with weatherproof openings for installation of the Bluetooth Antenna and the Outdoor-Rated Network Cable.

The Bluetooth Roadside Detector shall collect data, store, and transmit data for the purpose of calculating travel times dynamically. The Bluetooth Roadside Detector must include algorithms to process the data and generate travel times in a consistent format and capable of integration with the existing TrafficCast system currently used by Lake County to provide travel times through the PASSAGE network.

Basis of Payment. This work will be paid for at the contract unit price per each for ROADSIDE DETECTOR which shall include all necessary hardware, firmware, software, and accessories necessary to achieve proper operation. The required mounting hardware, labor, and incidentals necessary to securely fasten the assembly to an existing pole shall be included in the cost of ROADSIDE DETECTOR. The Ethernet cable required to provide PoE and data connectivity shall be paid for separately as OUTDOOR RATED NETWORK CABLE.

EXPLORATION TRENCH, SPECIAL:

This work shall consist of constructing a trench for the purpose of verifying clearances and locations of existing private and public utilities and storm sewers. The exploration trench shall be constructed at the locations as determined by the Engineer and in accordance with Article 213.02 of the Standard Specifications, except as modified herein.

The depth of the trench shall be variable, but shall be deep enough to locate all potential conflicts. The width of the trench shall be sufficient to allow proper investigation of the entire trench.

Method of Measurement. This work will be measured for payment per lineal foot of actual trench constructed.

Basis of Payment. This work will be paid for at the contract unit price per foot for EXPLORATION TRENCH, SPECIAL, regardless of depth.

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 determined 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 determined 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 course 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.”

WATER MAIN PROTECTION:

Description. This work shall consist of tunneling under, protecting and supporting existing water mains that intersect proposed storm sewer trenches. All existing water main exposed during storm sewer installation shall be protected and supported to prevent settlement, misalignment, or any other damage to the existing pipe.

Any damage to the existing water main caused by the Contractor’s operations, as determined by the Engineer, shall be repaired at no additional cost to the Contract. Repairs shall be in accordance with Village of Round Lake requirements and the latest edition of the “Standard Specifications for Water Main and Sewer Construction in Illinois.”

Method of Measurement. This work will be measured for payment in feet to the limits of exposed water main requiring protection or as determined by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per foot for WATER MAIN PROTECTION.

MANHOLES, DROP TYPE:

This work shall be done in accordance with Section 602 of the Standard Specifications and the Drop Manhole Detail provided in the Plans, except as modified herein.

602.01 Description. Add the following sentence to the end of this Article:

“This work shall include all reinforcement bars, ductile iron pipe, fittings, and concrete encasement.”

602.16 Basis of Payment. Add the following paragraph to this Article:

“Drop type manholes will be paid for at the contract unit price per each for MANHOLES, DROP TYPE, of the diameter specified and the type of frame and grate or lid specified.”

MANHOLES, SPECIAL:

This work shall be done in accordance with Sections 602 and 512 of the Standard Specifications and the Manhole Pile Detail provided in the Plans, except as modified herein.

602.01 Description. Add the following sentence to the end of this Article:

“This work shall consist of the installation of pile supported storm manholes complete in place, including excavation in excess of that required for storm sewer construction; trenching; bracing, sheeting and shoring; dewatering, including erosion and sedimentation control methods and devices to provide protection to the environment from all pumping operation; providing and driving timber piles; placement of reinforced concrete pile cap/manhole bottom; storm sewer manhole, including base, barrel sections, cone section, adjusting rings, steps, chimney seals, and frames and covers; watertight flexible connectors to match pipe; poured inverts and benches; backfilling with and compaction of excavated material or granular backfill materials; final adjustment of frame to final grade at time of surface restoration; finish grading; removal and disposal of waste excavated material; and all other work necessary for a complete pile supported storm sewer manhole installation.”

512.02 and 602.02 Materials. Materials shall be in accordance with applicable material sections listed in these Articles.

Method of Measurement. This work will be measured for payment in place as each pile-supported manhole, regardless of the length of piles or amount of concrete and reinforcement for the pile cap.

602.16 Basis of Payment. Revise this article to read:

“602.16 Basis of Payment. This work will be paid for at the contract unit price per each for MANHOLES, SPECIAL, of the type and diameter specified and the type of frame and grate or lid specified.”

SANITARY MANHOLES TO BE ADJUSTED:

This work shall be done in accordance with Section 602 of the Standard Specifications and shall consist of the adjustment of sanitary manholes. Non-hardening butyl rubber mastic sealant; minimum thickness ¼-inch, shall be used between adjusting rings in place of mortar, or as required by the Owner of the Sanitary Sewer. In locations where existing external frame seals exist, it shall be removed and reinstalled. In locations where internal frame seals exist, it shall be removed and disposed of and an external frame seal shall be installed. In locations where there are no existing frame seals, an external frame seal shall be installed. The installation of the external frame seal will not be paid for separately and will be considered included in this pay item.

The External Frame seal shall consist of the following:

- A. Provide frame seals consisting of a flexible external rubber sleeve and extension and stainless steel compression bands.
- B. Rubber sleeve and extension:
 - 1. Provide rubber sleeve and extension complying with ASTM C923.
 - 2. Comply with a minimum 1500 psi tensile strength, maximum 18 percent compression set and a hardness (durameter) of 48±5.
 - 3. Provide sleeve with a minimum thickness of 3/16-inch and unexpanded vertical heights of 6 or 9 inches.
- C. Provide extension having a minimum thickness of 3/16-inch.
- D. Compression band:
 - 1. Provide compression band to compress the sleeve against the manhole.
 - 2. Use 16 gauge stainless steel conforming to ASTM A240 Type 304 with no welded attachments and having a minimum width of 1-inch.
 - 3. Make a watertight seal having a minimum adjustment range of 2 diameter inches.
 - 4. Provide stainless steel screws, bolts, and nuts conforming to ASTM F593 and 594, Type 304.
- E. Or as required by the Owner of the sanitary sewer system.

The External Frame Seal shall be installed as follows:

- A. Install external rubber gasket on the manhole frame and chimney.
 - 1. Provide watertight gasket to eliminate leakage between the frame and each adjusting ring down to and including cone section.
- B. Clean surface and prepare the lower 2 inches of the manhole frame and exterior of all adjusting rings and cone section/corbel surfaces.
 - 1. Realign frame on adjusting rings or corbel as required.
- C. Repair and apply mortar grout to the adjusting rings as required to provide a smooth, circular surface for the rubber gasket.
- D. Install rubber gasket in accordance with manufacturer's recommendations.
 - 1. Field verify for suitable dimensions and layout before installation.
 - 2. Utilize sealing caulk where required.
- E. Or as required by the Owner of the sanitary sewer system.

Basis of Payment. This work will be paid for at the contract unit price per each for SANITARY MANHOLES TO BE ADJUSTED, which price shall include all of the above.

CHAIN LINK FENCE TO BE RELOCATED:

This work shall include removal, salvaging, and replacement according to Section 664 of the Standard Specifications of existing chain link fence to the limits shown on the Plans or as determined by the Engineer.

Removal shall consist of the complete removal and salvaging of the chain link fence; including chain link fabric, hardware, fence posts, terminal posts, horizontal braces, and any other parts that make up the construction of the existing chain link fence; and backfilling the post holes with granular material. All parts that are unable to be salvaged due to the condition or unavoidable damage caused by the removal operation shall be properly disposed of.

Replacement shall consist of installing the salvaged chain link fence at the proposed location as shown in the Plans or as determined by the Engineer in accordance with Section 664 of the Standard Specifications, with replacement parts being of new material meeting requirements of Article 664.02.

Method of Measurement. This work will be measured for payment according to Article 664.12 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per foot for CHAIN LINK FENCE TO BE RELOCATED.

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.

BASE REPAIR, SPECIAL:

This work is to be performed where the entire existing HMA surface is to be removed or pulverized and shall consist of the removal of the existing aggregate base course and subgrade materials to a minimum depth of 10 inches, disposal of surplus material, compacting the subgrade, and installation of porous granular embankment and aggregate base course Type B to a minimum compacted thickness of 10 inches.

After the subgrade has been brought to a smooth grade and proper shape, it shall be compacted by use of vibratory rollers and/or compactors in accordance with Article 351.04 of the Standard Specifications.

Replacement shall consist of providing Porous Granular Embankment in accordance with Article 207.03 to a minimum compacted thickness of 7 inches on a previously prepared subgrade. This Porous Granular Embankment layer shall be capped by a CA-6 crushed gravel or crushed stone base course layer compacted to a minimum thickness of 3 inches in

accordance with Article 351.05. The material for the Porous Granular Embankment layer shall conform to Article 1004.05 of the Standard Specifications except the gradation shall be as follows:

1. Crushed Stone and Crushed Concrete

<u>Sieve Size</u>	<u>Percent Passing</u>
6 inches	97±3
4 inches	90±10
2 inches	45±25
#4	20±20
#200	5±5

2. Crushed Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
6 inches	97±3
4 inches	90±10
2 inches	55±25
#4	30±20
#200	5±5

Method of Measurement. This work 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 BASE REPAIR, SPECIAL”.

PREPARATION OF BASE (SPECIAL):

This work shall be done in accordance with Section 358 of the Standard Specifications except as modified herein.

358.04 Aggregate Bases. Add the following sentence to the beginning of the first paragraph of this Article:

“It may be necessary to remove up to 2-inches of existing aggregate base course in order to establish the proposed base course elevation.”

358.04 Aggregate Bases. Delete reference to Article 358.04 (a).

358.04 Aggregate Bases. Add the following sentence to Article 358.04 (b):

“Proof-rolling with a 45,000-pound, rubber-tired vehicle in the presence of the Engineer will be necessary to demonstrate that the base is in proper condition for resurfacing.”

358.06 Method of Measurement. Revise Article 358.06 (b) to read:

“(b) Measured Quantities. The work in connection with the preparation of bases, except base repairs and addition of materials, will be measured for payment in place and the area computed in square yards.”

358.07 Basis of Payment. Revise this Article to read:

“**358.07 Basis of Payment.** The work will be paid for at the contract unit price per square yard for PREPARATION OF BASE (SPECIAL).”

STORM SEWERS, PILE SUPPORTED:

This work shall be done in accordance with Sections 550 and 512 of the Standard Specifications and the Concrete Cradle / Pile Support Detail provided in the Plans, except as modified herein.

550.01 Description. Revise this Article to read:

“**550.01 Description.** This work shall consist of the installation of storm sewer pipe with timber pile/concrete cradles complete in place, including excavation and trenching; bracing, sheeting and shoring; dewatering, including erosion and sedimentation control methods and devices to provide protection to the environment from all pumping operation; providing and driving timber piles; forming and placement of reinforced concrete cradles; shimming of storm sewer pipe joints; backfilling with and compaction of excavated material; finish grading; removal and disposal of waste excavated material; cleanup; and all other work necessary for a complete pile/cradle supported storm sewer installation.”

512.02 and 550.02 Materials. Materials shall be in accordance with applicable material sections listed in these Articles, except that storm sewer shall be Class A, Type 1 Storm Sewer Pipe or Ductile Iron Pipe meeting the requirements of Sections 40 and 41-2.01 of the “Standard Specifications for Water and Sewer Main Construction in Illinois”, thickness Class 50.

Method of Measurement. This work will be measured for payment in place per foot for pile/cradle supported storm sewers, regardless of the length of piles or amount of concrete and reinforcement for the pipe cradles.

550.10 Basis of Payment. Revise this article to read:

"550.10 Basis of Payment. This work will be paid for at the contract unit price per foot for STORM SEWERS, PILE SUPPORTED, of the diameter specified."

PRECAST REINFORCED CONCRETE FLARED END SECTION, PILE SUPPORTED:

This work shall be done in accordance with Sections 542 and 512 of the Standard Specifications and the Concrete Cradle / Pile Support Detail provided in the Plans, except as modified herein.

542.01 Description. Revise this Article to read:

"542.01 Description. This work shall consist of the installation of a reinforced concrete pipe flared end section with timber pile/concrete cradles complete in place, including excavation and trenching; bracing, sheeting and shoring; dewatering, including erosion and sedimentation control methods and devices to provide protection to the environment from all pumping operation; providing and driving timber piles; forming and placement of reinforced concrete cradles; shimming of the flared end section and storm sewer pipe joint; backfilling with and compaction of excavated material; finish grading; removal and disposal of waste excavated material; cleanup; and all other work necessary for a complete pile/cradle supported flared end section installation."

512.02 and 542.02 Materials. Materials shall be in accordance with applicable material sections listed in these Articles, except that end section shall be precast reinforced concrete meeting rigid pipe requirements for Class A, Type 1 Storm Sewer Pipe.

Method of Measurement. This work will be measured for payment in place per each pile/cradle supported end section, regardless of the length of piles or amount of concrete and reinforcement for the pipe cradles.

542.11 Basis of Payment. Revise this article to read:

"542.11 Basis of Payment. This work will be paid for at the contract unit price per each for PRECAST REINFORCED CONCRETE FLARED END SECTION, PILE SUPPORTED, of the diameter specified."

ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW), 2-1/C NO. 10:

This work shall be done in accordance Section 817 of the Standard Specifications, except as modified herein.

Village of Round Lake
 FAU 201 Hart Road
 Section No.: 00-00025-00-FP
 County: Lake
 Contract No.: 63868

Basis of Payment. This work will be paid for at the contract unit price per foot installed for ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW), 2-1/C NO. 10.

TRAFFIC SIGNAL SPECIAL PROVISIONS (LAKE COUNTY DOT):

LAKE COUNTY DIVISION OF TRANSPORTATION

TRAFFIC SIGNAL SPECIAL PROVISIONS

Effective: January 1, 2013

All work and equipment performed and installed under this Contract shall be governed by and shall comply with:

SPECIFICATION	ADOPTED/DATED
The State of Illinois "Standard Specifications for Road and Bridge Construction" referred to as "Standard Specifications"	Latest Edition
The State of Illinois "Manual on Uniform Traffic Control Devices for Streets and Highways," referred to as "MUTCD"	Latest Edition
The National Electrical Code referred to as "NEC"	Latest Edition
The National Electrical Manufacturers Association (All publications for traffic control items) referred to as "NEMA"	Latest Edition
The International Municipal Signal Association ("Official Wire & Cable Specifications Manual,") referred to as "IMSA"	Latest Edition
The Institute of Transportation Engineers Technical Report No. 1, (A Standard for Adjustable Face Vehicular Traffic Control Heads) referred to as "ITE"	Latest Edition
AASHTO "Standard Specifications" Structural Supports for Highway Signs, Luminaires, and Traffic Signals	Latest Edition
Supplemental Specifications and Recurring Special Provisions	Latest Edition

The following Traffic Signal Special Provisions supplement the above specifications, manuals, and codes. In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

The following terms and acronyms are used:

IDOT	Illinois Department of Transportation
District 1	IDOT District 1
LCDOT	The Lake County Division of Transportation
Engineer	The Resident Engineer
Traffic Engineer	The County Traffic Engineer – LCDOT

The intent of these Special Provisions is to prescribe the materials and construction methods commonly used in traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be indicated on the plans or as directed by the Engineer.

The work performed under this contract shall consist of furnishing and installing all traffic signal work as specified on the plans and as specified herein in a manner acceptable and approved by the Engineer.

SUBMITTALS.

Revise Article 801.05 of the Standard Specifications to read:

General requirements include:

- a. All material approval requests shall be submitted at the preconstruction meeting.
- b. Product data and shop drawings shall be assembled by pay item. Only the top sheet of each pay item submittal will be stamped by the LCDOT Traffic Department with the review status, except shop drawings for mast arm pole assemblies will be stamped with the review status on each sheet.
- c. Four complete copies of the manufacturer's descriptive literatures and technical data for the traffic signal materials. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.
- d. Seven complete copies of the shop drawings for the mast arm assemblies and poles, and the combination mast arm assemblies and poles showing, in detail, the fabrication thereof and the certified mill analyses of the materials used in the fabrication, anchor rods, and reinforcing materials.

- e. Partial or incomplete submittals will be returned without review.
- f. Certain non-standard mast arm poles and structures will require additional review from IDOT's Bureau of Bridges and Structures. Examples include special mast arms and non-standard length mast arm pole assemblies. The contractor shall account for the additional review time in their schedule.
- g. The contract number or permit number, project location/limits and corresponding pay code number must be on each sheet of correspondence, catalog cuts and mast arm poles and assemblies drawings.
- h. Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections, and/or tests of material shall be complete with all test data, dates, and times.
- i. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their status as 'APPROVED', 'APPROVED AS CORRECTED', 'NOT APPROVED', or 'RESUBMIT'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Engineer's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.
- j. All submitted items reviewed and marked 'APPROVED AS CORRECTED', 'NOT APPROVED', or 'RESUBMIT' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments., with a disposition of previous comments to verify contract compliance at no additional cost to the contract.
- k. Exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.

MARKING PROPOSED LOCATIONS

Revise "Marking Proposed Locations for Highway Lighting System" of Article 801.09 to read "Marking Proposed Locations for Highway Lighting System and Traffic Signals."

INSPECTION OF ELECTRICAL SYSTEMS

Add the following to Article 801.10 of the "Standard Specifications":

All cabinets, including temporary traffic signal cabinets, shall be assembled by an approved equipment supplier in IDOT District 1. LCDOT reserves the right to request that any controller and cabinet be tested at an IDOT District 1 approved equipment supplier's facility prior to field installation. Such testing will be at no extra cost to the contract. All permanent or temporary "railroad interconnected" controllers and cabinets, shall be new, built, tested and approved by the controller equipment vendor, in the vendor's IDOT District 1 approved facility, prior to field installation. The vendor shall provide the technical equipment and assistance as required by the Engineer to fully test this equipment.

MAINTENANCE AND RESPONSIBILITY

Revise Article 801.11 of the "Standard Specifications" to read:

- a. Existing traffic signal installations and/or any electrical facilities at locations included in this contract may be altered or reconstructed totally or partially as part of the work on this contract. The Contractor is hereby advised that all traffic control equipment presently installed at these locations may be the property of the State of Illinois, Department of Transportation, Division of Highways, County, Private Developer, or the Municipality in which it is located. Once the Contractor has begun any work on any portion of the project, all traffic signals within the limits of this contract or those which have the pay item MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, TEMPORARY TRAFFIC SIGNAL INSTALLATION, and/or MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION, shall become the full responsibility of the Contractor. The Contractor shall supply the Engineer and the County's Traffic Signal Maintenance Contractor two 24-hour emergency contact names and telephone numbers. The Contractor shall provide sufficient qualified personnel to respond to all notifications of malfunctions on a round-the-clock basis (24 hours a day, 7 days a week). The Contractor is required to keep a time and date log of all maintenance items, including the time of the initial report, the response time, and the time of final permanent repair. The Contractor shall provide this information to the Engineer, upon request.

- b. When the project has a pay item for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, TEMPORARY TRAFFIC SIGNAL INSTALLATION, and/or MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION, the Contractor must notify the Traffic Engineer at **(847) 377-7000** of their intent to begin any physical construction work on the project or any portion thereof. This notification must be a minimum of seven (7) working days prior to the start of construction to allow sufficient time for an inspection of the existing traffic signal installation(s) and the transfer of maintenance to the Contractor. If work is started prior to the inspection, maintenance of the traffic signal installation(s) will be immediately transferred to the Contractor without an inspection. The Contractor shall then become responsible for repairing or replacing

all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs to or the replacement of damaged equipment must meet the approval of the Engineer at the time of final inspection or the traffic signal installation will not be accepted.

- c. Contracts that don't include traffic signal installations or modifications, but do include pay items for milling or pavement patching which may result in the destruction of traffic signal loops, do not require maintenance transfer. These contracts do require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Traffic Engineer at **(847) 377-7000**, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection.
- d. The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most unavoidable down time. Any plan to shutdown the traffic signal installation for a period exceeding fifteen (15) minutes must receive prior approval from the Engineer. Approval to shutdown the traffic signal installation will only be granted during the hours of 9:00 A.M. to 3:00 P.M. on weekdays. Shutdowns will not be allowed during inclement weather, weekends or holiday periods.
- e. The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. Any inquiry, complaint or request by the Division, the County's Traffic Signal Maintenance Contractor or the public, shall be investigated and repairs started. The Contractor shall restore service and complete permanent repairs in accordance with the following Repair Timetable. Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. The Traffic Engineer reserves the right to assign any work not completed within this timeframe to the County's Traffic Signal Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Traffic Signal Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The County's Traffic Signal Maintenance Contractor may inspect any signaling device on the Division's highway system at any time without notification.

Immediately after performing any work related to a signal maintenance item (troubleshooting, temporary repair, permanent repair, etc.) the Contractor shall contact the Lake County PASSAGE Transportation Management Center (TMC) at **(847) 377-7000**.

Unless specifically stated to the contrary, all items shall be repaired within the time frame described in the Repair Timetable. The times listed are noncumulative. Any repairs not specifically covered in the Repair Timetable, or described elsewhere, shall be completed within

a time frame matching the most similar line item in the Repair Timetable.

REPAIR TIMETABLE

(non cumulative)

<u>ITEM</u>	<u>RESPONSE TIME</u>	<u>SERVICE RESTORATION</u>	<u>PERMANENT REPAIRS</u>
KNOCKDOWNS/FAILURE/DAMAGE:			
Cabinet	1 hr	24hrs	2 wks
Controller (Local or Master)	1 hr	24hrs	2 wks
Detector Loop	1 hr	n.a.	3 wks
Loop Detector/Amplifier	1 hr	4 hrs	2 wks
MVP Sensor	1 hr	4 hrs	2 wks
PTZ Camera	2 hrs	48 hrs	2 wks
Detector Interface Card/Mini Hub	1 hr	4 hrs	2 wks
Modem	2 hrs	NWD	2 wks
Load Switch	1 hr	2 hrs	2 hrs
Signal Head/Lenses	1 hr	2 hrs	NWD
Pole/Mast Arm	1 hr	2 hrs	ENG
Cabling/Conduit	1 hr	4 hrs	ENG
Interconnect/Communication	1 hr	NWD	ENG
Graffiti/Advertising	NWD	NWD	NWD
Telemetry, Electrical	1 hr	2 hrs	NWD
Ethernet Switches/Video Encoders	1 hr	48 hrs	2 wks
Highway Advisory Radio (HAR)	1 hr	48 hrs	2 wks
Indicators/switches/LEDs/displays	NWD	n.a.	2 wks
Outages not covered elsewhere	1 hr	2 hrs	NWD
Filter/Cleanliness/fans/thermostat	NWD	NWD	n.a.
Misalignment (conflicting)	1 hr	2 hrs	NWD
Misalignment (non-conflicting)	2 hrs	4 hrs	NWD
COMPLAINTS/CALLS/ALARMS:			
Timing/Phasing/Programming	1 hr	2 hrs	ENG
Coordination Alarm/Cycle Fail	NWD	ENG	ENG
Controller Alarm/Status Change	1 hr	NWD	1 wk
Detector Alarm/Status change	NWD	NWD	ENG
CMU Flash/Local Flash	1 hr	2 hrs	1 wk
Door Open/Maint. Req.	2 hrs	4 hrs	NWD

LEGEND: hr=hour, hrs=hours, NWD=next working day, wk=week, wks=weeks, ENG=acceptable to Engineer, days=calendar days, n.a.=not applicable

LIQUIDATED DAMAGES FOR UNTIMELY WORK

A primary concern of LCDOT is to maintain a safe and efficient roadway for the public. Therefore, the Contractor shall proceed with the traffic signal work as soon as conditions and project staging permit. If in the opinion of the Engineer construction conditions are suitable for traffic signal work, and the Contractor has not yet begun the traffic signal work, the Engineer shall notify the Contractor to proceed. The Contractor shall begin the traffic signal work within seven (7) calendar days after notification to proceed. The Contractor shall continue to prosecute the traffic signal work until completion, or until he can no longer proceed due to conditions beyond his control. The Contractor shall notify the Engineer of any conditions impeding and/or delaying his prosecution of the work. Failure by the Contractor to proceed with the traffic signal work as specified herein shall result in liquidated damages of **\$500.00** per calendar day per occurrence.

DAMAGE TO TRAFFIC SIGNAL SYSTEM

Revise Article 801.12(b) of the "Standard Specifications" to read:

Any damaged equipment or equipment not operating properly from any cause whatsoever shall be repaired and/or replaced with new equipment meeting current traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, to the satisfaction of the Engineer. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection; otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed.

Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause whatsoever, shall be the responsibility of the municipality or the Automatic Traffic Enforcement company per Permit agreement.

TRAFFIC SIGNAL INSPECTION (TURN-ON)

Revise Article 801.15(b) of the "Standard Specifications" to read:

It is LCDOT's intent to have all electric work completed and the equipment field-tested by the vendor, prior to LCDOT's "turn-on" field inspection. The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and "turn-on" of the traffic signal installation. In the event the Traffic Engineer determines that the work is not complete and that the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The Contractor may request a "turn-on" and inspection of the completed traffic signal installation at each separate location. This request must be made to the Traffic Engineer at **(847) 377-7000** a minimum of seven (7) working days prior to the time of the requested inspection. LCDOT will not grant a field inspection until the Contractor provides notification that the equipment has been field tested, and the intersection is operating according to contract requirements.

Signal indications being tested shall match the lane configurations and markings at the intersection. If any conflicting signal indications are visible to motorist or pedestrians while testing, Contractor shall be responsible to provide police officer(s) to direct traffic. In addition, the Contractor shall provide a representative from the control equipment vendor's office to attend the traffic signal inspection for both permanent and temporary traffic signal "turn-ons". Upon demonstration that the signals are operating properly and that all work has been completed in accordance with the contract and to the satisfaction of the Traffic Engineer, the Traffic Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will reassume the traffic signal maintenance upon acceptance by the Traffic Engineer.

The Lake County Division of Transportation requires the following from the Contractor at Traffic Signal "turn-ons":

1. One (1) set of as-built signal plans.
2. One (1) letter from the electrical contractor certifying that all material and equipment provided and installed as part of the project is in accordance with the approved catalog cuts and shop drawings.
3. A knowledgeable representative of the controller equipment supplier shall be present at the traffic signal "turn-on". The representative shall be knowledgeable concerning the cabinet design and the controller functions.
4. One (1) CD or electronic version of the cabinet box prints.
5. One (1) copy of the operation and service manuals for the signal controller and the associated control equipment.
6. Five (5) copies (11" x 17") of the cabinet wiring diagrams.
7. Five (5) copies of the traffic signal installation cable log.

8. All manufacturer and contractor warranties and guarantees required by Article 801.14.

Acceptance of the traffic signal equipment by LCDOT shall be based on the inspection results at the traffic signal "turn-on". If approved, the traffic signal acceptance shall be given verbally at the "turn-on" inspection, followed by written correspondence from the Traffic Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until LCDOT acceptance is granted. Any "punch list" work remaining after the installation is accepted shall be completed within thirty (30) calendar days of the acceptance date. If this work is not completed within thirty days, LCDOT reserves the right to have the work completed by others at the Contractor's expense. This cost will be in addition to Liquidated Damages for Untimely Work.

The Contractor shall furnish all equipment and/or parts to keep the traffic signal installation operating.

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements will be subject to removal and disposal at the Contractor's expense.

LOCATING UNDERGROUND FACILITIES

Revise Section 803 of the "Standard Specifications" to read:

Contractor requests for equipment locates will be granted only once prior to the start of the contract. Additional requests shall be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any item(s) damaged during the construction, at his/her own expense.

Locate requests should be directed to LCDOT's Traffic Signal Maintenance Contractor or to the LCDOT Traffic Engineering Department at (847) 377-7000.

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities call J.U.L.I.E. at **1-800-892-0123**. For the locations of some utilities, other Agencies or Municipalities may need to be contacted.

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

Revise Section 850 of the "Standard Specifications" to read:

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The Contractor shall not be required to pay the energy charges for the operation of the existing traffic signal installation. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the Contract or any portion thereof.

The Contractor shall have electricians on staff with IMSA Level II certification to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including cameras, emergency vehicle pre-emption equipment, master controllers, telephone service installations, communication equipment, communication cables and conduits to adjacent intersections.

The maintenance shall be according to Article 850 of the "Standard Specifications", and the following contained herein.

The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. This item includes, as routine maintenance, all portions of the emergency vehicle pre-emption system. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.

The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two (2) far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place at least 1 STOP sign (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. At approaches where a yellow flashing indication is necessary, as directed by the Engineer, STOP signs will not be required. The Contractor shall furnish and equip all their signal maintenance vehicles with a sufficient number of STOP signs as specified herein. The Contractor shall maintain a sufficient number of spare STOP signs in stock at all times to replace those which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24-hour telephone number for traffic signal maintenance. The Contractor, or his representative, shall be available on a 24-hour basis to respond to emergency calls by the Traffic Engineer or other parties.

Traffic signal equipment which is lost or not returned to the County for any reason shall be replaced with new equipment meeting the requirements of these Specifications.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The Contractor shall respond to all emergency calls from the County or others within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the County. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the County's Traffic Signal Maintenance Contractor perform the maintenance work required. The County's Traffic Signal Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the County's Traffic Signal Maintenance Contractor to make reviews of the existing traffic signal installation that has been transferred to the Contractor for maintenance.

The Engineer may require the Contractor to transfer maintenance of a signal back to the County's Traffic Signal Maintenance Contractor (or other electrical contractor) for a short time. This may become necessary due to other signal projects in the area, or if the County needs to perform work at the signal. Any costs incurred by the Contractor for maintenance transfer inspections of this type shall be included in cost of pay item MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

Basis of Payment. This work shall be paid for at the contract unit price each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

TEMPORARY TRAFFIC SIGNAL INSTALLATION

Add the following to Section 890 of the "Standard Specifications":

Only an approved equipment vendor will be allowed to assemble the temporary traffic signal cabinet. Also, an approved equipment vendor shall assemble and test a temporary railroad traffic signal cabinet. (Refer to the "Inspection of Electrical Systems" specification) A

representative of the approved control equipment vendor shall be present at the temporary traffic signal turn-on inspection.

Only controllers compatible with "Centracs" software (NTCIP) or "Aries" software, currently in use by LCDOT, will be approved for use at temporary signal locations. Controller software compatibility requirements are based upon the controller's location in the communication system, and shall be as shown on the plans. All controllers used for temporary traffic signals shall be fully-actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software, installed in NEMA TS-1 or TS-2 cabinets with 8 phase back panels, capable of supplying 255 seconds of cycle length and individual phase length settings up to 99 seconds. On projects with one lane open and two way traffic flow, such as bridge deck repairs, the temporary bridge signal controller shall be capable of providing an adjustable all red clearance setting of up to 30 seconds in length. All controllers used for temporary traffic signals shall meet or exceed the requirements of Section 857 of the "Standard Specifications" with regards to internal time base coordination and preemption.

All temporary traffic signal cabinets shall have a closed bottom made of aluminum alloy. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust and insect-proof seal. The bottom shall provide a minimum of two (2) 4-inch diameter holes to run the electric cables through. The 4-inch diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.

The stand which supports the temporary traffic signal cabinet shall be constructed of lumber and plywood that has been pressure-treated to protect against rot, mold, and insects.

Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 806 of the "Standard Specifications" and the "Grounding of Traffic Signal Systems" section of these special provisions.

All traffic signal head sections shall be twelve (12) inches. Traffic signal sections shall be LED with expandable view, unless otherwise approved by the Engineer. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Traffic Engineer. The Contractor shall furnish enough cable slack to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

All temporary traffic signal installations shall have vehicular detection installed as shown on the plans or as directed by the Engineer. Pedestrian push buttons shall be provided for all

pedestrian signal heads/phases as shown on the plans or as directed by the Engineer. All approaches shall have vehicular detection provided by vehicle detection system as shown on the plans or as directed by the Engineer. The Contractor shall install, wire, and adjust the alignment of the video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. A representative of the approved control equipment vendor shall be present and assist the contractor in setting up and maintaining the video vehicle detection system. An in-cabinet video monitor shall be provided with all video vehicle detection systems and shall be included in the item Temporary Traffic Signal Installation. When called for in the plans, the UPS cabinet shall be mounted to the temporary traffic signal cabinet and meet the requirements of UNINTERRUPTABLE POWER SUPPLY of these Special Provisions.

For temporary traffic signal installations within closed loop system(s), the controller shall be compatible with the existing traffic signal system master controller. The existing system interconnect is to be maintained as part of the Temporary Traffic Signal Installation specified on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. Refer to the INTERRUPTION OF COMMUNICATION requirements described earlier. All labor and equipment required to install and maintain the existing interconnect shall be included in the cost of the item TEMPORARY TRAFFIC SIGNAL INSTALLATION.

All emergency vehicle priority equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle priority equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of signal equipment currently in use by the County. All light operated systems shall operate at a uniform rate of 14.035 hz \pm 0.002, or as otherwise required by the Engineer. All labor and material required to install and maintain the Emergency Vehicle Priority system shall be included in the cost of the item TEMPORARY TRAFFIC SIGNAL INSTALLATION.

When directed by the Engineer, this item shall also include operational items such as: controller database changes, timing changes, activation/deactivation of phases, relocation of signal heads, relocation / reconfiguration of detectors (microwave and/or video), and bagging / unbagging signal heads. On temporary traffic signal installations with detector loops, coilable non-metallic conduit shall be used for detector loop raceways from the saw-cut to 10 feet up the wood pole, unless otherwise shown on the plans. Coilable non-metallic conduit shall meet the requirements of NEC Article 343 and meet the requirements of COILABLE NON-METALLIC CONDUIT of the Special Provisions.

All existing street name and intersection regulatory signs shall be removed from existing poles and relocated to the temporary signal span wire. If new mast arm assemblies and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost.

The Contractor shall not be required to pay the energy charges for the operation of the existing traffic signal installation. If the installation replaces an existing signal, the Contractor shall not be required to pay the energy charges for the operation of the temporary traffic signal. The Contractor shall pay the energy charges for all other temporary traffic signal installations.

The Contractor shall furnish all control equipment for the temporary traffic signals(s) unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be of the same manufacturer and model number with current software installed. Maintenance shall meet the requirements of the "Standard Specifications" and the "Maintenance of Existing Traffic Signal Installation" section of these special provisions. Maintenance of temporary signals and of the existing signals shall be included in the cost of this item. When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as he begins any physical work on any portion of the project. Maintenance responsibility of the existing signals shall be incidental to the item TEMPORARY TRAFFIC SIGNAL INSTALLATION. In addition, a minimum of seven (7) days prior to assuming maintenance of the existing traffic signal installation(s) under this contract, the Contractor shall contact the Traffic Engineer **(847) 377-7000** to request an inspection of the installation(s).

Temporary Traffic Signals for bridge projects shall follow the State Standards, "Standard Specifications", LCDOT Traffic Signal Special Provisions, and any plans for Bridge Temporary Traffic Signals included in the plans. The installation shall meet the above requirements for TEMPORARY TRAFFIC SIGNAL INSTALLATION. In addition, all electric cable shall be aerially suspended, at a minimum height of 18 feet, on temporary wood poles (Class 5 or better) of 45 feet minimum height. The signal heads shall be span-wire-mounted or bracket-mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole or as directed by the Engineer. All approaches for temporary traffic signals for bridge projects shall have microwave vehicle sensors or video vehicle detection, as shown on the plans or as approved by the Engineer.

Basis of Payment: This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION which shall include all costs for the installation, vehicular detection system, UPS, modification, maintenance, operational items, complete removal of the temporary traffic signal, and all material required to complete the work.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Add the following to Article 895.05 of the "Standard Specifications":

The traffic signal equipment, which is to be removed and will become the property of the Contractor, shall be disposed of by the Contractor outside the right-of-way at his/her own expense.

The Contractor shall safely store and arrange for delivery of all equipment that will remain the property of LCDOT. The Contractor shall deliver, unload and stack the equipment at the owner's facility, as directed by the Engineer, within 30 days of removing it from the traffic signal installation. The Contractor shall provide three (3) copies of a list of equipment that is to remain the property of LCDOT including model and serial numbers where applicable. The Contractor shall also provide a copy of the contract plan or special provisions showing the quantities and type of equipment to be delivered. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. The Contractor shall be responsible for the condition of the traffic signal equipment from the time of removal until the acceptance of a receipt written by the owner indicating that the items have been returned in good condition.

Traffic signal equipment which is lost or not returned to the County for any reason shall be replaced with new equipment meeting the requirements of these Specifications.

RESTORATION OF WORK AREA

Add to Section 801 of the "Standard Specifications":

Restoration of the traffic signal work area shall be included in the related pay item such as foundation, conduit, handhole, trench and backfill, etc. and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be restored to match the previously existing conditions. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded, in accordance with Section 250 and 252 of the "Standard Specifications" respectively.

CABINET NEATNESS

The Contractor shall assure that all wiring and peripheral equipment in any new traffic signal cabinet is in a neat and orderly fashion that is acceptable to the Engineer. This applies to controller cabinets, master cabinets, railroad cabinets, communication cabinets, electrical service cabinets, or any other new cabinet called for in the project plans.

All conduit entrances into the cabinet shall be sealed with a pliable waterproof material. Electrical cables inside the cabinet shall be neatly trained along the base and back of the cabinet. Each conductor shall be connected individually to the proper terminal, and the spare

conductors shall be bound into a neat bundle. All cables, including those for signals, vehicle detection, pushbuttons, emergency vehicle preemption, video transmission, and communication shall be neatly arranged and bundled within the cabinet to the satisfaction of the Engineer. Each cable shall be marked with an identification number which corresponds to the number and description on the cabinet cable log.

In the case of an existing cabinet that is being modernized or modified, the new cables being installed shall be trained, bundled and labeled to the satisfaction of the Engineer. When working inside an existing cabinet, the Contractor shall minimize disturbance to existing cables and cabinet wiring. Any existing cables and cabinet wiring disturbed by the Contractor shall be re-trained, bundled, and/or labeled to the satisfaction of the Engineer.

The County shall not accept maintenance of the traffic signal installations until the requirements of this specification are satisfied.

VENDOR REPRESENTATION

Under this provision, the Engineer reserves the right to request the equipment vendor be present at the activation of new traffic equipment. Equipment covered under this provision includes signal heads, cabinets, controllers, amplifiers, preemption, video detection/monitoring, communication/transmission, fiber-optic/telemetry, radio, microwave, infrared, illuminated signs, streetlights, push buttons, lighted crosswalks, uninterruptable power supplies, and any other new equipment being installed and activated.

This provision is in addition to the requirement contained herein that the Contractor provide a representative from the control equipment vendor to attend the traffic signal inspection for both permanent and temporary traffic signal "turn-ons".

Any costs associated with equipment vendor representation shall not be paid for separately, but shall be included in the cost of the associated traffic equipment being activated. Any unforeseen costs incurred by the Contractor to provide this representation shall not be the responsibility of the County.

INTERRUPTION OF COMMUNICATION

The interruption of communication with County equipment shall be kept to an absolute minimum. This includes communication such as controller telemetry, video transmission, camera control signals, Highway Advisory Radio, wireless interconnect, telephone (POTS/ISDN/DSL), high speed Internet, or any other County communication equipment. This provision applies to cable types including copper, multimode fiber optic, singlemode fiber optic, telephone cables, Internet cables, or any other cable used by the County to monitor and maintain its various signal and ITS equipment.

The contractor shall plan ahead, and shall stage his construction work accordingly, so that he can interrupt communication, and then restore communication, with as little down time as possible. For example, when a section of existing interconnect is being relocated, the new handholes and conduits should be installed prior to disconnecting the interconnect cable. The interconnect cable can then be disconnected, pulled out of the existing conduit, pulled through the new conduit, and re-connected. In addition, when an existing fiber optic cable is to be re-used, the contractor shall be prepared to immediately replace any fiber splices and/or terminations that become damaged.

Prior to disconnecting any LCDOT communication link, the contractor shall contact the Traffic Engineer for approval of his planned construction method.

ELECTRIC SERVICE INSTALLATION

Revise Section 805 of the "Standard Specifications" to read:

Description. This work shall consist of all materials and labor required to install, modify, or extend the electric service installation. All installations shall meet the requirements of the details in the "IDOT District 1 Standard Traffic Signal Design Details" and applicable portions of the Specifications.

General. The electric service installation shall be the electric service disconnecting means and it shall be identified as suitable for use as service equipment.

The electric utility contact information is noted on the plans and represents the current information at the time of contract preparation. The Contractor must request in writing for service and/or service modification within 10 days of contract award and must follow-up with the electric utility to assure all necessary documents and payment are received by the utility. The Contractor shall forward copies of all correspondence between the contractor and utility company to the Engineer of Traffic.

Materials.

- a. General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.
- b. Enclosures. All electrical service enclosures shall be UL 50, single door design, fabricated from Type 5052 H-32 aluminum or stainless steel. All seams shall be continuous welded and ground smooth, and the cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. Enclosures shall meet the following additional requirements:

1. Pole Mounted Cabinet. The cabinet shall be NEMA Type 4X. Stainless steel screws and clamps shall secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. A minimum size of 14-inches high, 9-inches wide and 8-inches deep is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the manufacturer.
 2. Ground Mounted Cabinet. The cabinet shall be NEMA Type 3R with back panel. The cabinet frame and door shall be 0.125-inch thick, the top 0.250-inch thick, and the bottom 0.500-inch thick. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full-length tamperproof stainless steel .075-inch thick hinge bolted to the cabinet with stainless steel carriage bolts and nylock nuts. The locking mechanism shall be slam-latch type with a keyhole cover. A minimum size of 40-inches high, 16-inches wide, and 15-inches deep is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.
- c. Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120-volt load circuit by the means MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40C to +85C. The surge protector shall be UL 1449 Listed.
 - d. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type, with trip-free indicating handles. 120-volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit breaker for the traffic signal controller shall be rated 60 amperes, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.
 - e. Fuses, Fuseholders and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.

- f. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.
- g. Utility Services Connection. The Contractor shall notify the Utility Company marketing representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30-day advance notification will begin only after the Utility Company marketing representative has received service charge payments from the Contractor. Prior to contacting the Utility Company for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.
- h. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10-feet in length, and 3/4-inch in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.

Installation

- a. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the Engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
- b. Pole Mounted. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.
- c. Ground Mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

The service installation shall be paid for at the contract unit price each for SERVICE INSTALLATION of the type specified which shall be payment in full for furnishing and installing the service installation complete. The type A foundation which includes the ground rod shall be paid for separately. SERVICE INSTALLATION, POLE MOUNTED shall include the 3/4-inch grounding conduit, ground rod, and pole mount assembly. Any changes by the utility companies shall be approved by the Engineer and paid for as an addition to the contract according to Article 109.05 of the "Standard Specifications".

GROUNDING OF TRAFFIC SIGNAL SYSTEMS

Revise Section 806 of the "Standard Specifications" to read:

General. All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. See "IDOT District One Standard Traffic Signal Design Details" for additional information.

The grounding electrode system shall include a ground rod installed in all foundations, and the service installation. An additional ground rod will be required at locations where measured resistance to ground exceeds 25 ohms. Ground rods are included in the associated pay items and will not be paid for separately. Testing shall be according to Article 801.13.

- a) The grounded conductor (neutral conductor) shall be white color-coded. This conductor shall be bonded to the equipment-grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- b) The equipment-grounding conductor shall be green color-coded. The following is in addition to Article 1087.01 of the "Standard Specifications".
 - 1) Equipment-grounding conductors shall be XLP insulated No. 6, unless otherwise noted on the plans, and bonded to the grounded conductor (neutral conductor) only at the electric service Installation. The Earth shall not be used as the equipment-grounding conductor, and no splices shall be allowed in the cable between ground rods. The equipment-grounding conductor is paid for separately.
 - 2) Equipment-grounding conductors shall be bonded, using a UL listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. A UL listed electrical joint compound shall be applied to all conductors' terminations, connector threads and contact points.
 - 3) All metallic and non-metallic raceways containing traffic signal circuit runs shall have a continuous equipment-grounding conductor, with the following exceptions: Raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment-grounding conductor.
- c) The grounding electrode conductor shall be similar to the equipment-grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment-grounding conductor and is bonded to ground rods via exothermic welding, UL listed pressure connectors, UL listed clamps or other UL approved listed means.

GROUNDING EXISTING HANDHOLE FRAME AND COVER

This work shall consist of all materials and labor required to bond the equipment-grounding conductor to the existing handhole frame and handhole cover. All installations shall meet the requirements of the details in the "IDOT District One Standard Traffic Signal Design Details" and applicable portions of the Specifications.

The equipment-grounding conductor shall be bonded to the handhole frame and to the handhole cover. Two (2) ½-inch diameter x 1 ¼-inch long hex-head stainless steel bolts, spaced 1.75-inches apart center-to-center shall be fully welded to the frame and to the cover to accommodate a heavy duty Listed grounding compression terminal (Burndy type YGHA or approved equal). The grounding compression terminal shall be secured to the bolts with stainless steel split-lock washers and nylon-insert locknuts.

Welding preparation for the stainless steel bolt hex-head to the frame and to the cover shall include thoroughly cleaning the contact and weldment area of all rust, dirt and contaminates. The Contractor shall assure a solid strong weld. The welds shall be smooth and thoroughly cleaned of flux and spatter. The grounding installation shall not affect the proper seating of the cover when closed.

Mechanical connections to the frame and cover may be approved in lieu of the listed welding procedures. The contractor shall submit a detailed plan indicating the proposed connectors and installation procedures for review and approval by the Engineer prior to the start of any work on this item.

The grounding cable shall be paid for separately.

Basis of Payment: This work shall be paid for at the contract unit price each for GROUNDING EXISTING HANDHOLE FRAME AND COVER, which shall be payment in full for grounding one handhole complete, regardless of the type of handhole or its location.

UNDERGROUND CONDUIT

The conduit shall meet the requirements of Section 810 of the "Standard Specifications", except for the following:

Delete Article 810.01 of the "Standard Specifications" and add the following:

Description. This item shall consist of furnishing and installing galvanized steel conduit, fittings and accessories in the ground, either pushed, trenched, plowed, or directionally bored, with fittings complete as specified herein and as shown on the Contract drawings.

Add the following to Article 810.04 of the "Standard Specifications":

Pavement, driveways, and curbs shall not be removed to install electrical conduits. All buried conduits shall be placed at a minimum depth of 30 inches, except under railroad tracks, where the minimum depth shall meet the written requirements of the railroad company. All conduit couplings shall be threaded. Conduits terminating in junction and pull boxes shall be terminated with galvanized steel bushings.

When empty conduit is installed for future traffic signal interconnects(s), the Contractor shall provide a pull line within the conduit.

Revise Article 810.07 of the "Standard Specifications" to read:

Basis of Payment: This work will be paid for at the contract unit price per foot for UNDERGROUND CONDUIT of the type and size specified, which price shall be payment in full for furnishing and installing the conduit either pushed, trenched, plowed, or directionally bored with fittings, complete. Trenching, backfilling and area restoration are included in the cost of this item.

CONCRETE FOUNDATIONS

Add the following to Article 878.03 of the "Standard Specifications":

All anchor bolts shall be according to Article 1006.09, except all anchor bolts shall be hot dipped galvanized the full length of the anchor bolt including the hook.

Concrete Foundations, Type A for Traffic Signal Posts shall provide anchor bolts with the bolt pattern specified within the "IDOT District 1 Standards Traffic Signal Design Details". All Type A foundations shall be a minimum depth of forty-eight (48) inches.

Concrete Foundations, Type C (Special) for Traffic Signal Cabinets with Uninterruptable Power Supply (UPS / Battery Back-Up) cabinet installations shall be constructed a minimum of forty-eight (48) inches long by thirty-one (31) inches wide, and shall have a minimum depth of forty-eight (48) inches. An integral concrete pad foundation for the UPS cabinet shall be constructed a minimum of thirty-one (31) inches long by twenty (20) inches wide by ten (10) inches deep. The UPS cabinet pad foundation shall be integral to the side of the signal cabinet foundation, and shall be constructed on the same side as the signal cabinet power panel. An L-Shaped concrete apron shall be constructed along the entire front of the signal cabinet foundation, the entire side of the UPS cabinet foundation, and the entire front of the UPS cabinet foundation. This concrete apron shall be a minimum of thirty-six (36) inches wide by four (4) inches deep. Anchor bolts shall be provided and spaced according to the cabinet manufacturer's specifications.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

Concrete Foundations, Type D for Traffic Signal Cabinets shall be constructed a minimum of forty-eight (48) inches long by thirty-one (31) inches wide, and shall have a minimum depth of forty-eight (48) inches. The concrete apron at the signal cabinet shall be constructed a minimum of thirty-six (36) inches wide by forty-eight (48) inches long by four (4) inches deep. Anchor bolts shall be provided and spaced according to the cabinet manufacturer's specifications.

Concrete Foundations, Type E for Mast Arm and Combination Mast Arm Poles shall be 15 ft. minimum depth and in accordance with the latest edition of IDOT standard 878001.

The Resident Engineer shall approve the foundation excavation prior to placing any concrete.

HANDHOLES

Add the following to Section 814 of the "Standard Specifications":

All handholes shall be cast-in-place concrete, with a minimum inside dimension of 21-1/2 inches. Frames and lid openings shall match this dimension. The minimum wall thickness for heavy-duty hand holes shall be 12 inches. The handhole cover shall be labeled "Traffic Signals" with legible raised letters.

All conduits shall enter the handhole at a minimum depth of thirty (30) inches. However, the depth of conduit from detector loops located less than five (5) feet from the handhole may be less than thirty (30) inches.

All cable hooks shall be hot-dipped galvanized in accordance with AASHTO Specification M111. Hooks shall be a minimum of 3/8-inch diameter and extend into the handhole at least 6 inches. Hooks shall be placed a minimum of 12 inches below the lid, or lower if additional space is required. All cable hooks shall be secured with a retaining nut tightened against the handhole concrete.

COILABLE NON-METALLIC CONDUIT

Description. This work shall consist of furnishing and installing empty coilable non-metallic conduit (CNC) for detector loop raceways.

General. The CNC installation shall be in accordance with Sections 810 and 811 of the Standard Specifications except for the following:

Add the following to Article 810.03 of the Standard Specifications:

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways to the handholes.

Add the following to Article 811.03 of the Standard Specifications:

On temporary traffic signal installations with detector loops, CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways from the saw-cut to 10 feet (3m) up the wood pole, unless otherwise shown on the plans

Basis of Payment. All installations of CNC shall be included in the cost of the contract and not paid for separately.

DETECTOR LOOP

Revise Section 886 of the "Standard Specifications" to read:

A minimum of seven (7) working days prior to the Contractor cutting loops, the Engineer shall mark the location of the proposed loops and contact the Traffic Engineer **(847) 377-7000** to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the placement of the concrete surface, using the same notification process as above.

Loop detectors shall be installed according to the requirements of the "IDOT District 1 Standard Traffic Signal Design Details". Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement in order to minimize the length of the saw cut (homerun), unless otherwise directed by the Engineer or as shown on the plans. Polyethylene unit duct shall be used for detector loop raceways to the handholes. Coilable non-metallic conduit shall meet the requirements of NEC Article 343. All coilable non-metallic conduit used for traffic signal loop detector runs shall be included in cost of the detector loop.

The detector loop cable insulation shall be labeled with the cable specifications. Each detector loop lead-in wire shall be labeled in the handhole using a Panduit 250W175C waterproof tag or approved equal. The tag will be secured to each wire with nylon ties.

The resistance to ground for new detector loops shall be a minimum of 500 megaohms under any conditions of weather or moisture. Inductance shall be more than 50 microhenries and less than 700 microhenries. Quality readings shall be more than 5. All new or replacement lead-in cables shall be connected to the loop interface panel using appropriate crimp-on, spade type connectors. Detector loop measurements shall include the saw cut and the length of the loop lead-in to the edge of pavement. The lead-in wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be included in the cost of

the detector loop. Coilable non-metallic conduit, trench and backfill, and drilling of pavement or handholes shall be incidental to detector loop quantities.

The location of each dive hole shall be marked on the face of the curb, the edge of pavement or the handhole, with a saw cut 1/4 inch deep by 4 inches long.

(a) Type I: Each detector loop, which is to be installed in new asphalt pavement, must be placed in the pavement below the surface course. Each detector loop, which is to be installed in an existing asphalt or concrete pavement, shall be located to miss existing pavement cracks, if possible. Loop sealant used to seal new loops shall consist of a two-component thixotropic, chemically-cured polyurethane. The sealant will be Chemque Q-Seal 295, Perol Elastic Cement A/C Grade or an approved equal. The sealant shall be installed 1/8 inch below the pavement surface. Excess sealant, which accumulates on the surface, shall be removed immediately. Loop sealant used to reseal existing loops shall be composed of an asphalt-based compound. The sealant will be Doseal 230 or an approved equal.

(b) Preformed. This work shall consist of furnishing and installing a rubberized heat resistant preformed traffic signal loop in accordance with the "Standard Specifications", except for the following:

Preformed detector loops shall be installed in new pavement constructed of portland cement concrete and shall be placed in the substrate. Loop lead-ins shall be protected to the satisfaction of the Engineer.

Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole.

Preformed detector loops shall be factory assembled. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16-inch outside diameter (minimum), 3/8-inch inside diameter (minimum) Class A oil resistant synthetic cord-reinforced hydraulic hose with 250 psi internal pressure rating. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns or interconnects to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy-duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. The wire used shall be #16 THWN

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire.

To minimize the length of time that a signal operates without vehicle detection, detector loops for active traffic signal installations shall be installed in a timely manner as follows:

If in the opinion of the Engineer construction conditions are suitable for loop installation(s), the Engineer shall notify the Contractor to proceed. The detector loops shall be installed and fully operational within fourteen (14) calendar days following notification to proceed by the Engineer. This 14-day period shall be in effect throughout the entire year, including the off season, regardless of the Contractor's working day status. Failure by the Contractor to complete the loop installation(s) within the specified timeframe shall result in liquidated damages in the amount of **\$500.00** per calendar day, per occurrence.

This work shall be paid for at the contract unit price per foot for DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP as specified in the plans, which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

ELECTRIC CABLE

Delete "or stranded, and No. 12 or" from the last sentence of Article 1076.04 (a) of the "Standard Specifications".

Add the following to the Article 1076.04(d) of the Standard Specifications:

Service cable may be single or multiple conductor cable.

The electric service cable shall have an XLP jacket. All other cable jackets shall be polyvinyl chloride, meeting the requirements of IMSA 19-1 or IMSA 20-1. The jacket color for signal cable shall be black. The jacket color for lead-in and communications cable shall be gray. All cabling between the signal cabinet and the signal heads shall be solid copper, not multi-stranded. Heat shrink splices shall be used according to the IDOT District 1 "Standard Traffic Signal Design Details".

GROUNDING CABLE

The cable shall meet the requirements of Section 817 of the "Standard Specifications", except for the following:

Add to Article 817.02 of the "Standard Specifications":

Unless otherwise noted on the Plans, the system grounding cable shall be one conductor, #6 gauge copper, with an XLP jacket.

The traffic signal grounding conductor (system grounding cable) shall be bonded, using a Listed grounding connector (Burndy type KC/K2C, as applicable, or approved equal), to all new and existing traffic signal mast arm poles and traffic/pedestrian signal posts, including push button posts. The grounding conductor shall be bonded to all new and existing pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system and noted herein and detailed on the plans. Bonding to existing handhole frames and covers shall be paid for separately.

Add the following to Article 817.05 of the "Standard Specifications":

Basis of Payment. Payment shall be at the Contract unit price, per foot, for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C, which price includes all associated labor and material including grounding clamps, splicing, exothermic welds/other UL Listed connectors and hardware.

RAILROAD INTERCONNECT CABLE

The cable shall meet the requirements of Section 873 of the "Standard Specifications", except for the following:

Add the following to Article 873.02 of the "Standard Specifications":

The cable shall be three conductor standard #14 copper cable in a clear polyester binder, shielded with #36 AWG tinned copper braid with 85% coverage, and insulated with .016 inch polyethylene (black, blue, red). The jacket shall be black 0.045 PVC or polyethylene.

Revise Article 873.06 of the "Standard Specifications" to read:

Basis of Payment. This work shall be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C, which price shall be payment in full for furnishing, installing, and making all electrical connections in the traffic signal controller cabinet. Connections in the railroad controller cabinet shall be performed by railroad personnel.

ELECTRIC CABLE IN CONDUIT, COAXIAL

This work shall consist of furnishing and installing a Belden 1694A RG-6/U Type Digital Coaxial Cable or approved equal. The cable shall be a 75-ohm coaxial cable with 18 AWG solid bare copper conductor, tinned copper braided shield (95% min), and black polyvinyl chloride jacket. The nominal outside diameter shall be 0.274 inches. Amphenol 31-71032 (or equivalent) BNC

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

plug connectors shall be used at both the PTZ camera and traffic signal cabinet ends of the cable. An Amphenol CLT-2 crimping tool is required for the termination. No splices shall be allowed in the cable between the PTZ camera and the traffic signal cabinet.

Basis of payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, COAXIAL, which price shall be payment in full for furnishing the material, making all electrical connections and installing the cable complete, measured as specified herein.

EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C

This work shall consist of furnishing and installing lead-in cable for light detectors installed at existing and/or proposed traffic signal installations as part of an emergency vehicle priority system. The work includes installation of the lead-in cables in existing and/or new conduit. The electric cable shall be shielded and have (3) stranded conductors colored blue, orange, and yellow with a stranded tinned copper drain wire. The cable shall meet the requirements of the manufacturer of the Emergency Vehicle Priority System Equipment.

Basis of Payment. This work will be paid for at the contract unit price per foot for EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C, which price shall be payment in full for furnishing, installing and making all electrical connections necessary for proper operations.

ELECTRICAL CABLE IN CONDUIT, VIDEO NO 20 4 C

This work shall consist of furnishing and installing a Belden 5402 FE Cable or approved equal. No splices shall be allowed in the cable between the PTZ camera and the traffic signal cabinet.

Basis of payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, VIDEO NO. 20 4 C, which price shall be payment in full for furnishing the material, making all electrical connections and installing the cable complete, measured as specified herein.

OUTDOOR RATED NETWORK CABLE

This work shall consist of furnishing and installing a network cable from the traffic signal cabinet to the associated field device shown on the plans.

The outdoor rated network cable shall be a black Category 5e cable, meeting the TIA/EIA 568-B.2 telecommunication standards. The cable shall be composed of 24 AWG solid bare copper conductors, twisted pairs, polyolefin insulation, inner LLPE jacket, overall shield (100% coverage), 24 AWG stranded TC drain wire, industrial grade sunlight- and oil-resistant LLPE

jacket. The cable shall be capable of performing from -40 °C to 70 °C.

Each end of the cable shall be terminated with an RJ-45 connector installed according to the TIA/EIA 568B standard. The drain wire at each end shall be terminated with a ring lug and attached to a suitable ground point.

The cable shall be Belden 7937A or approved equivalent.

The work shall be performed according to the applicable portions of Section 873 of the "Standard Specifications", and details as shown on the plans.

Basis of payment. This work will be paid for at the contract unit price per foot for OUTDOOR RATED NETWORK CABLE. The unit price shall include furnishing and installing the cable, and making all connections necessary for proper operation. Furnishing and installing the RJ-45 connectors, ring terminals and grounding the OUTDOOR RATED NETWORK CABLE shall be included in the cost of this pay item.

TRAFFIC-ACTUATED CONTROLLER

Add the following to Section 857 of the "Standard Specifications":

The controller shall be the latest model available that is compatible with "Centracs" software or "Aries" software, currently in use by LCDOT, and shall be NEMA TS2 Type 1 compatible, unless specified otherwise on the plans. Controller software compatibility requirements are based upon the controller's location in the communication system, and shall be as shown on the plans. The controller shall have the latest version of NTCIP software installed, and be equipped with an Ethernet port and a removable data key to save the controller database. Only controllers supplied by approved IDOT District 1 closed-loop equipment manufacturers will be allowed. The traffic signal controller shall provide features to inhibit simultaneous display of circular yellow and yellow arrow indications.

CONTROLLER CABINET AND PERIPHERAL EQUIPMENT

Add the following to Article 1074.03 of the "Standard Specifications":

Cabinets shall be designed for NEMA TS2 Type 1 operation. All cabinets shall be pre-wired for a minimum of eight (8) phases of vehicular, four (4) phases of pedestrian, and four (4) phases of overlap operation. Individual load switches shall be provided for each vehicle, pedestrian and right turn overlap phase.

- Cabinets – Controller cabinets shall have a footprint of approximately 44 inches wide by 26 inches deep. Type IV cabinets shall be 65 inches high, and shall provide a third shelf for mounting additional equipment. Type V cabinets shall be 77 inches high. Cabinets shall

be fabricated of 1/8" thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.

- Cabinet Doors – Provide front and rear doors of NEMA type 3R construction with cellular neoprene gasket that is rain tight. Door hinges shall be continuous 14-gauge stainless steel and shall be secured with 1/4-20 stainless steel carriage bolts. Standard equipment shall include a three-point locking system that secures the door at the top, bottom and center. A corbin lock with two keys shall also be furnished. The door shall be equipped with a two-position doorstop, one at 90° and one at 120°.
- Controller Harness – Provide a TS2 Type 2 "A" harness in addition to the TS2 Type 1 harness.
- Surge Protection – Atlantic Scientific ZoneIT Model 91391 base station, Model 91375 ZoneIT pluggable module (50kA rating) with LED status indicators, or approved equivalent.
- BIU – Containment screw required.
- Switch Guards – All switches shall be guarded.
- Back Panel – The back panel wiring shall be securely covered with a piece of plexiglass, minimum thickness 1/8-inch.
- Heating – One (1) 200-watt, thermostatically-controlled, Hoffman electric heater, or approved equivalent.
- Lighting – Four (4) LED light assemblies shall be included along the top and sides of the cabinet. The LED panels shall be controlled by a wall switch. Relume Traffic Control Box LED panels and power supply, or approved equivalent.
- Plan & Wiring Diagrams – 12" x 16" moisture sealed container attached to door.
- The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1 1/2 inch deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one (1) complete set of cabinet prints and manuals. This drawer shall support 50 lbs. in weight when fully extended. The drawer shall open and close smoothly. Drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 24 inches wide.
- Detector Racks – Full-size rack fully wired to support one BIU, sixteen channels of vehicle detection, and four channels of EVP.
- Field Wiring Labels – All field wiring shall be labeled.
- Field Wiring Termination – Approved channel lugs required.
- Power Supply – Provide a nonconductive shield.
- Circuit Breaker – The signal circuit breaker shall be sized for the proposed load, but shall not be rated less than thirty (30) amps.
- Police Door – Provide wiring and termination for plug-in manual phase advance switch.
- Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or approved equivalent.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

- MMU – 16 Channel, LCD display, IP addressable (Ethernet) Malfunction Management Unit. The MMU shall be connected to the Ethernet switch with a CAT 5e cable, and configured for proper communication.
- Door Alarm – The front and rear doors shall be equipped with switches wired to the traffic signal controller alarm 1 input for logging and reporting of a door open condition.

FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL

This item shall comply with Sections 857 and 863 of the “Standard Specifications” for Road and Bridge Construction, and shall also comply with the following requirements:

The controller shall meet the requirements for NEMA-TS2 standards for a Type 1 Cabinet. The controller shall be the latest model available that is compatible with “Centracs” software or “Aries” software, currently in use by LCDOT. Controller software compatibility requirements are based upon the controller’s location in the communication system, and shall be as shown on the plans. The controller shall have the latest version of NTCIP software installed, and be equipped with an Ethernet port and a removable data key to save the controller database.

The cabinet shall be NEMA TS2 Type 1 design, meeting the requirements of CONTROLLER CABINET AND PERIPHERAL EQUIPMENT.

Basis of payment. This item will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL which price shall be payment in full for furnishing and installing the cabinet and controller, complete with necessary connections and equipment for proper operation, at a location designated by the Engineer.

TRAFFIC ACTUATED CONTROLLER & CABINET INTERCONNECTED WITH RAILROADS

Add the following to Articles 1073.01 (c) (2) and 1074.03 (a) (5) (e) of the Standard Specifications:

Controllers and cabinets shall be new and NEMA TS2 Type 1 design.

A method of monitoring and/or providing redundancy to the railroad preemptor input to the controller shall be included as a component of the Railroad, Full Actuated Controller and Cabinet installation and be verified by the traffic signal equipment supplier prior to installation. The cabinet shall be NEMA TS2 Type 1 design, meeting the requirements of CONTROLLER CABINET AND PERIPHERAL EQUIPMENT and FULL ACTUATED CONTROLLER, IN TYPE IV CABINET, (SPECIAL).

Railroad interconnected controllers and cabinets shall be assembled only by an approved traffic signal equipment supplier. All railroad interconnected (including temporary railroad interconnect) controllers and cabinets shall be new, built, tested and approved by the controller

equipment vendor, in the vendor's IDOT District 1 facility, prior to field installation. The vendor shall provide the technical equipment and assistance as required by the Engineer to fully test this equipment.

MASTER CONTROLLER

Revise Articles 860.02 and 860.03 of the "Standard Specifications" to read:

The Master Controller shall be the latest model available that is compatible with "Aries" software, currently in use by LCDOT. The minimum baud rate for fiber optic interconnected signal systems shall be 9600 bps.

This item shall also include the installation of an outdoor network interface for termination of the telephone service and a US Robotics 56k modem. The outdoor network interface shall be mounted to the inside of the cabinet in a location suitable to provide access for termination of the telephone service. The outdoor network interface shall be equipped with a standard Three-Electrode Heavy Duty Gas Tube Surge Arrestor.

INTERSECTION MONITOR

This item shall consist of furnishing and installing an Intersection Monitor at a new or existing traffic signal controller. This item is necessary at isolated (non-interconnected) traffic signals in order to monitor the intersection and controller operations. The Intersection Monitor shall be either an internal module installed in the controller, or an external data key, and shall be the latest model available. The Intersection Monitor shall be fully compatible with "Aries" traffic signal management software, currently in use by LCDOT.

This item shall also include the installation of an outdoor network interface for termination of the telephone service and a US Robotics 56k modem. The outdoor network interface shall be mounted to the inside of the cabinet in a location suitable to provide access for termination of the telephone service. The outdoor network interface shall be equipped with a standard Three-Electrode Heavy Duty Gas Tube Surge Arrestor.

Basis of payment. This item will be paid for at the contract unit price each for INTERSECTION MONITOR, which price shall be payment in full for furnishing and installing the Intersection Monitor (module or data key) complete with all necessary connections and equipment for proper operations.

INDUCTIVE LOOP DETECTOR.

Add the following to Article 1079.01 of the Standard Specifications:

Contracts requiring new cabinets shall provide for rack mounted detector amplifier cards. Detector amplifiers shall provide LCD displays with loop frequency, inductance, and change of inductance readings.

UNINTERRUPTABLE POWER SUPPLY, SPECIAL

This specification sets forth the minimum requirements for an uninterruptable power system (UPS) with battery back-up, for a traffic signal. The system is comprised of the UPS or Inverter unit, bypass switch, batteries, cabinet, and related wiring harnesses.

Revise Article 1074.04(a) (1) of the Standard Specifications to read:

The UPS shall be line interactive or double conversion and provide voltage regulation and power conditioning when utilizing utility power.

The UPS shall be sized appropriately for the intersection's normal traffic signal operating connected load, plus 20 percent (20%). The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of six (6) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 700 W/1000VA active output capacity, with 90 percent minimum inverter efficiency).

Revise Article 1074.04(a) (10) of the Standard Specifications to read:

The UPS shall be compatible with the County's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

Revise Article 1074.04(a) (17) of the Standard Specifications to read:

When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, cabinet heaters, service receptacles, any lighted street name signs, any automated enforcement equipment and any other devices directed by the Engineer.

Revise Article 1074.04(b) (2)b of the Standard Specifications to read:

Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125-inch thick and have a natural mill finish.

Revise Article 1074.04(b) (2)c of the Standard Specifications to read:

No more than three batteries shall be mounted on individual shelves for a cabinet housing six

batteries and no more than four batteries per shelf for a cabinet housing eight batteries.

Add the following to Article 1074.04(b) (2)e of the Standard Specifications:

The door shall be equipped with a two-position doorstop, one at 90° and one at 120°.

Revise Article 1074.04(b) (2)g of the Standard Specifications to read:

The door shall open to the entire cabinet and have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three point locking system. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

Add the following to Article 1074.04(b) (2) of the Standard Specifications:

j. The battery cabinet shall have provisions for an external generator connection.

Add the following to Article 1074.04(c) of the Standard Specifications:

- (8) The UPS shall include a tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.
- (9) The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector provided shall be a NEMA L5-15P or NEMA L5-30P locking plug. The connector shall be rated for a minimum of 15/125VAC.
- (10) A power adapter cord shall be provided which converts the supplied NEMA locking connector to a NEMA 5-15P plug. The power adapter cord shall be rated for a minimum of 15A/125VAC and shall be a minimum of 12 inches in length.
- (11) Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

Battery System.

Revise Article 1074.04(d) (3) of the Standard Specifications to read:

All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic lead calcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted.

Revise Article 1074.04(d) (4) of the Standard Specifications to read:

Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F (-25 to + 71 °C) for gel cell batteries and -40 to 140 °F (-40 to + 60 °C) for AGM type batteries.

Add the following to Article 1074.04(d) of the Standard Specifications:

- (9) The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the signalized intersection for a minimum of six hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

Add the following to the Article 1074.04 of the Standard Specifications:

- (e) Warranty. The warranty for an uninterruptable power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years from the date the traffic signal and UPS are placed into service.

Basis of payment. This item shall be paid for at the contract unit price, each, for furnishing and installing the UNINTERRUPTABLE POWER SUPPLY, SPECIAL. The price shall include the UPS/Inverter unit, Bypass Switch, Batteries, Cabinet, wiring harnesses, power adapter cord, and all associated equipment and materials necessary for proper operation.

EMERGENCY VEHICLE PRIORITY SYSTEM

Revise Section 887 of the "Standard Specifications" to read:

If not marked in the Contract plans, it shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be of the latest type manufactured and must be completely compatible with all components of signal equipment currently in use by the County.

All new installations shall be equipped with confirmation beacons as shown on the IDOT District 1 "Standard Traffic Signal Design Details". The confirmation beacon shall consist of a PAR 38 white LED flood lamp (90 watt equivalent, approved by the Engineer) for each direction of traffic. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control

equipment receives the preemption signal. The preemption movement shall be signaled by a flashing indication at the rate specified by Section 4L.01 of "MUTCD". The stopped preempted movements shall be signaled by a continuous indication.

All light operated systems shall operate at a uniform rate of 14.035 hz \pm 0.002 hz, or as otherwise required by the Traffic Engineer, and provide compatible operation with other light systems currently being operated in the County.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the EMERGENCY VEHICLE PRIORITY SYSTEM.

Basis of Payment. The work shall be paid for at the contract unit price each for furnishing and installing LIGHT DETECTOR and LIGHT DETECTOR AMPLIFIER. Furnishing and installing the confirmation beacon shall be included in the cost of the Light Detector. Any required modifications to the traffic signal controller shall be included in the cost of the LIGHT DETECTOR AMPLIFIER. The light detector amplifier shall be paid for on a basis of (1) one each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

STEEL MAST ARM ASSEMBLY AND POLE
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE

Add the following to Article 1077.03 of the "Standard Specifications":

Traffic signal mast arms shall be one-piece construction, unless otherwise approved by the Engineer. All mast arms, mast arm poles, luminaire arms, cast iron bases, and any exposed steel hardware shall be hot-dipped galvanized.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Luminaire arms shall be steel, and of the length shown on the plans. Luminaire arms over fifteen (15) feet in length shall be tapered, monotube style, with AASHTO 2001 wrap-around, gusset style connection.

Luminaires shall be "cobra head" style, with a minimum mounting height of forty-five (45) feet, and shall be paid for separately.

Stainless steel mesh screening shall be stainless steel banded to the anchor bolts, with a minimum 2-inch lap, to enclose the void between the top of the foundation and the base plate. The mesh screening shall have ¼-inch maximum opening and a minimum wire diameter of AWG NO. 16.

The base of the mast arm pole shall be protected by a bolt-on galvanized metal shroud or an approved equal. The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall be constructed and designed to allow air to circulate throughout the mast arm but not allow infestation of insects or other animals, and such that it is not hazardous to probing fingers and feet. All mounting hardware shall be stainless steel.

STEEL MAST ARM ASSEMBLY AND POLE (SPECIAL)

STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL)

Add the following to Article 1077.03 of the "Standard Specifications":

Base covers for mast arm poles shall be cast aluminum. All mast arms, mast arm poles, luminaire arms, and any exposed steel hardware shall be hot-dipped galvanized, and then powder-coated black by the supplier/manufacturer, as described below or an approved alternative finishing method. Cast aluminum base covers shall be powder-coated black by the supplier/manufacturer, as described below or an approved alternative finishing method.

All galvanized and aluminum exterior surfaces shall be coated with chip resistive epoxy resin primer applied via electrostatic spray equipment. The primer is to be applied at a minimum dry film thickness (DFT) of 3.0 mils with a minimum DFT of 6.0 mils applied to the lower 8 feet of the pole. The primer coat must be energy absorptive, and capable of achieving a rating of 10A under testing per ASTM (American Society for Testing and Materials) Procedure D3170, Standard Test Method for Chipping Resistance of Coatings. The primed surfaces shall then be coated with a black semi-gloss TGIC Super Durable Polyester topcoat to a minimum dry film thickness of 3.0 mils. The topcoat must meet the requirements of AAMA (American Architectural Manufacturer's Association) 2604 for color and gloss retention properties.

The manufacturer shall warranty the finish of all components for a period of at least 5 years from the date of shipment. The contractor shall provide a copy of the warranty to the Engineer, upon request.

All chips, scrapes, scratches, etc. in the paint shall be touched-up by the Contractor according to the manufacturer's recommendations, with matching paint supplied by the manufacturer.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Stainless steel mesh screening shall be stainless steel banded to the anchor bolts, with a minimum 2-inch lap, to enclose the void between the top of the foundation and the base plate. The mesh screening shall have ¼-inch maximum opening and a minimum wire diameter of AWG NO. 16.

All base covers shall fit tightly around the poles, with little or no gap at the top of the base cover. Two-piece base covers shall fit together tightly, with little or no gap between the two pieces. All base covers shall fit securely on top of the foundation, and shall not easily move or wobble. All base covers shall have an access hand hole, with a removable cover, and a minimum opening size of 200 square inches.

Pedestrian pushbutton stations shall be mounted to mast arm base covers according to the following: The top and bottom of the station shall be secured by drilling, tapping, and installing a 3/8-inch stainless steel threaded bolt, lock washer, and hex nut. Do not use self-tapping screws. Spacers made of 3/4-inch aluminum conduit shall be installed behind the pushbutton station, to level and plumb the station.

Luminaire arms shall be steel, and of the length shown on the plans. Luminaire arms over fifteen (15) feet in length shall be tapered, monotube style, with AASHTO 2001 wrap-around, gusset style connection.

Luminaires shall be installed at a minimum mounting height of forty-five (45) feet, and shall be paid for separately.

All (Special) steel mast arm assemblies and poles (including combination mast arm assemblies) shall be manufactured and/or supplied by Sternberg Vintage Lighting, Union Metal, Valmont, or approved equal, according to the following:

- Round, tapered, 16-sharp fluted pole.
- Round, tapered, smooth, standard-curved, flange-connected, traffic signal mast arm

The two-piece mast arm base cover shall be cast aluminum, and shall be manufactured and/or supplied by the same company as the mast arm assembly and pole. Manufacturer designations for the two-piece mast arm base cover to be used with (SPECIAL) MAST ARM ASSEMBLIES include the following:

- Hamilton 6401SS (Sternberg)
- Lake County AC1 base cover (Valmont)

LUMINAIRE

Add the following to Article 1067.01(e) of the "Standard Specifications":

The luminaire housing shall be cobra head style.

Revise Article 1067.01(i) of the "Standard Specifications" to read:

The luminaire shall be painted black or powder-coated black to match the finish of STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL).

TRAFFIC SIGNAL POST

Add the following to Article 1077.01 (d) of the "Standard Specifications":

Steel posts and cast iron bases shall be hot-dipped galvanized.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

TRAFFIC SIGNAL POST (SPECIAL)

Add the following to Article 1077.01 of the "Standard Specifications":

All Traffic Signal Posts (Special) shall be sixteen (16) feet in height, extruded aluminum, unless otherwise specified on the plans. All bases for Traffic Signal Post (Special) shall be cast aluminum.

All Traffic Signal Posts (Special) and associated bases shall be assembled and powder-coated black at the factory. The powder-coated finish and warranty shall meet the requirements of STEEL MAST ARM ASSEMBLY AND POLE (SPECIAL). All exposed steel hardware shall be hot-dipped galvanized, and then powder-coated black.

All chips, scrapes, scratches, etc. in the paint shall be touched-up by the Contractor according to the manufacturer's recommendations, with matching paint supplied by the manufacturer.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Pedestrian pushbutton stations shall be mounted to signal posts according to the following: The top and bottom of the station shall be secured by drilling, tapping, and installing a 3/8-inch stainless steel threaded bolt. Self-tapping screws are not allowed. Anti-seize lubricating compound shall be applied to all pushbutton and pushbutton station hardware. Spacers made of 3/4-inch aluminum conduit shall be installed behind the pushbutton station, to level and plumb the station.

All Traffic Signal Posts (Special) and associated bases shall be manufactured and/or supplied by Beacon, Sternberg Vintage Lighting, Union Metal, Valmont, or approved equal, according to the following:

- Round, straight (non-tapered), five (5)-inch diameter, 12-flat fluted post.
- A ball center cap for the top of the post, instead of a tenon.
- The base section of the post shall be approximately forty-three (43) inches tall.

Manufacturer designations for TRAFFIC SIGNAL POST (SPECIAL) include the following:

- MainStreet Series (100SJ) base (Beacon)
- Hamilton Series (5400D) base (Sternberg)

PEDESTRIAN PUSH-BUTTON

Replace Article 1074.02 of the "Standard Specifications" with the following:

Pedestrian Push-button assembly shall be ADA compliant, 3-inch round style, highly vandal resistant, non-moving, pressure activated, with a solid-state Piezo switch actuator that cannot be stuck in an "on" or constant call position. A latching red LED and audible tone shall be provided to confirm an actuation. The housing, or bezel, of the assembly shall be solid aluminum and powder coated yellow. The button shall be stainless steel or nickel-plated aluminum.

Pedestrian Push-button assembly shall be a Campbell Company 4 EVR CL with Enlightened Interface Module (ENIM), a Polara Bulldog BDL3-Y with Latching Push Button Control Unit (LPBCU), or approved equivalent.

The pedestrian station shall be a Campbell Company 912H Station, Polara PBF9X12 or approved equivalent.

The station shall be installed with a 9-inch by 12-inch retro-reflective sign, according to the following: Where pedestrian signal heads are used, pedestrian signs shall provide the "Push Button for" legend, with the Walking Man symbol and arrow (R10-3). Where no pedestrian signal heads are used, pedestrian signs shall provide the "Push Button for Green Light" legend with arrow (R10-4 with arrow), or as specified on the plans.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Anti-seize lubricating compound shall be applied to all pushbutton and pushbutton station hardware.

Refer to STEEL MAST ARM ASSEMBLY AND POLE (SPECIAL), STEEL COMBINATION MAST ARM ASSEMBLY AND POLE (SPECIAL), and/or TRAFFIC SIGNAL POST (SPECIAL) for additional installation requirements.

ILLUMINATED SIGN, LIGHT EMITTING DIODE

Delete last sentence of Article 1084.01(a) and add "Mounting hardware shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and bracket specified herein and shall provide tool free access to the interior."

Revise the second paragraph of Article 1084.01(a) of the Standard Specifications to read:

The exterior surface of the housing shall be acid-etched and shop painted with one coat of zinc-chromate primer and two coats of exterior enamel. The housing shall be the same color (yellow or black) to match the existing or proposed signal heads. The painting shall be according to Section 851.

Add the following to Article 1084.01 (b) of the Standard Specifications:

The message shall be formed by rows of LEDs. The sign face shall be 24 inches by 24 inches .

Add the following to Article 1084.01 of the Standard Specifications:

- (e) The light emitting diode (LED) blank out signs shall be manufactured by National Sign & Signal Company, or an approved equal and consist of a weatherproof housing and door, LEDs and transformers.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Basis of payment. This work shall be paid for at the unit price each for ILLUMINATED SIGN, LIGHT EMITTING DIODE.

LED INTERNALLY ILLUMINATED STREET NAME SIGN

This work shall consist of furnishing a street name sign which is internally illuminated with light emitting diodes, and installing the sign on a traffic signal mast arm or span wire.

(a) Description.

The LEDs shall be white in color and utilize InGaN or UV thermally efficient technology. The LED Light Engines shall be designed to fit inside a standard fluorescent illuminated street sign housing in lieu of fluorescent lamps and ballasts. The LED internally-illuminated street name sign shall display the designated street name clearly and legibly in the daylight hours without being energized and at night when energized. The sign assembly shall consist of a four-, six-, or eight-foot aluminum housing. White translucent 3M DG³ reflective sheeting sign faces with the street name applied in 3M/Scotchlite Series 1177 or current 3M equivalent transparent green shall be installed in hinged doors on the side of the sign for easy access to perform general cleaning and maintenance operations. Illumination shall occur with LED Light Engine as specified.

(b) Environmental Requirements.

The LED lamp shall be rated for use in the ambient operating temperature range of -40 to +50°C (-40 to +122°F) for storage in the ambient temperature range of -40 to +75°C (-40 to +167°F).

(c) General Construction.

1. The LED Light Engine shall be a single, self-contained device, for installation in an existing street sign housing. The power supply must be designed to fit and mounted on the inside wall at one end of the street sign housing. The LED Light Engine shall be mounted within the inner top portion of the housing and no components of the light source shall sit between the sign faces.
2. The assembly and manufacturing processes of the LED Light Engine shall be designed to ensure that all LED and electronic components are adequately supported to withstand mechanical shocks and vibrations in compliance with the specifications of the ANSI, C136.31-2001 standards.

(d) Mechanical Construction.

1. The sign shall be constructed using a weatherproof, aluminum housing consisting of an extruded aluminum top with a minimum thickness of .140" x 10 3/4" deep (including the drip edge). The extruded aluminum bottom is .094" thick x 5 7/8" deep. The ends of the housing shall be cast aluminum with a minimum thickness of .250". A six-foot sign shall be 72 5/8" long and 22 5/16" tall and not weigh more than 77 pounds. An eight-foot sign shall be 96 5/8" long and 22 5/16" tall and not weigh more than 92 pounds. All corners are continuous TIG (Tungsten Inert Gas) welded to provide a weatherproof seal around the entire housing.
2. The door shall be constructed of extruded aluminum. Two corners are continuous TIG welded with the other two screwed together to make one side of the door removable for installation of the sign face. The door is fastened to the housing on the bottom by a full length, .040" x 1 1/8" open stainless steel hinge. The door shall be held secure onto a 1" wide by 5/32" thick neoprene gasket by three (six total for two-way sign) quarter-turn fasteners to form a watertight seal between the door and the housing.
3. The sign face shall be constructed of .125" white translucent polycarbonate. The letters shall be 8" upper case and 6" lower case. The sign face legend background shall consist of 3M/Scotchlite Series 4090T or current equivalent 3M translucent DG³ white VIP (Visual Impact Performance) diamond grade sheeting (ATSM Type 9) and 3M/Scotchlite Series 1177 or current 3M equivalent transparent green acrylic EC (electronic cut-able) film applied to the front of the sign face. The legend shall be framed

by a white polycarbonate border. A logo symbol and/or name of the community may be included with approval of the Engineer.

4. All surfaces of the sign shall be etched and primed in accordance to industry standards before receiving appropriate color coats of industrial enamel. The sign frame shall be painted black with a durable powder coated process.
5. All fasteners and hardware shall be corrosion resistant stainless steel. No tools are required for routine maintenance.
6. All wiring shall be secured by insulated wire compression nuts.
7. A wire entrance junction box shall be supplied with the sign assembly. The box may be supplied mounted to the exterior or interior of the sign and provide a weather tight seal.
8. Each sign shall be activated by a photocell mounted/installed on the side of the sign frame.
9. Brackets and Mounting: LED internally-illuminated street name signs will be factory drilled to accommodate mast arm two-point support assembly mounting brackets.

(e) Electrical.

1. Photocell shall be rated 105-305V, turn on at 1.5 fcs. with a 3-5 second delay. A manufacturer's warranty of six (6) years shall be provided. Power consumption shall be no greater than 1 watt at 120V.
2. The LED Light Engine shall operate from a 60 +/- 3 cycle AC line power over a voltage range of 80 to 135 Vac rms. Fluctuations in line voltage over the range of 80 to 135 Vac shall not affect luminous intensity by more than +/- 10%.
3. Total harmonic distortion induced into the AC power line by the LED Light Engine, operated at a nominal operating voltage, and at a temperature of +25°C (+77°F), shall not exceed 20%.
4. The LED Light Engine shall cycled ON and OFF with a photocell as shown on the detail sheet and shall not exceed the following maximum power values:

4-Foot Sign	60 W
6-Foot Sign	90 W
8-Foot Sign	120 W

The signs shall not be energized when traffic signals are powered by an alternate energy source such as a generator or uninterruptable power source (UPS). The signs shall be connected to the generator or UPS bypass circuitry.

(f) Photometric Requirements.

1. The entire surface of the sign panel shall be evenly illuminated. The average maintained luminous intensity measured across the letters, operating under the conditions defined in Environmental Requirements and Wattage Sections shall be of a minimum value of 100 cd/m².
2. The manufacturer shall make available independent laboratory test results to verify compliance to Voltage Range and Luminous Intensity Distribution Sections.
3. Twelve (12) 1.25 watt LED units shall be mounted on 1-inch x 22-inch metal cone printed circuit boards (MCPCB). The viewing angle shall be 120 degrees. LED shall have a color temperature of 5200k nominal, CRI of 80 with a life expectancy of 75,000 hrs.

(g) Quality Assurance.

The LED Light Engine shall be manufactured in accordance with a vendor quality assurance (QA) program. The production QA shall include statistically controlled routine tests to ensure minimum performance levels of the LED Light Engine build to meet this specification. QA process and test result documentations shall be kept on file for a minimum period of seven (7) years. The LED Light Engine that does not satisfy the production QA testing performance requirements shall not be labeled, advertised, or sold as conforming to these specifications. Each LED Light Engine shall be identified by a manufacturer's serial number for warranty purposes. LED Light Engines shall be replaced or repaired if they fail to function as intended due to workmanship or material defects within the first sixty (60) months from the date of acceptance. LED Light Engines that exhibit luminous intensities less than the minimum value specified in Photometric Section within the first thirty-six (36) months from the date of acceptance shall be replaced or repaired.

The sign shall be mounted on the mast arm three feet to the right of the furthest right signal head, as viewed by the approaching traffic.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The Manufacturer/Vendor shall supply shop drawings of the fixtures, sign, sign message and mounting hardware for approval. All hardware used to install the sign shall be in accordance with the manufacturer's recommendations.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

Basis of Payment. This work will be paid for at the contract unit price each for furnishing and installing LED INTERNALLY ILLUMINATED STREET NAME SIGN, of the size specified, complete in place, including photocell and all related hardware, wiring, and connections required for proper operations. The #14 2/C cable from the signal cabinet to the sign shall be paid for separately.

MAST ARM SIGN PANELS

Add the following to Article 720.02 of the Standard Specifications:

Signs attached to poles or posts (such as mast arm signs) shall have mounting brackets and sign channels which are equal to and completely interchangeable with those used by LCDOT. All aluminum signs shall have a white reflectorized legend and border on a green reflectorized background, DG⁹ type sheeting. The sign face shall not have any holes. 3M Scotch Joining Systems bonding tape or an approved equal shall be used in place of screws or rivets. The Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware or bonding tape may be acceptable based upon LCDOT approval.

SIGNAL HEADS

Add the following to Section 1078 of the Standard Specifications to read:

All vehicle signal and pedestrian signal heads shall provide 12-inch displays, with glossy black polycarbonate housings, with the following exception: At locations where existing yellow polycarbonate heads will remain, all new signal heads shall be yellow to match the existing ones. Connecting hardware and mounting brackets shall be polycarbonate, the same color as the heads, or galvanized. A corrosive resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on. Where required, incandescent bulbs shall be manufactured by Duratest, Sylvania or an approved equal.

SIGNAL HEAD, LED

This work shall consist of furnishing and installing a traffic signal head with light emitting diodes (LED) of the type specified in the plans, in accordance with Sections 880 and 1078 of the Standard Specifications for Road and Bridge Construction, and the following.

The lens of the LED signal module shall be tinted with a wavelength-matched color to reduce sun phantom effect and enhance on/off contrast. The tinting shall be uniform across the lens face, and shall not affect chromaticity. The lens shall be smooth, with the same uniform appearance as incandescent lenses.

Each individual LED signal module shall be clearly marked with the manufacturer's name, model number, date of manufacture, nominal operating voltage, and power consumption in

watts.

The LED signal module shall have a one-piece neoprene gasket.

The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.

All LED signal modules shall be warranted for 5 years from the date of traffic signal turn-on against failures due to manufacturing, workmanship, or material defects including modules which exhibit luminous intensities less than the minimum values specified by the Institute for Transportation Engineers (ITE) LED purchase specification, "Vehicle Traffic Control Signal Heads: LED Circular Signal Supplement". Any modules that do not meet these warranty requirements shall be replaced or repaired at no expense to the County. The manufacturer's written warranty for the LED signal modules shall be included in the product submittal to the County.

PEDESTRIAN SIGNAL HEAD, LED
PEDESTRIAN SIGNAL HEAD, LED, COUNTDOWN

This work shall consist of furnishing and installing a pedestrian countdown signal head, with light emitting diodes (LED) of the type specified in the plans, in accordance with Section 881 and Article 1078.02 of the Standard Specifications for Road and Bridge Construction, and the following.

Pedestrian Countdown Signal Heads shall not be used at signalized intersections where traffic signals and railroad warning devices are interconnected.

The nominal message-bearing surface of pedestrian signal heads shall be 12 in. x 12 in.

Pedestrian Countdown Signal Heads shall consist of two (2) 12-inch by 12-inch modules aligned vertically. The top module of the unit shall be overlapping full "HAND" and full "MAN" symbols. The bottom module of the unit shall be a two digit numerical countdown display ("00" to "99"). The counter shall begin countdown at the beginning of the pedestrian clearance interval as the pictogram of the hand starts flashing. The counter shall execute a countdown of the time, in seconds, of the pedestrian clearance interval synchronized with the controller and ending at (0) at the expiration of the pedestrian clearance interval. The counter shall be blank at all other times.

The visor for each signal shall be the tunnel visor.

The signal module shall have a one-piece neoprene gasket.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The signal module identification labels and warranty shall be according to the SIGNAL HEAD, LED section of these specifications.

SIGNAL HEAD, LED, RETROFIT

This work shall consist of furnishing and installing vehicle or pedestrian LED signal modules in an existing signal head, of the type and mounting specified in the plans, according to the following.

All vehicle and pedestrian LED Retrofit signal modules shall fully comply with the SIGNAL HEAD, LED; PEDESTRIAN SIGNAL HEAD, LED; and PEDESTRIAN SIGNAL HEAD, LED, COUNTDOWN sections of these specifications.

Basis of Payment. This item shall be paid for at the contract unit price each for SIGNAL HEAD, LED, of the type and mounting specified, RETROFIT or PEDESTRIAN SIGNAL HEAD, LED, RETROFIT; or PEDESTRIAN SIGNAL HEAD, LED, COUNTDOWN, RETROFIT, which price shall be payment in full for furnishing the equipment described above including LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

TRAFFIC SIGNAL BACKPLATE

Delete the second sentence of the fourth paragraph of Article 1078.03 of the Standard Specifications.

Add the following to the fourth paragraph of Article 1078.03 of the Standard Specifications:

When retro reflective sheeting is specified, it shall be Type ZZ sheeting according to Article 1091.03 and applied in preferred orientation for the maximum angularity according to the manufacturer's recommendations. The retro reflective sheeting shall be installed under a controlled environment at the manufacturer/supplier before shipment to the contractor. The aluminum backplate shall be prepared and cleaned, following recommendations of the retro reflective sheeting manufacturer.

VIDEO VEHICLE DETECTION SYSTEM

This specification sets forth the minimum requirements for a system that monitors vehicles on a roadway via processing of video images and provides detector outputs to a traffic signal controller. This work shall consist of furnishing and installing video cameras, all cables, video processors, controller interface unit, and remote communication module to operate a video vehicle detection system at one signalized intersection.

The video vehicle detection system shall be one of the following or approved equal:

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

- Autoscope Encore, Terra TIP, Terra TAP
- Iteris RZ-4 WDR, Vantage Edge 2, Vantage TS2-IM, Edge Connect
- Autoscope AIS-IV, Terra RackVision,

All the cables from the detection cameras to the traffic signal cabinet and within the traffic signal cabinet itself shall be included in the cost of this item.

The video vehicle detection system shall also include a LCD monitor in the traffic signal cabinet with BNC connector for video input.

The video detection camera shall be installed on top of the luminaire arm. However, occasionally overhead utility wires obstruct the camera's field of view and prevent proper detector placement. When this occurs, the camera shall be installed on a J-hook below the luminaire arm, instead of the normal mounting bracket. The cost of the J-hook shall be included in the cost of this item.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Surge protection and grounding shall be provided to protect the video detection cameras and components located in the traffic signal cabinet.

In order for the Traffic Engineer to manipulate detection zones and view the video signal over a high-speed connection, the VIDEO VEHICLE DETECTION SYSTEM must be connected to either the LCDOT Gigabit Ethernet network or a VIDEO TRANSMISSION SYSTEM.

If the VIDEO VEHICLE DETECTION SYSTEM is being connected to the Gigabit Ethernet network, the remote communications module shall communicate over 10/100 Base T Ethernet to a LAYER II (DATA LINK) SWITCH and/or a LAYER III (NETWORK) SWITCH. The Layer II and Layer III switches shall be installed according to the plans, and shall be paid for separately.

Basis of Payment. This item will be paid for at the contract unit price each for VIDEO VEHICLE DETECTION SYSTEM which price shall be payment in full for furnishing all associated equipment, cables and hardware required, installing the system at one signalized intersection, and placing the system in operation to the satisfaction of the Engineer.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

REMOTE-CONTROLLED VIDEO SYSTEM

This pay item shall include providing and installing a remote-controlled video system at a location designated by the Engineer. The remote-controlled video system shall be a PELCO Spectra IV SE Series Discreet Dome System or approved equal. This pay item shall include a color camera (minimum 35x optical zoom), dome assembly, all mounting hardware, connectors, cables, and related equipment necessary to complete the installation in accordance with the manufacturer's specifications.

The PTZ control, power, and coax cables from the traffic signal cabinet shall be paid for separately.

The camera shall be installed as shown on the plans, either on the luminaire arm near the luminaire, or on the combination mast arm assembly pole, angled toward the center of the intersection. When installed on the pole, the camera shall be mounted with a 14-inch pendant arm with integral transformer / power supply (Pelco IWM24-GY or approved equal). When installed on the luminaire arm, the camera shall be installed with a 30-degree tilt-adjustable bracket, and the external power supply (Pelco WCS1-4 or approved equal) shall be installed on the pole. Cameras and external power supplies shall be installed with stainless steel straps.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The contractor shall contact the Traffic Engineer prior to installing the Pelco camera and associated wiring, to receive final approval on the camera location.

In order for the Traffic Engineer to control the camera remotely and view the video signal over a high-speed connection, the REMOTE-CONTROLLED VIDEO SYSTEM must be connected to either the LCDOT Gigabit Ethernet network or a VIDEO TRANSMISSION SYSTEM.

If the REMOTE-CONTROLLED VIDEO SYSTEM is being connected to the Gigabit Ethernet network, then a LAYER II (DATA LINK) SWITCH and/or a LAYER III (NETWORK) SWITCH will be required. Layer II and Layer III switches shall be installed according to the plans, and shall be paid for separately.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

If the REMOTE-CONTROLLED VIDEO SYSTEM is being connected to a new or existing VIDEO TRANSMISSION SYSTEM, then fiber-optic video/data transmitters and receivers may be required. Fiber-optic video/data transmitters and receivers are necessary whenever the REMOTE-CONTROLLED VIDEO SYSTEM and the VIDEO TRANSMISSION SYSTEM are installed at separate signalized intersections. When required, fiber-optic video/data transmitters and receivers shall be installed according to the plans, and shall be included in the cost of this item. The VIDEO TRANSMISSION SYSTEM shall be paid for separately.

Basis of Payment. This item will be paid for at the contract unit price each for REMOTE-CONTROLLED VIDEO SYSTEM, which price shall be payment in full for furnishing all associated equipment required, installing the system complete and in place, and placing the system in operation to the satisfaction of the Engineer.

CAMERA MOUNTING ASSEMBLY

This work shall consist of modifying an existing traffic signal mast arm pole to accommodate an extension pole suitable for mounting a CCTV Camera. The pole extension shall be a 20-foot long, 4-inch diameter, Schedule 80 galvanized steel pipe and fastened to the existing mast arm pole with adjustable, galvanized steel clamps as indicated in the plans. The galvanized clamps shall fit securely around the tapered mast arm and shall be modified as required to maintain a true vertical alignment of the camera mounting assembly pole. The exposed wires shall be trained into a drip loop and protected with black plastic spiral cable wrap.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Basis of payment. This work shall be paid for at the contract unit price each for CAMERA MOUNTING ASSEMBLY, which shall include all necessary mounting hardware, labor, and incidentals necessary to securely fasten the assembly to an existing pole and placing the camera in operation to the satisfaction of the Engineer. The camera, cables, connectors, and related equipment shall be paid for separately as part of REMOTE-CONTROLLED VIDEO SYSTEM.

VIDEO TRANSMISSION SYSTEM

This specification sets forth the minimum requirements for a video transmission system that allows a user to transmit video output from multiple cameras to a remote location, via video transmitter(s) and a high-speed communication link.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The high-speed communication link will be either an ISDN phone line or DSL connection as indicated on the plans.

The VIDEO TRANSMISSION SYSTEM may be installed in either the intersection traffic signal cabinet or in the VIDEO COMMUNICATIONS CABINET. The Cabinet shall be paid for separately.

The VIDEO TRANSMISSION SYSTEM may include the relocation of existing video transmitter(s), ISDN modems, Cisco router, and/or high-speed Internet modem(s) to a new traffic signal cabinet. The relocation of such existing equipment to a new traffic signal cabinet shall be performed as directed by the Engineer and included in the cost of the VIDEO TRANSMISSION SYSTEM. Any item damaged during removal, storage, or reinstallation shall be repaired or replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

System Components:

The system shall consist of video transmitter(s) (ADPRO Fast Tx or approved equal) or a high-speed Internet modem(s), a Cisco Router, and related connection cables.

High-Speed Internet Modem:

The high-speed Internet modem shall be provided by the County or the Internet Service Provider.

The Cisco Router shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

Basis of payment. This item will be paid for at the contract unit price each for VIDEO TRANSMISSION SYSTEM, which price shall be payment in full for furnishing and/or relocating all associated equipment required, installing the system complete and in place, and placing the system in operation to the satisfaction of the Engineer

COMMUNICATIONS CABINET

This specification sets forth the minimum requirements for a communications cabinet to be installed at the location(s) shown in the plans.

The Communications Cabinet shall be a Model 332 (Type 170) Controller Cabinet, with heat exchanger, or approved equal. The heat exchanger shall be thermostatically controlled to maintain the temperature between 32°F and 122°F within the enclosure. The cabinet shall be constructed of 0.125"-thickness, alloy-5052 sheet aluminum. The surface shall have a smooth, natural aluminum mill finish. The cabinet shall measure 24" wide x 30" deep x 55" high.

The communications cabinet shall have front and rear doors of NEMA type 3R construction with cellular neoprene gasket that is rain tight. Door hinges shall be continuous 14-gauge stainless steel and shall be secured with 1/4-20 stainless steel carriage bolts. Standard equipment shall include a three-point locking system that secures the door at the top, bottom and center. A corbin lock with two keys shall also be furnished. The front and rear doors shall be equipped with a two-position doorstop, one at 90° and one at 120°. Door locking rods are 1/4" x 3/4" aluminum turned edgeways with 1" nylon rollers. Door handles shall be cast aluminum.

The front and rear doors shall be equipped with alarm switches wired to an I/O module. The I/O module shall be connected to the Layer III network switch to transmit door open and closed alarms to the TMC. The I/O device shall be a Moxa E2210, Advantech ADAM-6050, or approved equal meeting the following requirements:

- 10/100BaseT LAN connection
- Supports Modbus/TCP over a TCP/IP network
- Minimum of 8 digital dry-contact inputs (logic level 0 = short to GND, logic level 1 = open)
- -10C to +60C Power: 24VDC nominal
- Mounting: DIN rail

The communications cabinet shall be base mounted and equipped with inside flanges and anchoring holes in the front and back of the cabinet for anchoring to a base.

The communications cabinet shall be equipped with a 19" Electronic Industries Association (EIA) rack using 1.75" hole spacing for the purpose of mounting rack-mountable cabinet equipment. The cabinet shall include a fiber optic connector housing, Corning Cable Systems CCH-04U, or approved equal, and a splice housing, Corning Cable Systems CSH-03U, or approved equal, mounted on the 19" rack.

The communications cabinet shall also be equipped with a 15A rackmount power distribution unit and a pull-out drawer/ shelf assembly.

The heat exchanger handles the air inside the communication cabinet, as necessary, to maintain the equipment within the desired temperature range. Therefore, the cabinet shall be fully enclosed, with no louvers in any doors or side panels. No fans or thermostats shall be installed in the communication cabinet.

A power panel shall be included with the cabinet and shall include the following:

- 50-amp circuit breaker. This circuit breaker shall supply power to all devices in the cabinet.
- The main breaker shall be thermal magnetic type, U.L. listed for HACR service, with a minimum of 20,000 amp interrupting capacity.

- Two 15-amp load breakers with minimum 10,000 amp interrupting capacity.
- Two 20-amp load breakers with minimum 10,000 amp interrupting capacity.
- Atlantic Scientific ZoneIT Model 91391 base station, Model 91375 ZoneIT pluggable module (50kA rating) surge arrestor, with LED status indicators, or approved equivalent.
- A 15-position neutral bus bar capable of connecting three #12 wires per position.
- A 7-position ground bus bar capable of connecting three #12 wires per position.
- A NEMA type 5-15R GFI convenience outlet.

The heat exchanger shall be mounted on the side of the communications cabinet and conform to the following specifications.

- Maximum dimensions of 47 inches high x 15 inches wide x 11 inches deep
- The unit shall provide closed-loop system cooling and heating. (Heater option shall be included with the unit.)
- Unit shall be fully gasketed and maintain the NEMA 3R enclosure rating
- Shall utilize a high efficiency, convoluted, refrigerant-free, aluminum heat transfer element
- Shall operate under maximum enclosure temperature of 150°F and maximum ambient temperature of 131°F
- The unit shall dissipate a minimum of 54 Watts per °F
- Shall operate on 115 VAC, 60 Hz
- The heat exchanger shall be hard-wired to the communications cabinet power supply.
- Unit shall be UL listed

Basis of payment. This item will be paid for at the contract unit price each for COMMUNICATIONS CABINET, which price shall be payment in full for furnishing all associated equipment and labor, and installing the cabinet as shown on the plans and to the satisfaction of the Engineer. The Layer III switch, fiber optic splices and terminations, the video transmission system, if applicable, and the concrete foundation for the cabinet shall be paid for separately.

LAYER II (DATA LINK) SWITCH

This specification sets forth the minimum requirements for a layer II Ethernet switch that will transmit data from one traffic signal cabinet to another traffic signal cabinet containing a layer II switch or a layer III (Network) switch. The layer II switch shall be a Cisco Catalyst 2955 Series Intelligent Ethernet Switch, or approved equal.

The Layer II (Data Link) Switch shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

The layer II switch and its power supply shall be mounted to either a standard DIN rail or an

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

Basis of Payment. This item will be paid for at the contract unit price each for LAYER II (DATA LINK) SWITCH, which price shall be payment in full for furnishing and installing the switch, and all necessary connectors, cables, fiber optic jumpers, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The VIDEO ENCODER, MEDIA CONVERTERS, and TERMINAL SERVERS shall be paid for separately.

LAYER III (NETWORK) SWITCH

This specification sets forth the minimum requirements for a layer III switch that will transmit video data from one traffic signal cabinet to another traffic signal cabinet or to another location having a layer III switch. The layer III switch shall be a Cisco Catalyst 3560 Series Intelligent Ethernet Switch, or approved equal.

The Layer III (Network) Switch shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

The layer III switch shall be mounted to the 19-inch equipment rack inside the cabinet. The layer III switch shall be plugged into the 15A power distribution unit inside the cabinet.

Basis of Payment. This item will be paid for at the contract unit price each for LAYER III (NETWORK) SWITCH, which price shall be payment in full for furnishing and installing the switch, and all necessary connectors, cables, fiber optic jumpers, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The VIDEO ENCODER, LAYER III FIBER OPTIC TRANSCEIVER MODULES, MEDIA CONVERTERS, and TERMINAL SERVERS shall be paid for separately.

FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, LONG DISTANCE

This specification sets forth the minimum requirements for a fiber optic transceiver module that plugs into a Cisco layer III gigabit ethernet switch. The module shall be a small form pluggable (SFP), long distance, single mode transceiver, Cisco GLC-LH-SM, or approved equivalent. The transceiver shall be installed in the Cisco layer III switch at the location shown on the plans.

Basis of payment. This item will be paid for at the contract unit price each for FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, LONG DISTANCE, which price shall be payment in full for furnishing and installing the module, and all necessary connectors, cables, hardware,

software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, EXTRA LONG DISTANCE

This specification sets forth the minimum requirements for a fiber optic transceiver module that plugs into a Cisco layer III gigabit ethernet switch. The module shall be a small form pluggable (SFP), extra-long distance, single mode transceiver, Cisco GLC-ZX-SM, or approved equivalent. The transceiver shall be installed in the Cisco layer III switch at the location shown on the plans.

Basis of payment. This item will be paid for at the contract unit price each for FIBER OPTIC TRANSCEIVER MODULE, SFP TYPE, EXTRA LONG DISTANCE, which price shall be payment in full for furnishing and installing the module, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

FIBER OPTIC TRANSCEIVER MODULE, GBIC TYPE, LONG DISTANCE

This specification sets forth the minimum requirements for a fiber optic transceiver module that plugs into a Cisco layer III gigabit ethernet switch. The module shall be a Gigabit Interface Converter (GBIC) type, long distance, single mode transceiver, Cisco WS-G5486, or approved equivalent. The transceiver shall be installed in the Cisco layer III switch at the location shown on the plans. This type of transceiver module is intended for use with earlier models of Cisco layer III switches.

Basis of payment. This item will be paid for at the contract unit price each for FIBER OPTIC TRANSCEIVER MODULE, GBIC TYPE, LONG DISTANCE, which price shall be payment in full for furnishing and installing the module, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

FIBER OPTIC TRANSCEIVER MODULE, GBIC TYPE, EXTRA LONG DISTANCE

This specification sets forth the minimum requirements for a fiber optic transceiver module that plugs into a Cisco layer III gigabit Ethernet switch. The module shall be a Gigabit Interface Converter (GBIC) type, extra long distance, single mode transceiver, Cisco WS-G5487, or approved equivalent. The transceiver shall be installed in the Cisco layer III switch at the location shown on the plans. This type of transceiver module is intended for use with earlier models of Cisco layer III switches.

Basis of payment. This item will be paid for at the contract unit price each for FIBER OPTIC TRANSCEIVER MODULE, GBIC TYPE, EXTRA LONG DISTANCE, which price shall be payment in full for furnishing and installing the module, and all necessary connectors, cables,

hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

VIDEO ENCODER

This specification sets forth the minimum requirements for a video encoder that will transmit video data from one traffic signal cabinet to another traffic signal cabinet or to another location having a layer three switch.

The video encoder shall be an Optelecom Model C-50e MPEG-4 video encoder/decoder, or an Optelecom Model C-54e E-MC 4-channel MPEG-4 encoder, as shown on the plans, or approved equivalent. Other video encoder/decoders submitted for approval must be compatible with the Lake County Passage Advanced Traffic Management System (ATMS) software and VideoLAN VLC Media Player Release 0.8.6D or later.

The VIDEO ENCODER shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

The video encoder shall be mounted on a 16 gauge (min.) aluminum plate, and the plate shall be mounted to the cabinet side rails.

The power supply shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the cabinet power, not plugged into one of the traffic signal cabinet power outlets.

Basis of payment. This item will be paid for at the contract unit price each for VIDEO ENCODER, which price shall be payment in full for furnishing and installing the encoder, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

MEDIA CONVERTER

This specification sets forth the minimum requirements for an unmanaged Ethernet switch that performs copper-to-fiber media conversion at 10/100Mbps speeds.

The media converter shall be a Ruggedcom RMC40 Series, (Model RMC40-HI-C200) four-port, unmanaged Ethernet switch, or approved equivalent. The power supply shall be the HI voltage type (85-264VAC) and ports 3 and 4 shall be for single-mode fiber with SC connectors.

The media converter shall be mounted to either a standard DIN rail or an equipment mounting channel in the cabinet. The power supply shall be hard-wired to the traffic signal cabinet power, not plugged into one of the traffic signal cabinet power outlets. When the media converter is mounted within a communications cabinet, the power supply shall be connected to the power distribution center.

Basis of payment. This item will be paid for at the contract unit price each for MEDIA CONVERTER, which price shall be payment in full for furnishing and installing the media converter, and all necessary connectors, cables, fiber optic jumpers, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

TERMINAL SERVER

This specification sets forth the minimum requirements for a terminal server that will transmit signal controller data from one or more traffic signal controllers onto the Lake County PASSAGE Gigabit Ethernet network.

The terminal server shall be a Digi PortServer TS Hcc 4 four-port serial-to-Ethernet device, or approved equivalent, installed at the location shown on the plans. The terminal server shall be properly configured for its location within the Lake County PASSAGE Network, and for proper communication with the signal equipment being connected to it.

Basis of payment. This item will be paid for at the contract unit price each for TERMINAL SERVER, which price shall be payment in full for furnishing, installing, and configuring the terminal server, and all necessary connectors, cables, hardware, software, other peripheral equipment, and placing it in operation to the satisfaction of the Engineer.

FIBER OPTIC CABLE

Add the following to Section 871 and Section 1076.02 of the "Standard Specifications":

This work shall consist of furnishing and installing Fiber Optical cable in conduit with all accessories and connectors. The cable shall be of the type, size, and the number of fibers specified with twelve fibers per buffer tube.

The distribution enclosure shall be a Corning Model WIC-04P Wall-Mountable Interconnect Center, or approved equivalent, capable of accommodating the required number of fibers. The distribution enclosure shall be included in the cost of the fiber optic cable, including connections to any existing cables.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

All fibers being terminated shall be connected to the distribution enclosure and labeled at the connector and also at the enclosure bulkhead. The label shall include the direction and also the fiber number (e.g. S1, S2, N11, N12).

All splices and terminations on the installed fiber optic cable shall be included in the cost of the fiber optic cable. The splicing of the installed fiber optic cable to any existing fiber optic cable shall be included in the cost of this pay item.

All terminations and splices required only on existing fiber optic cable shall be paid for separately in accordance with the pay item TERMINATE FIBER IN CABINET or SPLICE FIBER IN CABINET.

The quality of the fiber optic cable, including all splices and terminations, shall be verified by testing and documentation in accordance with Article 801.13(d) of the "Standard Specifications", to the satisfaction of the Engineer.

Multimode: The contractor shall coordinate with the equipment vendor, and shall terminate as many multimode fibers as are necessary to establish proper communications with signal controllers and/or video transmission equipment. In addition, the contractor shall terminate four unused multimode fibers and attach them to the distribution enclosure. All multimode terminations shall be ST compatible connectors with ceramic ferrules.

Singlemode: The contractor shall splice and/or terminate the number of singlemode fibers shown on the project plans, if any. Singlemode fiber terminations shall utilize pre-fabricated, factory-terminated pigtailed fusion spliced to bare fibers. The pre-fabricated pigtailed shall have all of their fibers color coded to match the singlemode fibers in the fiber optic cable. All fusion splices shall be secured on Corning splice trays, Models M67-068, M67-110, or approved equivalent, capable of accommodating the required number of fusion splices. All single-mode connectors shall be SC compatible, with ceramic ferrules.

A minimum of 13 feet of slack cable shall be provided for the controller cabinet. The controller cabinet slack cable shall be stored as directed by the Engineer.

Fiber Optic cable may be gel filled or have an approved water blocking tape.

Basis of Payment. The work shall be paid for at the contract unit price per foot for FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, 24 FIBER (12 MULTIMODE AND 12 SINGLEMODE), (FIBER OPTIC CABLE IN CONDUIT, 24 SINGLEMODE) or as specified in plans for the cable in place, including distribution enclosure(s), all connectors, pigtailed, splice trays, connector bulkheads, testing and documentation, and the required number of fiber splices and terminations described in the plans. Additional fiber terminations and/or splices required by

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

the Engineer, (not included in this item), shall be paid for as TERMINATE FIBER IN CABINET and/or SPLICE FIBER IN CABINET.

TERMINATE FIBER IN CABINET

This work shall consist of terminating existing or new fibers in field cabinets or buildings as indicated on the plans or as directed by the Engineer.

All multi-mode connectors shall be ST compatible, with ceramic ferrules. Singlemode fiber terminations shall utilize pre-fabricated, factory-terminated (SC compatible) pigtailed fusion spliced to bare fibers. . The pre-fabricated pigtailed shall have all of their fibers color coded to match the singlemode fibers in the fiber optic cable. All fusion splices shall be secured on Corning splice trays, Models M67-068, M67-110, or approved equivalent, capable of accommodating the required number of fusion splices. Splice trays and connector bulkheads shall be included in the cost of TERMINATE FIBER IN CABINET, and shall not be paid for separately. Connector bulkheads shall be the proper type for the fiber enclosure at the location, and shall be properly secured to the enclosure.

The quality of all fiber splices shall be verified by testing and documentation in accordance with Article 801.13(d) of the "Standard Specifications", to the satisfaction of the Engineer.

Basis of payment. This work shall be paid for at the contract unit price each for each fiber terminated in a field cabinet or inside a building as TERMINATE FIBER IN CABINET, which will be payment in full for terminating each required multimode or singlemode fiber, including all connectors, pigtailed, splice trays, bulkheads, testing and documentation. The splicing of pigtailed for singlemode fibers is included in the cost of TERMINATE FIBER IN CABINET, and shall not be paid for separately. This pay item shall not be used to pay for fiber terminations and/or splices completed to meet the requirements of FIBER OPTIC CABLE IN CONDUIT.

SPLICE FIBER IN CABINET

This work shall consist of fusion splicing singlemode fibers in a field cabinet or inside a building as indicated on the plans and as directed by the Engineer. Splices shall be secured in fiber optic splice trays within fiber optic distribution enclosures. The splice trays shall be Corning Models M67-068, M67-110, or approved equivalent, capable of accommodating the required number of fusion splices. Splice trays shall be included in the cost of SPLICE FIBER IN CABINET and shall not be paid for separately.

The quality of all fiber splices shall be verified by testing and documentation in accordance with Article 801.13(d) of the "Standard Specifications", to the satisfaction of the Engineer.

All optical fibers shall be spliced to provide continuous runs. Splices shall only be allowed in equipment cabinets except where otherwise shown on the Plans.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

All splices shall be made using a fusion splicer that automatically positions the fibers using a system of light injection and detection. The Contractor shall provide all equipment and consumable supplies.

Basis of payment. This work shall be paid for at the contract unit price each for SPLICE FIBER IN CABINET, which will be payment in full for all fusion splicing, fiber optic splice trays, testing and documentation, at a cabinet or building location shown on the plans and as directed by the Engineer. This pay item shall not be used to pay for fiber terminations and/or splices completed to meet the requirements of FIBER OPTIC CABLE IN CONDUIT.

FIBER OPTIC TRACER CABLE

The cable shall meet the requirements of Section 817 of the "Standard Specifications", except for the following:

In order to trace the fiber optic cable after installation, an XLP black insulated copper cable No. 14 shall be pulled in the same conduit as the fiber optic cable. The tracer cable shall be continuous, and extend a minimum of 3 feet into the controller cabinet. The tracer cable shall be clearly marked and identified. In order to minimize the number of splices required, the tracer cable shall incorporate maximum lengths of cable supplied by the manufacturer. Splicing of the tracer cable will be allowed at the handholes only. The tracer cable splice shall use a Western Union splice soldered with resin core flux. All exposed surfaces of the solder shall be smooth. Splices shall be soldered using a soldering iron. Blowtorches or other devices which oxidize copper cable shall not be allowed for soldering operations. The splice shall be covered with underwater grade WCSMW 30/100 heat shrink tube, minimum length four (4) inches and with a minimum one (1) inch coverage over the XLP insulation.

Basis of payment. The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per foot, which price shall include all associated labor and material for installation.

WIRELESS TRANSMISSION SYSTEM SHORT RANGE

This work shall consist of the installation of a new node on the Lake County PASSAGE wireless network. This item includes the directional antenna and power injector, associated cables / wiring, and all mounting hardware.

The WIRELESS TRANSMISSION SYSTEM SHORT RANGE includes:

- One (1) Proxim TsunamiMP.11 5054-R Subscriber unit with Integrated 23dBi Antenna (Model 5054-SUR-US) or approved equivalent.
- Two (2) Proxim Model 76394 surge suppressors, or approved equivalent.
- Power wiring from the radio power injector to the circuit breaker.
- All mounting hardware.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

All components of this item shall be installed as shown on the plans. The radio transceiver and antenna shall be installed as high as possible on the mast arm assembly pole. The antenna shall be directed / aimed at another antenna on the County's wireless system, (e.g. aimed at a sector antenna on a water tower), as shown on the plans and as directed by the Engineer. The power injector shall be installed inside the traffic signal cabinet.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The WIRELESS TRANSMISSION SYSTEM SHORT RANGE electronics shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

Basis of payment. This item will be paid for at the contract unit price each for WIRELESS TRANSMISSION SYSTEM SHORT RANGE, which price shall be payment in full for furnishing and installing the power injector, antenna, and all associated connectors, cables, hardware, and other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The Outdoor Rated Network Cable from the antenna to the traffic signal cabinet shall be paid for separately.

WIRELESS TRANSMISSION SYSTEM LONG RANGE

This work shall consist of the installation of a new node on the Lake County PASSAGE wireless network. This item includes the directional antenna and power injector, associated cables / wiring, and all mounting hardware.

The WIRELESS TRANSMISSION SYSTEM LONG RANGE includes:

- One (1) Proxim TsunamiMP.11 5054-R-LR Subscriber unit for extended range with Integrated 23dBi Antenna (Model 5054-SUR-LR-US) or approved equivalent.
- Two (2) Proxim Model 76394 surge suppressors, or approved equivalent.
- Power wiring from the radio power injector to the circuit breaker.
- All mounting hardware.

All components of this item shall be installed as shown on the plans. The radio transceiver and antenna shall be installed as high as possible on the mast arm assembly pole. The antenna shall be directed / aimed at another antenna on the County's wireless system, (e.g. aimed at a sector antenna on a water tower), as shown on the plans and as directed by the Engineer. The power injector shall be installed inside the traffic signal cabinet.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The WIRELESS TRANSMISSION SYSTEM LONG RANGE electronics shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

Basis of payment. This item will be paid for at the contract unit price each for WIRELESS TRANSMISSION SYSTEM LONG RANGE, which price shall be payment in full for furnishing and installing the power injector, antenna, and all associated connectors, cables, hardware, and other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The Outdoor Rated Network Cable from the antenna to the traffic signal cabinet shall be paid for separately.

WIRELESS TRANSMISSION SYSTEM EXTRA LONG RANGE

This work shall consist of the installation of a new node on the Lake County PASSAGE wireless network. This item includes the radio, directional antenna and power injector, associated cables / wiring, and all mounting hardware.

The WIRELESS TRANSMISSION SYSTEM EXTRA LONG RANGE includes:

- One (1) Proxim TsunamiMP.11 (Model 5054-SUA-LR-US) Subscriber unit for extended range with type N connector
- One (1) RadioWaves 28dBi Antenna (Model FP2-5-28) or approved equivalent.
- One (1) low loss RF coaxial cable, 3 foot, N to N
- Two (2) Proxim Model 76394 surge suppressors, or approved equivalent.
- Power wiring from the radio power injector to the circuit breaker.
- All mounting hardware.

All components of this item shall be installed as shown on the plans. The radio transceiver and antenna shall be installed as high as possible on the mast arm assembly pole. The antenna shall be directed / aimed at another antenna on the County's wireless system, (e.g. aimed at a sector antenna on a water tower), as shown on the plans and as directed by the Engineer. The power injector shall be installed inside the traffic signal cabinet.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The WIRELESS TRANSMISSION SYSTEM EXTRA LONG RANGE electronics shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

Basis of payment. This item will be paid for at the contract unit price each for WIRELESS TRANSMISSION SYSTEM EXTRA LONG RANGE, which price shall be payment in full for furnishing and installing the power injector, antenna, and all associated connectors, cables, hardware, and other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The Outdoor Rated Network Cable from the radio to the traffic signal cabinet shall be paid for separately.

WIRELESS TRANSMISSION SYSTEM POINT TO POINT

This work shall consist of the installation of a new node on the Lake County PASSAGE wireless network. This item includes the directional antenna and power injector, associated cables / wiring, and all mounting hardware.

The WIRELESS TRANSMISSION SYSTEM POINT TO POINT includes:

- One (1) Proxim Tsunami Quick Bridge unit with Integrated 23dBi Antenna (Model QB-8150-LINK-US) or approved equivalent.
- Two (2) Proxim Model 76394 surge suppressors, or approved equivalent.
- Power wiring from the radio power injector to the circuit breaker.
- All mounting hardware.

All components of this item shall be installed as shown on the plans. The radio transceiver and antenna shall be installed as high as possible on the mast arm assembly pole. The antenna shall be directed / aimed at another antenna on the County's wireless system, (e.g. aimed at corresponding antenna at other intersection), as shown on the plans and as directed by the Engineer. The power injector shall be installed inside the traffic signal cabinet.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The WIRELESS TRANSMISSION SYSTEM POINT TO POINT electronics shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

Basis of payment. This item will be paid for at the contract unit price each for WIRELESS

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

TRANSMISSION SYSTEM POINT TO POINT, which price shall be payment in full for furnishing and installing the power injector, antenna, and all associated connectors, cables, hardware, and other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The Outdoor Rated Network Cable from the antenna to the traffic signal cabinet shall be paid for separately.

WIRELESS TRANSMISSION SYSTEM BACKHAUL

This work shall consist of the installation of a new node on the Lake County PASSAGE wireless network. This item includes the directional antenna and power injector, associated cables / wiring, and all mounting hardware.

The WIRELESS TRANSMISSION SYSTEM BACKHAUL includes:

- One (1) Proxim Tsunami licensed backhaul radio (Model GX-800) or approved equivalent.
- One (1) 2 foot dish antenna or other as specified on plans
- Two (2) Proxim Model 76394 surge suppressors, or approved equivalent.
- Power wiring from the radio power injector to the circuit breaker.
- All mounting hardware.

All components of this item shall be installed as shown on the plans. The radio transceiver and antenna shall be installed as high as possible on the mast arm assembly pole or tower as shown on plans. The antenna shall be directed / aimed at another antenna on the County's wireless system, (e.g. aimed at corresponding antenna at other intersection / tower), as shown on the plans and as directed by the Engineer. The power injector shall be installed inside the traffic signal / grade level cabinet.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The WIRELESS TRANSMISSION SYSTEM BACKHAUL electronics shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

Basis of payment. This item will be paid for at the contract unit price each for WIRELESS TRANSMISSION SYSTEM BACKHAUL, which price shall be payment in full for furnishing and installing the power injector, antenna, and all associated connectors, cables, hardware, and other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The Outdoor Rated Network Cable from the antenna to the traffic signal cabinet shall be paid for separately.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

WIRELESS TRANSMISSION SYSTEM BASE STATION

This work shall consist of the installation of a new node on the Lake County PASSAGE wireless network. This item includes the directional antenna and power injector, associated cables / wiring, and all mounting hardware.

The WIRELESS TRANSMISSION SYSTEM BASE STATION includes:

- One (1) Proxim Tsunami base station long range unit (Model 5054-BSU-R-LR) or approved equivalent.
- One (1) 60 degree sector antenna or other as shown on the plans.
- Two (2) Proxim Model 76394 surge suppressors, or approved equivalent.
- Power wiring from the radio power injector to the circuit breaker.
- All mounting hardware and poles.

All components of this item shall be installed as shown on the plans. The radio transceiver and antenna shall be installed on a new mounting pole or other as shown on the plans. The antenna shall be directed / aimed according to the azimuth settings listed in the plans and as directed by the Engineer. The power injector shall be installed inside the cabinet.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

The WIRELESS TRANSMISSION SYSTEM BASE STATION electronics shall be procured from Delcan, the County's Passage engineering consultant. Delcan shall program this equipment for the appropriate location in the County's communication network.

Basis of payment. This item will be paid for at the contract unit price each for WIRELESS TRANSMISSION SYSTEM BASE STATION, which price shall be payment in full for furnishing and installing the power injector, antenna, and all associated connectors, cables, hardware, and other peripheral equipment, and placing it in operation to the satisfaction of the Engineer. The Outdoor Rated Network Cable from the antenna to the cabinet shall be paid for separately.

RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION)

This work shall consist of the removal, storage, and relocation of an existing video detection system (complete intersection) from one traffic signal installation (temporary or permanent) to another traffic signal installation (temporary or permanent). This item shall also include the relocation of the remote-controlled video system according to the plans.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The video detection system (complete intersection) shall be removed and relocated as shown in the plans. Any damage sustained to the video detection system during removal, storage, transport, and/or reinstallation operations shall be repaired or replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Basis of payment. This item will be paid for at the contract unit price each for RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION), which price shall be payment in full for disconnecting the existing video detection system, remote-controlled video system, packaging/storing it, transporting it, and relocating it to the new location complete and operating to the satisfaction of the Engineer.

RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM

This work shall consist of the removal, storage, and relocation of an existing remote-controlled video system from one traffic signal installation (temporary or permanent) to another traffic signal installation (temporary or permanent). This pay item shall be used when only the remote-controlled video system is being relocated. This pay item shall not be used when the remote-controlled video system is being relocated as part of RELOCATE EXISTING VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION).

The remote-controlled video system shall be removed and relocated as shown in the plans. Any damage sustained to the remote-controlled video system during removal, storage, transport, and/or reinstallation operations shall be repaired or replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

All holes drilled into signal poles, mast arms, or posts shall require rubber grommets to prevent chafing of wires.

Basis of payment. This item will be paid for at the contract unit price each for RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM, which price shall be payment in full for disconnecting the existing remote-controlled video system, packaging/storing it, transporting it, and relocating it to the new location complete and operating to the satisfaction of the Engineer.

RELOCATE EXISTING SWITCH

This work shall consist of the removal, storage, and relocation of an existing layer two or layer three switch from one traffic signal installation to another traffic signal installation.

The switch shall be removed and relocated as shown in the plans. Any damage sustained to the switch during removal, storage, transport, and/or reinstallation operations shall be repaired or

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

replaced in kind to the satisfaction of the Engineer at the Contractor's expense.

Basis of payment. This item will be paid for at the contract unit price each for RELOCATE EXISTING SWITCH, which price shall be payment in full for disconnecting the existing switch, packaging/storing it, transporting it, and relocating it to the new location complete and operating to the satisfaction of the Engineer. This item shall also include the relocation and reinstallation of the switch power supply, and all fiber optic jumper cables necessary for proper operation.

TEMPORARY TRAFFIC SIGNAL TIMING

This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the entirety of the construction project beginning with any changes to the existing traffic patterns including lane shifts or lane reductions. This shall include the period prior to the turn-on of any temporary traffic signal installation. This item can also be utilized to make temporary timing adjustments to existing traffic signals required by detours or other temporary conditions.

All timings and adjustments necessary for this work shall be performed by an approved Consultant who has previous experience in optimizing Closed Loop Traffic signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants.

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMINGS.

- (a) Consultant shall attend temporary traffic signal inspection (turn-on) and/or detour meeting and conduct on-site implementation of the traffic signal timings. Make fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.
- (b) Consultant shall provide monthly observation of traffic signal operations in the field.
- (c) Consultant shall provide on-site consultation and adjust timings as necessary for construction stage changes, temporary traffic signal phase changes, and any other conditions affecting timing and phasing, including lane closures, detours, and other construction activities.
- (d) Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

Basis of Payment. The work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL TIMING, which price shall be payment in full for performing all work described herein per intersection. When the temporary traffic signal installation is turned on, traffic control is installed, or the detour is implemented, 50 percent of the bid price will be paid. The remaining 50 percent of the bid price will be paid following the removal of the temporary traffic signal installation, traffic control and/or detour.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM

Description. This work shall consist of re-optimizing a closed loop traffic signal system according to the following Levels of work.

LEVEL I applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system. The purpose of this work is to integrate the improvements to the subject intersection into the signal system while minimizing the impacts to the existing system operation. This type of work would be commonly associated with the addition of signal phases, pedestrian phases, or improvements that do not affect the capacity at an intersection.

LEVEL II applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system and detailed analysis of the intersection operation is desired by the engineer, or when a new signalized or existing signalized intersection is being added to an existing system, but optimization of the entire system is not required. The purpose of this work is to optimize the subject intersection, while integrating it into the existing signal system with limited impact to the system operations. This item also includes an evaluation of the overall system operation, including the traffic responsive program.

For the purposes of re-optimization work, an intersection shall include all traffic movements operated by the subject controller and cabinet.

After the signal improvements are completed, the signal shall be re-optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 377-7000 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

All work shall be based upon the LCDOT Countywide Synchro model. The Consultant shall contact the LCDOT at 847-377-7000 to acquire the required portion of the countywide model to be updated for the particular project. Upon completion of the project, the Consultant shall provide the LCDOT with the revised and updated files for inclusion into the Countywide Synchro Model.

The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) LEVEL I Re-Optimization

1. The following tasks are associated with LEVEL I Re-Optimization.
 - a. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system.
 - b. Proposed signal timing plan for the new or modified intersection(s) shall be forwarded to the County for review prior to implementation.
 - c. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations.
 - d. All patterns associated with Transit Signal Priority and Incident Response Plans are to be reviewed and adjusted as required.
2. The following deliverables shall be provided for LEVEL I Re-Optimization.
 - a. Consultant shall furnish to the County a cover letter describing the extent of the re-optimization work performed.

(b) LEVEL II Re-Optimization

1. In addition to the requirements described in the LEVEL I Re-Optimization above, the following tasks are associated with LEVEL II Re-Optimization.
 - a. Traffic counts shall be taken at the subject intersection after the traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.
 - b. Traffic responsive program operation shall be evaluated to verify proper pattern selection and lack of oscillation and a report of the operation shall be provided to IDOT.
 - c. All patterns associated with Transit Signal Priority and Incident Response Plans are to be reviewed and adjusted as required.
2. The following deliverables shall be provided for LEVEL II Re-Optimization.
 - a. Consultant shall furnish to the County one (1) copy of a technical memorandum for the optimized system. The technical memorandum shall include the following elements:
 1. Brief description of the project
 2. Printed copies of the analysis output from Synchro (or other appropriate approved optimization software file)
 3. Printed copies of the traffic counts conducted at the subject intersection

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

- b. Consultant shall furnish to the County two (2) CDs for the optimized system. The CDs shall include the following elements:
1. Electronic copy of the technical memorandum in PDF format
 2. Revised Synchro files (or other appropriate, approved optimization software file) including the new signal and the rest of the signals in the closed loop system or as identified by the Engineer
 3. Traffic counts conducted at the subject intersection
 4. The CD case shall include a clearly readable label displaying the same information securely affixed to the side and front.

Basis of Payment. This work shall be paid for at the contract unit price each for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL I or RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL II, which price shall be payment in full for performing all work described herein per intersection. Following completion of the timings and submittal of specified deliverables, 100 percent of the bid price will be paid. Each intersection will be paid for separately.

OPTIMIZE TRAFFIC SIGNAL SYSTEM

Description. This work shall consist of optimizing a closed loop traffic signal system.

OPTIMIZE TRAFFIC SIGNAL SYSTEM applies when a new or existing closed loop traffic signal system is to be optimized and a formal Signal Coordination and Timing (SCAT) Report is to be prepared. The purpose of this work is to improve system performance by optimizing traffic signal timings, developing a time of day program and a traffic responsive program.

After the signal improvements are completed, the signal system shall be optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 377-7000 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

All work shall be based upon the LCDOT Countywide Synchro model. The Consultant shall contact the LCDOT at 847-377-7000 to acquire the required portion of the countywide model to be updated for the particular project. Upon completion of the project, the Consultant shall provide the LCDOT with the revised and updated files for inclusion into the Countywide Synchro Model.

The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the

system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

(a) The following tasks are associated with OPTIMIZE TRAFFIC SIGNAL SYSTEM.

1. Appropriate signal timings and offsets shall be developed for each intersection and appropriate cycle lengths shall be developed for the closed loop signal system or as identified by Engineer.
2. All patterns associated with Transit Signal Priority and Incident Response Plans are to be developed as required.
3. Traffic counts shall be taken at all intersections after the permanent traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit and multi-unit heavy vehicles.
4. A traffic responsive program shall be developed, which considers both volume and occupancy. A time-of-day program shall be developed for used as a back-up system.
5. Proposed signal timing plan for the new or modified intersection shall be forwarded to the County for review prior to implementation.
6. Consultant shall conduct on-site implementation of the timings and make fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.
7. Speed and delay studies shall be conducted during each of the count periods along the system corridor in the field before and after implementation of the proposed timing plans for comparative evaluations. These studies should utilize specialized electronic timing and measuring devices.

(b) The following deliverables shall be provided for OPTIMIZE TRAFFIC SIGNAL SYSTEM.

1. Consultant shall furnish to the County one (1) copy of a SCAT Report for the optimized system. The SCAT Report shall include the following elements:

Cover Page in color showing a System Map
Figures <ol style="list-style-type: none"> 1. System overview map – showing system number, system schematic map with numbered system detectors, oversaturated movements, master location, system phone number, cycle lengths, and date of completion. 2. General location map in color – showing signal system location in the metropolitan area. 3. Detail system location map in color – showing cross street names and local controller addresses. 4. Controller sequence – showing controller phase sequence diagrams.
Table of Contents
Tab 1: Final Report <ol style="list-style-type: none"> 1. Project Overview 2. System and Location Description (Project specific) 3. Methodology 4. Data Collection 5. Data Analysis and Timing Plan Development 6. Implementation <ol style="list-style-type: none"> a. Traffic Responsive Programming (Table of TRP vs. TOD Operation) 7. Evaluation <ol style="list-style-type: none"> a. Speed and Delay runs
Tab 2. Turning Movement Counts <ol style="list-style-type: none"> 1. Turning Movement Counts (Showing turning movement counts in the intersection diagram for each period, including truck percentage)
Tab 3. Synchro Analysis <ol style="list-style-type: none"> 1. AM: Time-Space diagram in color, followed by intersection Synchro report (Timing report) summarizing the implemented timings. 2. Midday: same as AM 3. PM: same as AM
Tab 4: Speed, Delay Studies <ol style="list-style-type: none"> 1. Summary of before and after runs results in two (2) tables showing travel time and delay time. 2. Plot of the before and after runs diagram for each direction and time period.
Tab 5: Environmental Report <ol style="list-style-type: none"> 1. Environmental impact report including gas consumption, NO2, HCCO, improvements.
Tab 6: Electronic Files <ol style="list-style-type: none"> 1. Two (2) CDs for the optimized system. The CDs shall include the following elements: <ol style="list-style-type: none"> a. Electronic copy of the SCAT Report in PDF format b. Copies of the Synchro files for the optimized system c. Traffic counts for the optimized system d. New or updated intersection graphic display files for each of the system intersections and the system graphic display file including system detector locations and addresses.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

Basis of Payment. The work shall be paid for at the contract unit each for OPTIMIZE TRAFFIC SIGNAL SYSTEM, which price shall be payment in full for performing all work described herein for the entire traffic signal system. Following the completion of traffic counts, 25 percent of the bid price will be paid. Following the completion of the Synchro analysis, 25 percent of the bid price will be paid. Following the setup and fine tuning of the timings, the speed-delay study, and the TRP programming, 25 percent of the bid price will be paid. The remaining 25 percent will be paid when the system is working to the satisfaction of the engineer and the report and CD have been submitted.

ELECTRIC CABLE IN CONDUIT, VIDEO NO. 18 3C

This work shall consist of furnishing and installing an 18AWG 3C 600V cable with black LLDPE jacket. This cable connects a video detection camera to the interface panel in the traffic signal cabinet.

The insulation of the individual conductors shall be color coded black, green, and white.

An appropriate connector shall be used to connect the cable to the camera. To minimize maintenance issues, the supplier of the video detection system shall install the connector, in a controlled shop environment, on to an appropriate length of this cable. The connector shall not be installed on to the cable by the Contractor.

Splices in this cable shall only be allowed at the handhole access near the base of the mast arm assembly, according to the following. Each of the three (3) individual conductors shall be butt spliced, soldered, and covered with heat-shrink tubing. Then the entire splice assembly (all three conductors) shall be covered with a minimum 6-inch piece of heavy-wall, adhesive lined, 3:1 shrink ratio shrinkable tubing.

Basis of Payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, VIDEO NO. 18 3C. The unit price shall include furnishing the material, installation, and making all electrical connections necessary for proper operation.

LAKE COUNTY D.O.T. TRAFFIC CONTROL AND PROTECTION SPECIAL PROVISION

Traffic Control Plan (L.C.-T- Section 700), Effective 06/01/2012

Traffic Control shall be according to with the applicable sections of the "Standard Specifications", the "Supplemental Specifications", the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, the "Quality Standard for Work Zone Traffic Control Devices", any special details and Highway Standards as shown on the plans and the special provisions contained herein.

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

Special attention is called to Articles 105.03(b), 105.05, and 107.09, and to Sections 701, 704, and 782 of the "Standard Specifications", and to the following Highway Standards, Details, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.

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

STANDARDS

901001, 701006, 701301, 701311, 701501, 701701, 701801, 701901

DETAILS

LC7003 – URBAN LANE CLOSURE MULTILANE INTERSECTION
LC7004 – TRAFFIC CONTROL AND PROTECTION FOR SIDEROADS, INTERSECTIONS
AND DRIVEWAYS
LC7005 – TYPICAL LANE CLOSURE 3 LANE ROAD SECTION
LC7800 – TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS

RECURRING SPECIAL PROVISIONS

LRS3 Special Provision for Work Zone Traffic Control Surveillance

DETOURS

Detours and road closures on county maintained roads within Lake County, Illinois shall be according to with the applicable Articles and Sections of the "Standard Specifications", the "Supplemental Specifications", the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", the Lake County Division of Transportation's Detour Procedures and Guidelines, any special details and Highway Standards as shown on the Detour Plan and the Special Provisions contained herein. The LCDOT's Detour Procedures and Guidelines are available from the LCDOT, Traffic Engineering Section upon request.

Traffic Control and Protection (L.C.-T- Section 700), Effective 06/01/2012

The Traffic Control and Protection shall meet the requirements of Division 700. Work Zone Traffic Control and Protection, Signing and Pavement Marking of the "Standard Specifications" except as follows:

Article 701.01 Description shall be replaced with the following:

701.01 Description. This item of work shall consist of furnishing, installing, maintaining, replacing, relocating and removing all traffic control devices used for the purpose of regulating, warning or directing traffic during the construction or maintenance of this improvement.

Article 701.02 Materials shall be modified by adding the following paragraph:

Traffic control devices include signs and their supports, signals, pavement markings, barricades and their approved weights, channeling devices, warning lights, arrow boards, flaggers, or any other device used for the purpose of regulating, detouring, warning or guiding traffic through or around the construction zone.

Article 701.04 General shall be modified by adding the following as the first paragraph:

Traffic Control and Protection shall be provided as called for in the plans, these special provisions, applicable Highway Standards, applicable sections of the "Standard Specifications", or as directed by the Engineer.

Article 701.04 General shall be modified by adding the following to the fourth paragraph:

The Contractor shall dispatch men, materials, and equipment to correct any such deficiencies. The Contractor shall respond to any call from LCDOT concerning any request for improving or correcting traffic control devices and begin making the requested repairs within two (2) hours from the time of notification.

Article 701.10 Surveillance shall be replaced with the following:

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

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

The Contractor shall ensure that all the traffic control devices he/she installs are operational, functional and effective 24 hours a day, 7 days a week, including holidays.

Article 701.13 Flaggers (a) shall be modified by revising the seventh paragraph, subparagraph (a) by adding the following:

The Engineer will determine when a side road or entrance shall be closed to traffic. The flagger shall be positioned as shown on the plans or as directed by the Engineer.

Article 701.14 Signs (a) Road Construction Ahead Signs shall be modified by changing the following to the first paragraph:

"ROAD WORK AHEAD" signs shall be required in lieu of "ROAD CONSTRUCTION AHEAD" SIGNS

Article 701.14 Signs (b) Work Zone Speed Limit Signs shall be revised to read:

- (b) Work Zone Speed Limit Signs. The Lake County Division of Transportation will specify whether a project meets the criteria for a Work Zone Speed Limit. When specified, the work zone speed limit signs shall be installed as shown on the LCDOT Work Zone Speed Limit Signing Diagram, LC7203, at a maximum of 20 feet lateral distance of the locations shown on the plans. Failure to install and maintain the required amount of signs at the proper sign spacing shall result in an immediate traffic control deficiency.

All permanent "SPEED LIMIT" signs located within the work zone shall be removed or covered. If the speed limit sign is to be covered, it shall be done in a manner that no part of the legend shall be visible in any lighting condition. This work shall be completed by the contractor after the method of covering the speed limit signs has been approved by the Engineer.

The work zone speed limit signs and the end work zone speed limit signs in advance of and at the end of the lane closure(s) shall be used for the duration of the closure(s).

The work zone speed limit signs will be removed when roadway conditions return to normal or when the construction project is suspended for over 30 days.

Article 701.14 Signs shall be modified by adding the following section (c),

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

- (c) Temporary Construction Information Signs. When indicated in the traffic control plan or as directed by the Engineer the Contractor shall furnish, install, maintain, relocate, and remove for various stages of construction Temporary Construction Information Signs.

Temporary Construction Information Signs may include:

Driveway	White Legend on Green Background
Caution-New Lanes Open	Black Legend on Orange Background

The signs, as shown on Lake County Detail LC7201 shall be installed in accordance with the traffic control plan and as directed by the Engineer.

Article 701.15 Traffic Control Devices (b) Type I, II and III Barricades shall be deleted and replaced with the following:

Type II barricades shall be used at all locations that call for Type I, or Type II barricades.

Type II barricades are used to channelize traffic; to delineate unattended obstacles, patches, excavations, drop-offs, and other hazards; and as check barricades

Any drop off greater than 3 inches, but less than 6 inches, located within 8 feet of the pavement edge shall be protected by Type II barricades equipped with mono-directional steady burn lights. The barricades shall be placed at a spacing of 100 feet center to center. For any drop off within 8 feet of the pavement edge that exceeds 6 inches, the Type II barricades equipped with mono-directional steady burn lights shall be placed at a spacing of 50 feet center to center. Barricades that must be placed in excavated areas shall have leg extensions installed so that the top of the barricade is in compliance with the height requirements of IDOT Standard 701901.

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

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

Type III barricades are used to close traffic lanes and to close roads.

Article 701.15 Traffic Control Devices (e) Direction Indicator Barricades shall be modified by adding the following paragraphs.

The direction indicator barricades shall meet the requirements for Type II barricades as stated in this special provision. The top panel, which faces traffic, shall be as shown in IDOT Highway Standard 701901. The top panel, facing away from traffic shall have a 12 inch x 24 inch orange and white diagonal panel. The bottom panels shall be 8 inches x 24 inches with orange and white diagonal sheeting, as shown in LCDOT's Special Detail LC7200.

Article 701.15 Traffic Control Devices (j) Portable Changeable Message Signs shall be modified by adding the following paragraphs:

The PCMS shall be compatible and fully functional with the Lake County Division of Transportation's Transportation Management Center PASSAGE PCMS Control Software. A list of approved PCMS's manufacturers and traffic control vendors is available upon request from the Lake County Division of Transportation. The PCMS shall be tested and approved by the Lake County Division of Transportation and can be sufficiently controlled by the Lake County Division of Transportation NTCIP compliant software. If the PCMS has not been tested or approved by either the Illinois State Toll Highway Authority or The Lake County Division of Transportation then the PCMS will need to be tested and certified by the Delcan Corporation at the contractor's expense.

Lake County Division of Transportation (PASSAGE)
Software Developer:
Delcan
650 East Algonquin Road, Suite 101
Schaumburg, IL 60173

In case of a Traffic Incident Management (TIM) event or other County or State declared Emergency Management event, the use of the PCMS may be pre-empted from the contractor's use by the Lake County Transportation Management Center for the duration of the incident. If the PCMS must be moved from the limits of the work site to an offsite location to better facilitate the use of the PCMS during the incident, the contractor will be compensated for the labor and equipment to move the PCMS to the designated location and back, in accordance with Article 109.04 (b) of the Standard Specifications for Road and Bridge Construction. In order to facilitate the movement of the PCMS in a timely

manner, the Lake County Division of Transportation may use County Forces to move the PCMS to the designated location and/or back, at no additional cost to the contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all times when no message is displayed, they shall be considered equipment.

Basis of Payment. Changeable message signs will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN, as stated in Article 701.20 of this special provision.

Article 701.17 Specific Construction Operations (c) Surface Courses and Pavement (1) Prime Coat shall be replaced by the following:

- (1) Prime Coat. "FRESH OIL" signs (W21-2) shall be used when the prime coat is applied to pavement that is open to traffic. The signs are to remain in place until tracking of the prime ceases. These signs shall be erected a minimum of 500 feet preceding the start of the prime and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. These signs are excluded from the time requirements of Article 701.04 of the "Standard Specifications" as modified by this special provision (above). Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate traffic control deficiency deduction. All signs shall have an amber flashing light attached.

Article 701.17 Specific Procedures (c) Surface Courses and Pavement (2) Cold Milling shall be replaced by the following:

- (2) Cold Milling. "ROUGH GROOVED SURFACE" signs (W8-1107) shall be used when the road has been cold milled and is open to traffic. The signs shall remain in place until the milled surface condition no longer exists. These signs shall be erected a minimum of 500 feet preceding the start of the milled pavement and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate traffic control deficiency deduction. All signs shall have an amber flashing light attached.

Article 701.17 Specific Procedures (c) Surface Course and Pavement shall be modified by

adding the following paragraph:

- (6) Area Reflective Crack Control Treatment Fabric. "SLIPPERY WHEN WET" signs (W8-5) shall be used when crack control fabric is applied to pavement that is open to traffic. These signs shall remain in place until the binder course is laid. The signs shall be erected a minimum of 500 feet preceding the start of the crack control treatment and on all side roads within the posted area. The signs on the side roads shall be posted a minimum of 200 feet from the mainline pavement. These signs are excluded from the time requirements of Article 701.04 of the "Standard Specifications" as modified by this special provision (above). Non-compliance with the provisions of this section, by the Contractor, shall result in an immediate traffic control deficiency deduction. All signs shall have an amber flashing light attached.

Article 701.18 Highway Standards Application (b) Standard 701316 and 701321 (2)
g. Detector Loops, shall be replaced with the following:

- g. Detection. Microwave Vehicle Sensors shall be installed as directed by the Engineer. LCDOT shall approve the proposed microwave vehicle sensor before the Contractor may furnish or install it. The Contractor shall install, wire and adjust the alignment of the sensor in accordance to the manufacturer's recommendations and requirements. The Engineer shall approve the installation. An alternate method of detection may be used if it has been demonstrated and approved by the department.

The microwave vehicle sensor shall meet the following requirements:

- Detection Range: Adjustable to 60 feet
- Detection Angle: Adjustable, horizontal and vertical
- Detection Pattern: 16 degree beam width minimum. [at 50 feet the pattern shall be approximately 15.5 feet wide]
- Mounting: Heavy-duty bracket, predrilled and slotted for pole mounting
- LED Indicator Light: for detection verification

Article 701.18 Highway Standards Application (j) Urban Traffic Control, Standards 701501, 701502, 701601, 701602, 701606, 701701, and 701801 (1) General, shall be modified by adding the following paragraphs:

Whenever a lane is closed to traffic using IDOT standard 701601, 701606, or 701701, the pavement width transition sign (W4-2R or W4-2L)

shall be used in lieu of the "WORKERS" sign (W21-1 or W21-1a)

Whenever any vehicle, equipment, workers or their activities infringe on the shoulder or within 15 feet of the traveled way, and the traveled way remains unobstructed, then the applicable Traffic Control Standard shall be 701006, 701011, 701101, or 701701. The "SHOULDER WORK AHEAD" sign (W21-5(0)-48) shall be used in lieu of the "WORKERS" sign (W21-1 or W-21-1a).

Article 701.18 Highway Standards Application shall be modified by adding the following section (l):

(l) IDOT standard 701331. When IDOT standard 701331 is specified on two-lane, two-way roadways, a "LANE SHIFT AHEAD" sign shall be added 500 feet in advance of W1-3 or 4 sign. The Road Work sign (W20-1) shall be extended to a total of 1500' from the start of the lane shift.

Article 701.19 Method of Measurement shall be replaced completely with the following:

701.19 Method of Measurement.

These items of work will be measured on a lump sum basis for furnishing installing, maintaining, replacing, relocating and removing the traffic control devices required in the plans and these special provisions.

Article 701.20 Basis of Payment shall be replaced completely with the following:

701.20 Basis of Payment

This work will be paid for at the contract unit price per lump sum for TRAFFIC CONTROL AND PROTECTION (SPECIAL). The payment will be in full for all labor, materials, transportation, and incidentals necessary to furnish, install, maintain, replace, relocate and remove all traffic control devices indicated in the plans and specifications, except for the following items, which will be paid for separately.

- 1) Temporary Bridge Traffic Signals
- 2) Temporary Rumble Strips [where each is defined as 25 feet].
- 3) Temporary Raised Pavement Markers.
- 4) Construction Speed Limit Trailer

- 5) Sand module impact attenuators
- 6) Portable Changeable Message Signs
- 7) Temporary Concrete Barrier
- 8) Temporary Pavement Marking-Letters and Symbols
- 9) Temporary Pavement Marking-Line at width specified

The salvage value of the materials removed shall be reflected in the bid price for this item.

Any delays or inconveniences incurred by the Contractor while complying with these requirements shall be considered as part of TRAFFIC CONTROL AND PROTECTION (SPECIAL) and no additional compensation will be allowed.

Any traffic control devices required by the Engineer to implement the Traffic Control Plan as shown in the plans and specifications of the contract shall be considered incidental to the pay item TRAFFIC CONTROL AND PROTECTION (SPECIAL).

If the Engineer requires additional work involving a substantial change of location and/or work which differs in design and/or work requiring a change in the type of construction, as stated in Article 104.02(d) of the "Standard Specifications" the standards and/or the designs, other than those required in the plans, will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic control required for the reasons listed above will be in accordance with Article 109.04 of the "Standard Specifications".

Revisions in the phasing of construction or maintenance operations, requested by the Contractor, may require traffic control to be installed in accordance with standards and/or designs other than those included in the plans. The Contractor shall submit revisions or modifications to the traffic control plan shown in the contract to the Engineer for approval. No additional payment will be made for a Contractor requested modification.

In the event the sum total of all work items for which traffic control and protection is required is increased or decreased by more than ten percent (10%), the contract bid price for TRAFFIC CONTROL AND PROTECTION will be adjusted as follows:

$$\text{Adjusted Contract Price} = 0.25P + 0.75P [1 \pm (X - 0.1)]$$

Village of Round Lake
FAU 201 Hart Road
Section No.: 00-00025-00-FP
County: Lake
Contract No.: 63868

P = the contract price for TRAFFIC CONTROL AND PROTECTION

$$X = \frac{\text{Difference between original and final value of work for which traffic control and protection is required.}}{\text{Original value of work for which traffic control and protection is required.}}$$

The value of the work items used in calculating the increase and decrease will include only items that have been added to or deducted from the contract under Article 104.02 of the "Standard Specifications" and only items that require the use of TRAFFIC CONTROL AND PROTECTION (SPECIAL).

In the event LCDOT cancels or alters any portion of the contract that result in the elimination or incompleteness of any portion of the work, payment for partially completed work will be made in accordance with Article 104.02 of the "Standard Specifications".

IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISIONS (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 projects as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under the Contract and the number of hours for which the incentive payment provided

under this Special Provision will be or has been claimed for the TPG.

The contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this Special Provision.

METHOD OF MEASUREMENT:

BASIS OF PAYMENT: This work will be paid for at the contract unit price of \$10.00 per hour for TRAINIES 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 journey worker in the type of trade or job classification involved. The initial number of TPG's for which the incentive is available under this contract is two (2). During the course of performance of the contract the Contractor may seek approval from the Department for additional incentive eligible TPG's. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPG's are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by the Special Provision. The contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the TPG's 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 TPG's. 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 TPG's. 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 TPG's 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 TPG's of IDOT pre-apprentice training programs is intended to move

said TPG's toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPG's by recruitment through the IDOT Illinois Community College Program to the extent such persons area 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 certifications how the type and length of training satisfactorily completed.



Route FAU 201
Section 00-00025-00-FP
County Lake

Marked Rte. Hart Road
Project No. M-9003(482)
Contract No. 63868

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.

Ron Kroop
Print Name
Director Of Public Works
Title
Village of Round Lake
Agency

Ron Kroop
Signature
21 June, 2013
Date

I. Site Description:

A. Provide a description of the project location (include latitude and longitude):

Project is located on Hart Road from IL Route 134 to Cedar Lake Road and on Sunset Drive from Hart Road to Long Lake Drive in the Village of Round Lake, Lake County, Illinois. Lat. 42deg21'27", Long88deg05'44"

B. Provide a description of the construction activity which is the subject of this plan:

Storm sewer installation, Roadway reconstruction, grading, parkway restoration

C. Provide the estimated duration of this project:

8 months

D. The total area of the construction site is estimated to be 6 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 3.2 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.6

F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:

Clay (very erosive), aggregate (moderately erosive), topsoil (very erosive)

G. Provide an aerial extent of wetland acreage at the site:

0.05 acre permanent disturbance, 0.24 acre temporary disturbance

H. Provide a description of potentially erosive areas associated with this project:

Clay in subgrade, cut sections, and fill sections; unstablized topsoil; exposed aggregate

- 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):

Storm sewer installation requires vertical trench excavation where erosion will be contained within the trench; Grading for roadway side slopes along length of project at 3H:1V will be highly erosive when unstablized; roadway subgrade will be graded with cross slopes of 2% and longitudinal slopes at a maximum of 4%, exposed subgrade not covered with aggregate poses high erosion risk; exposed aggregate will only erode in concentrated flow conditions.

- 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 Round Lake

- 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:

Round Lake Drain. Ultimate receiving water is 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.

All vegetation not directly impacted by construction will be protected from harm. Impacts to wetlands and other natural areas are to be kept to a minimum.

- 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 type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solid Waste Debris | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paints | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Solvents | <input type="checkbox"/> Other (specify) |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides | <input type="checkbox"/> Other (specify) |

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor, and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

1. **Stabilized Practices:** Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.

Where the initiation of stabilization measures by the seventh day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following stabilization practices will be used for this project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input 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 checked="" type="checkbox"/> Permanent Seeding | <input type="checkbox"/> Other (specify) |

Describe how the stabilization practices listed above will be utilized during construction:

Existing vegetation not directly impacted by construction activities will be preserved. Trees not to be removed, but may be in the vicinity of damaging construction activities, will be protected from harm. All exposed soil to be left idle for more than 7 calendar days will be stabilized with temporary erosion control

seeding and erosion control blanket. Areas not adjacent to private property will be permanently stabilized with seed and erosion blanket. Areas adjacent to private property will be stabilized with sod.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

Permanent seeding and sodding will provide necessary vegetation cover to stabilize unpaved areas.

2. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following structural practices will be used for this project:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Rock Outlet Protection |
| <input 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 checked="" type="checkbox"/> Turf Reinforcement Mats | <input checked="" type="checkbox"/> Other (specify) Filtered dewatering operations |
| <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:

Perimeter Erosion barrier will be installed along all construction limits that slope away from the project site and define disturbance limits in wetland areas. Storm drain inlet protection in form of Inlet Filters will protect all on-site and downstream existing and proposed open-grate drainage structures from sediment and perimeter erosion barrier installed around open pipe ends will protect existing and proposed open pipe ends from sediment. Turf reinforcement mat will be placed in locations where vegetative cover will not be sufficient to prevent erosion. All dewatering operations shall be filtered and/or pumped to an anionic polymer dewatering system to remove sediment from pumped water before discharging into the drainage system.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Turf reinforcement mat will be installed as permanent stabilization to areas where flows and/or slopes require additional stabilization beyond permanent vegetation.

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:

Except as previously described, permanent water management controls are not required for this project.

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:

The practices provided in this plan meet or exceed the requirements of Lake County Stormwater Management Ordinance.

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.

All erosion control measures shall be inspected, cleaned, and/or repaired at a minimum every 2 weeks or after a 1/2 inch or more rainfall event. All maintenance of erosion control measures shall be included in the cost of the Contract.

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 FAU 201 Marked Rte. Hart Road
Section 00-00025-00-FP Project No. M-9003(482)
County Lake Contract No. 63868

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:

145



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 Round Lake

Mailing Address: 442 N. Cedar Lake Road

Phone: 847-546-5400

City: Round Lake

State: IL

Zip: 60073-2802

Fax: 847-546-5405

Contact Person: Ron Kroop, Director of Public Works

E-mail: rkroop@eroundlake.com

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: Hart Road Improvements

County: Lake

Street Address: Hart Road

City: Round Lake

IL

Zip: 60073

Latitude: 42 21 27
(Deg) (Min) (Sec)

Longitude: 88 05 44
(Deg) (Min) (Sec)

20&29 45N 10E
Section Township Range

Approximate Construction Start Date Mar 3, 2014

Approximate Construction End Date Nov 28, 2014

Total size of construction site in acres: 6

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: 442 N. Cedar Lake Road

City: Round Lake, IL

SWPPP contact information:

Inspector qualifications:

Contact Name: Ron Kroop

P.E. _____

Phone: 847-546-0962

Fax: 847-740-3576

E-mail: rkroop@eroundlake.com

Project inspector, if different from above

Inspector qualifications:

Inspector's Name: _____

Phone: _____

Fax: _____

E-mail: _____

146

TYPE OF CONSTRUCTION (select one)

Construction Type Transportation

SIC Code: _____

Type a detailed description of the project:

Widening and Reconstruction, Install storm sewer, curb&gutter, sidewalk, HMA pavement, HMA resurfacing,
driveways, traffic signals, and restoration.

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 Round Lake

Name of closest receiving water body to which you discharge: Round Lake Drain

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_constit10swppp@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))

Ron Kroop
Owner Signature:

Ron Kroop 2/14/03
Date:

Ron Kroop
Printed Name:

Director of Public Works
Title:

147



Application for Right of Entry

(Attach any pertinent Plans or approval correspondence when returning this Application)

Date: Company Name:
(Legal name of party to occupy Metra Property)

Company Address:

Contact Person/Title:

Telephone: E-Mail:

Metra District:

Milwaukee West
Milwaukee North
Rock Island
South West Service
Electric

Location:
Hart Road at Illinois Route 134, Round Lake, Lake County. Mile Post 44.24.
(Distance from nearest street or railroad mile post)

Purpose: (This must be detailed & complete; if applicable, attach engineering plans & details to support)
Note: Describe only the portion of the project related to this request to enter Metra property

Does work on Metra property include:

Soil Borings – to what depth:

Excavation – to what depth:

Construction

Demolition: Describe

Bridge Inspection

Bridge Repair

Other (explain)

Will equipment will be used on Metra property?

(If yes, explain)

Does access to property require crossing Metra tracks?

(If yes, how/where) At public crossing

Other
(Explain)

Will equipment overhang Metra track or property at any time?

(If yes, explain)

Expected length of time needed on Metra property:

List all sub-contractors, if applicable, needing access to Metra property in conjunction with this project:

Submit Right of Entry Application to:
Mr. Daniel A. Kneita, Associate Contract Administrator
Contracts & Energy Management
547 W. Jackson Boulevard
Chicago, IL 60661-5717
Office: (312) 322-8016
E-Mail: dkneita@metrarr.com



Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Sunset Drive & Hart Road Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

Hart Road from Cedar Lake Road to Sunset Drive and Sunset Drive from Hart Road to Long Lake Drive- See Attached Figures

City: Round Lake State: IL Zip Code: 60073

County: Lake Township: Avon

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.35732 Longitude: -88.09696

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS Map Interpolation Photo Interpolation Survey Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Village of Round Lake

Name: _____

Street Address: 442 N. Cedar Lake Road

Street Address: _____

PO Box: _____

PO Box: _____

City: Round Lake State: IL

City: _____ State: _____

Zip Code: 60073 Phone: 847-546-5400

Zip Code: _____ Phone: _____

Contact: _____

Contact: _____

Email, if available: admindept@eroundlake.com

Email, if available: _____

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). This form has been approved by the Forms Management Center.

Project Name: Sunset Drive & Hart Road

Latitude: 42.35732 Longitude: -88.09696

Uncontaminated Site Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

A limited historical and regulatory review was performed to identify PIPs. Site reconnaissance and PID screening were performed while sampling to evaluate PIPs. Based on the nature and scope of the project, 6 soil samples were collected for the indicator contaminants associated with the identified PIPs. Figure 2 identifies the location of the samples.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

See attached analytical summary tables, laboratory reports and associated NELAC certification. Figure 2 identifies the project area that complies with 35 IAC Part 1100 Subpart F.

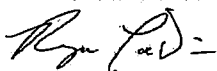
IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Ryan M. LaDieu, P.E. (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

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))

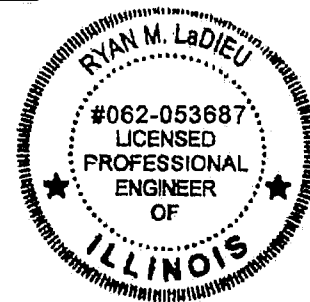
Company Name: True North Consultants
 Street Address: 1240 Iroquois Avenue, Suite 206
 City: Naperville State: IL Zip Code: 60563
 Phone: 630.717.2880
Ryan M. LaDieu

Printed Name:



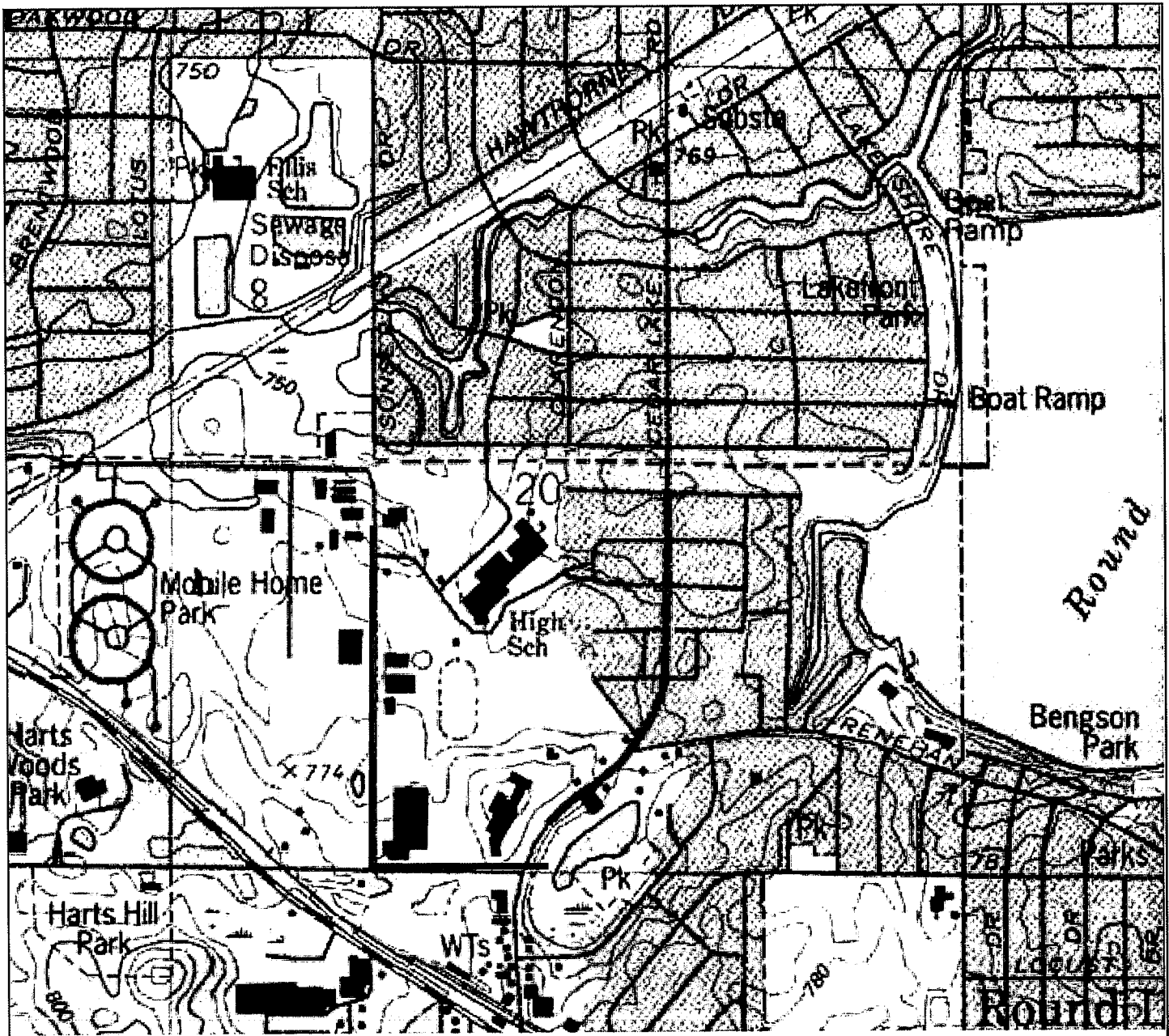
032613

Date:



Licensed Professional Engineer or
 Licensed Professional Geologist Signature:

P.E. or L.P.G. Seal:



1999 GRAYSLAKE ILLINOIS — TOPOGRAPHIC MAP ADAPTED FROM MYTOPO

— APPROXIMATE SITE LOCATION

TRUE NORTH
CONSULTANTS

1240 IROQUOIS AVE, SUITE 210
NAPERVILLE, ILLINOIS 60563

SITE LOCATION HART ROAD FROM CEDAR LAKE ROAD TO SUNSET DRIVE
AND SUNSET DRIVE FROM HART ROAD TO LONG LAKE
DRIVE, ROUND LAKE, ILLINOIS 60073

CLIENT SOIL AND MATERIAL CONSULTANTS, INC.
8 WEST COLLEGE DRIVE, SUITE C
ARLINGTON HEIGHTS, IL 60004



NOT TO SCALE

FIGURE

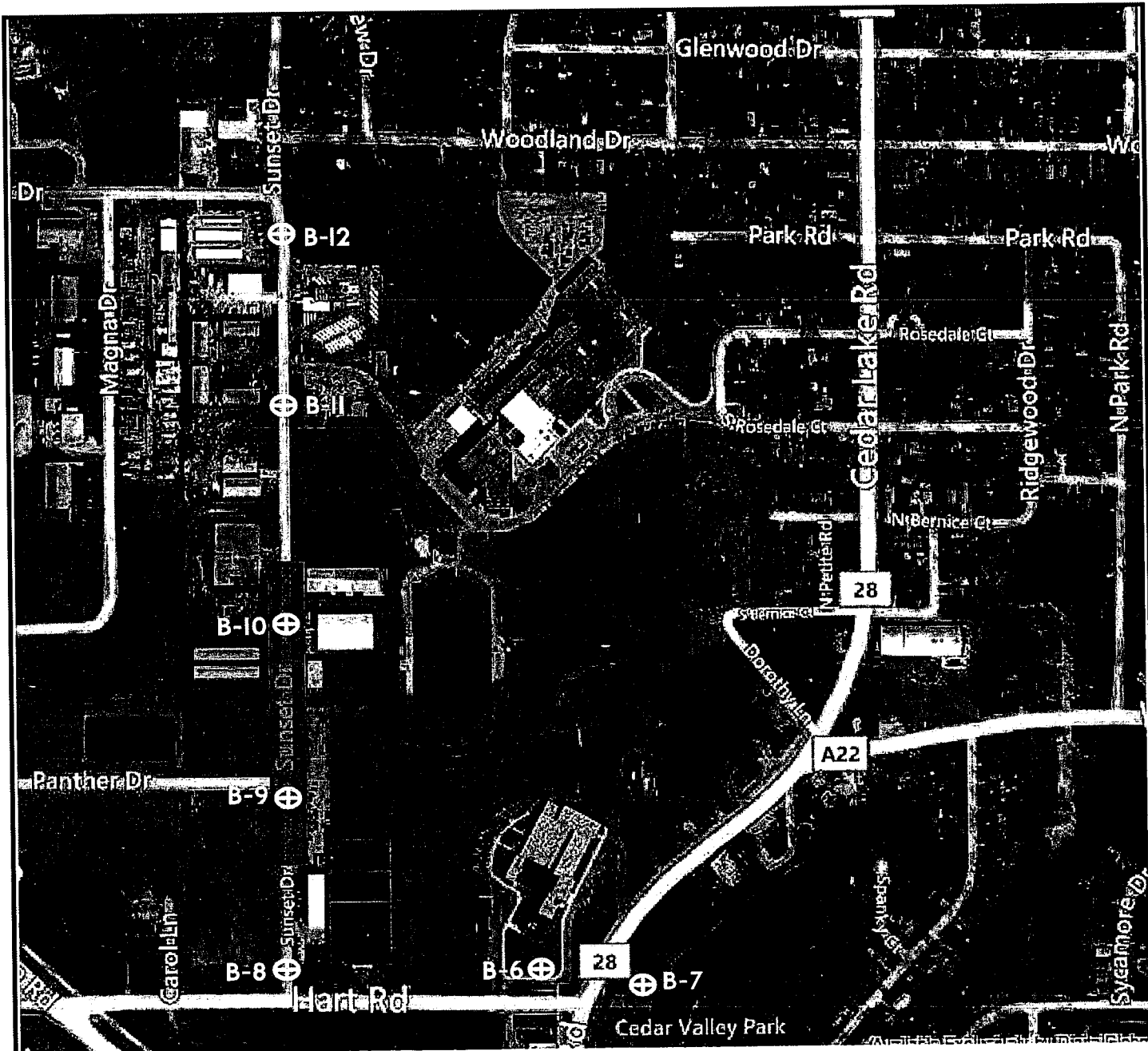
1

PROJECT NUMBER

TII3081

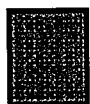
DATE

03/26/2013



2013 — AERIAL PHOTOGRAPH ADAPTED FROM MICROSOFT BING

 APPROXIMATE LOCATION OF SOIL SAMPLE BORING

 APPROXIMATE AREA OF SOILS EXCEEDING THE MOST STRINGENT TIER I SROs, METROPOLITAN BACKGROUND CONCENTRATIONS LISTED IN 35 IAC 742 OR SOIL PH OUTSIDE THE RANGE SPECIFIED IN 35 IAC 1100.201(G)

TRUENORTH
CONSULTANTS

1240 IROQUOIS AVE, SUITE 210
NAPERVILLE, ILLINOIS 60563

SITE LOCATION HART ROAD FROM CEDAR LAKE ROAD TO SUNSET DRIVE
AND SUNSET DRIVE FROM HART ROAD TO LONG LAKE
DRIVE, ROUND LAKE, ILLINOIS 60073

CLIENT SOIL AND MATERIAL CONSULTANTS, INC.
8 WEST COLLEGE DRIVE, SUITE C
ARLINGTON HEIGHTS, IL 60004



NOT TO SCALE

FIGURE

2

PROJECT NUMBER

TII3081

DATE

03/26/2013

153

TABLE I

Summary of Soil Analytical Results - Soil Characterization Sampling

Volatile Organic Compounds (VOCs)

CLIENT: Soil and Material Consultants, Inc.

SITE: Hart Road from Cedar Lake Road to Sunset Drive and Sunset Drive from Hart Road to Long Lake Drive, Round Lake, Illinois 60073

PROJECT NUMBER: TH3081

SAMPLE DATE: March 7, 2013

LABORATORY: Prairie Analytical Systems

MATRIX: Soil

Analytical Method: EPA Method 5035A/8260B

Contaminant of Concern	Maximum Allowable Concentration (MAC) within a Metropolitan Statistical Area (MSA)		Sample ID	B6 (10-12.5)	B7 (23-24)	B8 (5-7.5)	B9 (15-17.5)	BI (2.5-5)			
			Sample Date	3/7/2013	3/7/2013	3/7/2013	3/7/2013	3/7/2013			
	Value	Objective	Depth	10-12.5'	23-24	5-7.5'	15-17.5'	2.5-5'			
			Soil Type	Peat	Silty Clay	Silty Clay	Silty Clay	Silty Clay			
Acetone	25	MAC		< 0.0579	< 0.200	< 0.0446	< 0.0590	NA			
Benzene	0.03	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	< 0.00376			
Bromodichloromethane	0.6	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Bromoform	0.8	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Bromomethane	NE	NE		< 0.00786	< 0.0400	< 0.00893	< 0.00800	NA			
Carbon disulfide	9	MAC		< 0.00786	< 0.0400	< 0.00893	< 0.00800	NA			
Carbon tetrachloride	0.07	MAC		< 0.00786	< 0.0400	< 0.00893	< 0.00800	NA			
Chlorobenzene	1	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Chloroform	0.3	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,2-Dibromo-3-chloropropane	0.002	MAC		< 0.00786	< 0.0400	< 0.00893	< 0.00800	NA			
Dibromochloromethane	0.4	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,2-Dibromoethane	0.005	MAC		< 0.00786	< 0.0400	< 0.00893	< 0.00800	NA			
1,2-Dichlorobenzene	17	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,4-Dichlorobenzene	2	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,1-Dichloroethane	23	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,2-Dichloroethane	0.02	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,1-Dichloroethene	0.06	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
cis-1,2-Dichloroethene	0.4	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
trans-1,2-Dichloroethene	0.7	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,2-Dichloropropane	0.03	MAC		< 0.00236	< 0.0120	< 0.00268	< 0.00240	NA			
cis-1,3-Dichloropropene	0.005	MAC		< 0.00236	< 0.0120	< 0.00268	< 0.00240	NA			
trans-1,3-Dichloropropene	0.005	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,3-Dichloropropene (total)	0.005	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Ethylbenzene	13	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	< 0.00376			
Methyl tert-butyl ether	0.32	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Methylene chloride	0.02	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Styrene	4	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Tetrachloroethene	0.06	MAC		< 0.00157	< 0.00799	< 0.00179	< 0.00160	NA			
Toluene	12	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	< 0.00376			
1,1,1-Trichloroethane	2	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
1,1,2-Trichloroethane	0.02	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Trichloroethene	0.06	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Vinyl acetate	10	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Vinyl chloride	0.01	MAC		< 0.00393	< 0.0200	< 0.00446	< 0.00400	NA			
Xylenes (total)	5.6	MAC		< 0.0118	< 0.0600	< 0.0134	< 0.0120	< 0.0113			

Notes:
 Constituents that are not identified in 35 IAC 1100 Subpart F (MAC Table) are compared to the Metropolitan Statistical Area Background Concentration found in 35 IAC 742 Appendix A, Table H
 < = Analyte not detected (i.e. less than RL or MDL)
 All data reported in milligrams per kilogram (mg/kg) unless otherwise noted.
 NA = This constituent was not analyzed.
 NE = No remediation objective established by the IEPA for this constituent.
 Bold identifies an exceedence of the referenced objective.



154

TABLE 2

Summary of Soil Analytical Results - Soil Characterization Sampling

Semi-Volatile Organic Compounds (SVOCs)

CLIENT: Soil and Material Consultants, Inc.
 SITE: Hart Road from Cedar Lake Road to Sunset Drive and Sunset Drive from Hart Road to Long Lake Drive, Round Lake, Illinois 60073
 PROJECT NUMBER: TI13081

SAMPLE DATE: March 7, 2013
 LABORATORY: Prairie Analytical Systems
 MATRIX: Soil

Analytical Method: EPA Method 5035A/8260B

Contaminant of Concern	Maximum Allowable Concentration (MAC) within a Metropolitan Statistical Area (MSA)		Sample ID	B9 (15-17.5)					
	Value	Objective	Sample Date	3/7/2013					
			Depth	15-17.5'					
			Soil Type	Silty Clay					
Acenaphthene	570	MAC		< 0.388					
Acenaphthylene	NE	NE		< 0.388					
Anthracene	12000	MAC		< 0.388					
Benzofluoranthene	1.8	MAC		< 0.388					
Benzofluoranthene	2.1	MAC		< 0.388					
Benzofluoranthene	9.0	MAC		< 0.388					
Benzofluoranthene	NE	NE		< 0.388					
Benzofluoranthene	2.1	MAC		< 0.0698					
Bis(2-chloroethoxy)methane	NE	NE		< 0.388					
Bis(2-chloroethyl)ether	0.66	MAC		< 0.388					
Bis(2-chloroisopropyl)ether	NE	NE		< 0.388					
Bis(2-ethylhexyl)phthalate	46	MAC		< 0.388					
4-Bromophenyl phenyl ether	NE	NE		< 0.388					
Butyl benzyl phthalate	930	MAC		< 0.388					
Carbazole	0.6	MAC		< 0.388					
4-Chloro-3-methylphenol	NE	NE		< 0.775					
4-Chloroaniline	0.7	MAC		< 0.61					
2-Chloronaphthalene	NE	NE		< 0.388					
2-Chlorophenol	1.5	MAC		< 0.388					
4-Chlorophenyl phenyl ether	NE	NE		< 0.388					
Chrysene	88	MAC		< 0.388					
Di-n-butyl phthalate	2300	MAC		< 0.388					
Di-n-octyl phthalate	1600	MAC		< 0.388					
Dibenz(a,h)anthracene	0.42	MAC		< 0.0698					
Dibenzofuran	NE	NE		< 194					
1,2-Dichlorobenzene	NE	NE		< 0.388					
1,3-Dichlorobenzene	NE	NE		< 0.116					
1,4-Dichlorobenzene	NE	NE		< 0.388					
3,3'-Dichlorobenzidine	1.3	MAC		< 0.00582					
2,4-Dichlorophenol	0.48	MAC		< 0.388					
Diethyl phthalate	470	MAC		< 0.388					
Dimethyl phthalate	NE	NE		< 0.388					
2,4-Dimethylphenol	9	MAC		< 0.388					
4,6-Dinitro-2-methylphenol	NE	NE		< 0.0264					
2,4-Dinitrophenol	3.3	MAC		< 0.116					
2,4-Dinitrotoluene	NE	NE		< 0.116					
2,6-Dinitrotoluene	NE	NE		< 0.116					
Fluoranthene	3100	MAC		< 0.388					
Fluorene	560	MAC		< 0.388					
Hexachlorobenzene	0.4	MAC		< 0.116					
Hexachlorobutadiene	NE	NE		< 0.388					
Hexachlorocyclopentadiene	NE	NE		< 0.775					
Hexachloroethane	NE	NE		< 0.388					
Indeno(1,2,3-cd)pyrene	NE	NE		< 0.388					
Isophorone	NE	NE		< 0.388					
2-Methylnaphthalene	NE	NE		< 0.388					
2-Methylphenol	15	MAC		< 0.388					
3 & 4-Methylphenol	NE	NE		< 0.116					
Naphthalene	1.8	MAC		< 0.388					
2-Nitroaniline	NE	NE		< 0.116					
3-Nitroaniline	NE	NE		< 0.00582					
4-Nitroaniline	NE	NE		< 0.0698					
Nitrobenzene	NE	NE		< 0.0698					
2-Nitrophenol	NE	NE		< 0.388					
4-Nitrophenol	NE	NE		< 194					
N-Nitroso-di-n-propylamine	0.0018	MAC		< 0.00694					
N-Nitrosodimethylamine	NE	NE		< 0.0204					
N-Nitrosodiphenylamine	1	MAC		< 0.388					
Pentachlorophenol	NE	NE		< 0.116					
Phenanthrene	NE	NE		< 0.388					
Phenol	NE	NE		< 0.388					
Pyrene	2300	MAC		< 0.388					
1,2,4-Trichlorobenzene	5	MAC		< 0.388					
2,4,5-Trichlorophenol	26	MAC		< 0.388					
2,4,6-Trichlorophenol	0.66	MAC		< 0.116					

Notes:
 Constituents that are not identified in 35 IAC 1100 Subpart F (MAC Table) are compared to the Metropolitan Statistical Area Background Concentration found in 35 IAC 742 Appendix A, Table H
 (- = Analyte not detected (i.e. less than RL or MDL)
 All data reported in milligrams per kilogram (mg/kg) unless otherwise noted.
 NA = This constituent was not analyzed.
 NE = No remediation objective established by the IEPA for this constituent.
 Bold identifies an exceedence of the referenced objective.



155

TABLE 3

Summary of Soil Analytical Results - Soil Characterization Sampling

Polynuclear Aromatic Hydrocarbons (PNAs)

SAMPLE DATE: March 7, 2013
LABORATORY: Prairie Analytical Systems
MATRIX: Soil

CLIENT: Soil and Material Consultants, Inc.
SITE: Hart Road from Cedar Lake Road to Sunset Drive and Sunset Drive from Hart Road to Long Lake Drive, Round Lake, Illinois 60073
PROJECT NUMBER: TH3081

Contaminant of Concern	Maximum Allowable Concentration (MAC) within a Metropolitan Statistical Area (MSA)		Sample ID	Sample Date	Depth	Soil Type	Analytical Method: EPA Method 5035A/8260B					
	Value	Objective					B7 (23-24)	B8 (5-7.5)	B10 (7.5-10)	B11 (2.5-5)	B12 (7.5-20)	
							3/7/2013	3/7/2013	3/7/2013	3/7/2013	3/7/2013	3/7/2013
Acenaphthene	570	MAC				Peat	<102	<0.390	<0.421	<0.384	<0.365	
Acenaphthylene	NE	NE					<102	<0.390	<0.421	<0.384	<0.365	
Anthracene	12000	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Benzol(a)anthracene	1.8	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Benzol(b)fluoranthene	2.1	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Benzol(k)fluoranthene	9	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Benzol(g,h)perylene	1.7	Metro Background					<102	<0.390	<0.421	<0.384	<0.365	
Benzol(a)pyrene	2.1	MAC					<0.184	<0.0704	<0.0759	<0.0691	<0.0657	
Chrysene	88	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Dibenzol(a,h)anthracene	0.42	MAC					<0.184	<0.0704	<0.0759	<0.0691	<0.0657	
Fluoranthene	3,100	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Fluorene	560	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Indeno(1,2,3-cd)pyrene	1.6	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Naphthalene	1.8	MAC					<102	<0.390	<0.421	<0.384	<0.365	
Phenanthrene	2.5	Metro Background					<102	<0.390	<0.421	<0.384	<0.365	
Pyrene	2,500	MAC					<102	<0.390	<0.421	<0.384	<0.365	

Notes: Constituents that are not identified in 35 IAC 1100 Subpart F (MAC Table) are compared to the Metropolitan Statistical Area Background Concentration found in 35 IAC 742 Appendix A, Table H

< = Analyte not detected (i.e., less than RL or MDL)
 All data reported in milligrams per kilogram (mg/kg) unless otherwise noted.
 NA = This constituent was not analyzed.
 NE = No remediation objective established by the IEPA for this constituent.
 Bold identifies an exceedance of the referenced objective.



156

TABLE 3

Summary of Soil Analytical Results - Soil Characterization Sampling

Resource Conservation Recovery Act (RCRA) Metals

CLIENT: Soil and Material Consultants, Inc.
 SITE: Hart Road from Cedar Lake Road to Sunset Drive and Sunset Drive from Hart Road to Long Lake Drive, Round Lake, Illinois 60073
 PROJECT NUMBER: TH13081

SAMPLE DATE: March 7, 2013
 LABORATORY: Prairie Analytical Systems
 MATRIX: Soil

Contaminant of Concern	Maximum Allowable Concentration (MAC) within a Metropolitan Statistical Area (MSA)		Sample ID	Sample Date	pH	6.25 < pH < 9.0	Depth	Soil Type	Analytical Method: EPA Method 6020							
	Value	Objective							B7 (23-24)	B8 (5-7.5)	B9 (15-17.5)	B10 (7.5-10)	B11 (2.5-5)	B12 (17.5-20)		
Arsenic	13	MAC	B6 (10-12.5)	3/7/2013	7.54	Yes	10-12.5'	Peat	B7 (23-24)	B8 (5-7.5)	B9 (15-17.5)	B10 (7.5-10)	B11 (2.5-5)	B12 (17.5-20)		
Barium	1500	MAC							3/7/2013	7.28	Yes	7.81	3/7/2013	7.75	Yes	8.39
Cadmium	5.2	MAC							3/7/2013	0.461	Yes	0.402	3/7/2013	0.461	Yes	0.400
Chromium	21	MAC							3/7/2013	22.3	Yes	121	3/7/2013	18.9	Yes	13.5
Lead	107	MAC							3/7/2013	10.6	Yes	7.92	3/7/2013	9.64	Yes	6.91
Mercury	0.89	MAC							3/7/2013	<0.0930	Yes	<0.0895	3/7/2013	<0.0930	Yes	<0.0834
Selenium	1.3	MAC							3/7/2013	<0.581	Yes	<0.560	3/7/2013	<0.581	Yes	<0.521
Silver	4.4	MAC							3/7/2013	<0.581	Yes	<0.560	3/7/2013	<0.581	Yes	<0.521

Notes:
 Constituents that are not identified in 35 IAC 1100 Subpart F (MAC Table) are compared to the Metropolitan Statistical Area Background Concentration found in 35 IAC 742 Appendix A, Table H
 < = Analyte not detected (i.e. less than RL or MDL)
 All data reported in milligrams per kilogram (mg/kg) unless otherwise noted.
 NA = This constituent was not analyzed.
 NE = No remediation objective established by the IEPA for this constituent.
 Bold identifies an exceedence of the referenced objective.



TABLE 4

Summary of Soil Analytical Results - Soil Characterization Sampling

Resource Conservation Recovery Act (RCRA) Metals

CLIENT: Soil and Material Consultants, Inc.
 SITE: Hart Road from Cedar Lake Road to Sunset Drive and Sunset Drive from Hart Road to Long Lake Drive, Round Lake, Illinois 60073
 PROJECT NUMBER: TI13081

SAMPLE DATE: March 7, 2013
 LABORATORY: Prairie Analytical Systems, Inc.
 MATRIX: Soil

Contaminant of Concern	Maximum Allowable Concentration (MAC) within a Metropolitan Statistical Area (MSA)		Sample ID	BG (10-12.5)	Sample Date	Depth	Soil Type	Analytical Method: EPA Method 6020
	Value	Objective						
	Arsenic	0.006						
Barium	2	SCOG						
Cadmium	0.005	SCOG						
Chromium	0.1	SCOG						
Lead	0.0075	SCOG						
Mercury	0.002	SCOG						
Selenium	0.05	SCOG						
Silver	0.05	SCOG						

Notes:
 Constituents that are not identified in 35 IAC 1100 Subpart F (MAC Table) are compared to the Metropolitan Statistical Area Background Concentration found in 35 IAC 742 Appendix A, Table H
 As an alternative to the subject maximum allowable concentration value, compliance verification may be determined by comparing soil sample extraction results (TCLP/SPL) for this constituent to the respective TACO Class I Soil Component of the Groundwater Ingestion Exposure Route objective (35 Ill. Admin. Code 742. Appendix B, Table A). (See 35 IAC 1100.610(b)(1)(B); 1100.610(b)(3)(C)).

c = Analyte not detected (i.e. less than RL or MDL)
 All data reported in milligrams per liter (mg/L) unless otherwise noted.
 NA = This constituent was not analyzed.
 NE = No remediation objective established by the IEPA for this constituent.
 Bold identifies an exceedance of the referenced objective.



150



Tuesday, June 11, 2013

Marjory McMahon
True North Consultants
1240 Iroquois Avenue, Suite 210
Naperville, IL 60563
TEL: (630) 717-2880
FAX: (630) 689-5881

RE: Round Lake / Hart Rd.

PAS WO: 13C0195

Prairie Analytical Systems, Inc. received 8 sample(s) on 3/8/2013 for the analyses presented in the following report.

All applicable quality control procedures met method specific acceptance criteria unless otherwise noted.

This report shall not be reproduced, except in full, without the prior written consent of Prairie Analytical Systems, Inc.

If you have any questions, please feel free to contact me at (217) 753-1148.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kristen Potter".

Kristen A. Potter
Project Manager

Certifications: NELAP/NELAC - IL #100323

1210 Capital Airport Drive	*	Springfield, IL 62707	*	1.217.753.1148	*	1.217.753.1152 Fax
9114 Virginia Road Suite #112	*	Lake in the Hills, IL 60156	*	1.847.651.2604	*	1.847.458.0538 Fax

159

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B6 (10-12.5)
 Collection Date: 3/8/13 10:25

Lab Order: 13C0195
 Lab ID: 13C0195-01
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Volatile Organic Compounds by GC-MS									
*Acetone	U	0.0579		mg/Kg dry	1	3/14/13 8:26	3/14/13 13:43	SW 8260B Re	AJD
*Benzene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Bromodichloromethane	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Bromoforn	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Bromomethane	U	0.00786		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*2-Butanone	U	0.00786		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Carbon disulfide	U	0.00786		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Carbon tetrachloride	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Chlorobenzene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Chloroethane	U	0.00786		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Chloroform	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Chloromethane	U	0.00786		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Dibromochloromethane	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*1,1-Dichloroethane	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*1,2-Dichloroethane	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*1,1-Dichloroethene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*cis-1,2-Dichloroethene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*trans-1,2-Dichloroethene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*1,2-Dichloropropane	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*cis-1,3-Dichloropropene	U	0.00236		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*trans-1,3-Dichloropropene	U	0.00236		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Ethylbenzene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*2-Hexanone	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Methyl tert-butyl ether	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*4-Methyl-2-pentanone	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Methylene chloride	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Styrene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*1,1,2,2-Tetrachloroethane	U	0.00157		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Tetrachloroethene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Toluene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*1,1,1-Trichloroethane	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*1,1,2-Trichloroethane	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Trichloroethene	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Vinyl chloride	U	0.00393		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
*Xylenes (total)	U	0.0118		mg/Kg dry	1	3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
Surrogate: 4-Bromofluorobenzene		101 %		75-120		3/14/13 8:26	3/14/13 13:43	SW 8260B Re	AJD
Surrogate: 4-Bromofluorobenzene		99 %		75-120		3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
Surrogate: 1,2-Dichloroethane-d4		109 %		75-119		3/14/13 8:26	3/14/13 13:43	SW 8260B Re	AJD
Surrogate: 1,2-Dichloroethane-d4		107 %		75-119		3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
Surrogate: Toluene-d8		95 %		78-114		3/11/13 12:11	3/12/13 22:43	SW 8260B Re	AJD
Surrogate: Toluene-d8		99 %		78-114		3/14/13 8:26	3/14/13 13:43	SW 8260B Re	AJD
Semi-Volatile Organic Compounds by GC-MS									
*Acenaphthene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Acenaphthylene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Anthracene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Benzo(a)anthracene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Benzo(b)fluoranthene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Benzo(k)fluoranthene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP

160

LABORATORY RESULTS

Client: True North Consultants
Project: Round Lake / Hart Rd.
Client Sample ID: B6 (10-12.5)
Collection Date: 3/8/13 10:25

Lab Order: 13C0195
Lab ID: 13C0195-01
Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Benzo(g,h,i)perylene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Benzo(a)pyrene	U	0.0677		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Chrysene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Dibenz(a,h)anthracene	U	0.0677		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Fluoranthene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Fluorene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Indeno(1,2,3-cd)pyrene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Naphthalene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Phenanthrene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
*Pyrene	U	0.376		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
Surrogate: 2-Fluorobiphenyl		105 %		38-122		3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
Surrogate: Nitrobenzene-d5		98 %		45-136		3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP
Surrogate: 4-Terphenyl-d14		92 %		64-131		3/12/13 9:26	3/12/13 20:26	SW 8270C	BDP

Metals by ICP-MS

*Mercury	U	0.0930		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:16	SW 6020A	JHN
*Selenium	U	0.581		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:16	SW 6020A	JHN
*Silver	U	0.581		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:16	SW 6020A	JHN

Metals by ICP

*Arsenic	6.85	0.581		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:21	SW 6010B	JHN
*Barium	55.2	0.290		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:21	SW 6010B	JHN
*Cadmium	0.481	0.290		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:21	SW 6010B	JHN
*Chromium	22.3	0.290		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:21	SW 6010B	JHN
*Lead	10.6	0.290		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:21	SW 6010B	JHN

SPLP Metals by ICP

*Chromium	U	0.00500		mg/L	1	3/25/13 14:30	3/25/13 17:03	SW 6010B	JHN
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Conventional Chemistry Parameters

*pH	7.5	0.010		pH Units	1	3/12/13 11:30	3/12/13 15:32	SW 9045C	RSR
Percent Solids	84.5	0.100		%	1	3/13/13 8:55	3/13/13 15:20	ASTM D2216	RSR

161

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B7 (23-24)
 Collection Date: 3/8/13 11:45

Lab Order: 13C0195
 Lab ID: 13C0195-02
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Volatile Organic Compounds by GC-MS									
*Acetone	U	0.200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Benzene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Bromodichloromethane	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Bromoforn	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Bromomethane	U	0.0400		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*2-Butanone	U	0.0400		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Carbon disulfide	U	0.0400		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Carbon tetrachloride	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Chlorobenzene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Chloroethane	U	0.0400		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Chloroform	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Chloromethane	U	0.0400		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Dibromochloromethane	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*1,1-Dichloroethane	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*1,2-Dichloroethane	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*1,1-Dichloroethene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*cis-1,2-Dichloroethene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*trans-1,2-Dichloroethene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*1,2-Dichloropropane	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*cis-1,3-Dichloropropene	U	0.0120		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*trans-1,3-Dichloropropene	U	0.0120		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Ethylbenzene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*2-Hexanone	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Methyl tert-butyl ether	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*4-Methyl-2-pentanone	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Methylene chloride	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Styrene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*1,1,2,2-Tetrachloroethane	U	0.00799		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Tetrachloroethene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Toluene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*1,1,1-Trichloroethane	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*1,1,2-Trichloroethane	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Trichloroethene	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Vinyl chloride	U	0.0200		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
*Xylenes (total)	U	0.0600		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
Surrogate: 4-Bromofluorobenzene		58 %	Cl, I	75-120		3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
Surrogate: 1,2-Dichloroethane-d4		88 %		75-119		3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD
Surrogate: Toluene-d8		174 %	I, S2	78-114		3/14/13 8:26	3/14/13 15:12	SW 8260B Re	AJD

Semi-Volatile Organic Compounds by GC-MS

*Acenaphthene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Acenaphthylene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Anthracene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Benzo(a)anthracene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Benzo(b)fluoranthene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Benzo(k)fluoranthene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Benzo(g,h,i)perylene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Benzo(a)pyrene	U	0.184		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Chrysene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP

1462

LABORATORY RESULTS

Client: True North Consultants
Project: Round Lake / Hart Rd.
Client Sample ID: B7 (23-24)
Collection Date: 3/8/13 11:45

Lab Order: 13C0195
Lab ID: 13C0195-02
Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Dibenz(a,h)anthracene	U	0.184		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Fluoranthene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Fluorene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Indeno(1,2,3-cd)pyrene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Naphthalene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Phenanthrene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
*Pyrene	U	1.02		mg/Kg dry	1	3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
Surrogate: 2-Fluorobiphenyl		83 %		38-122		3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
Surrogate: Nitrobenzene-d5		84 %		45-136		3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
Surrogate: 4-Terphenyl-d14		90 %		64-131		3/12/13 9:26	3/12/13 20:59	SW 8270C	BDP
Metals by ICP-MS									
*Mercury	U	0.244		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:24	SW 6020A	JHN
*Selenium	U	1.53		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:24	SW 6020A	JHN
*Silver	U	1.53		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:24	SW 6020A	JHN
Metals by ICP									
*Arsenic	5.26	1.53		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:25	SW 6010B	JHN
*Barium	64.3	0.763		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:25	SW 6010B	JHN
*Cadmium	U	0.763		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:25	SW 6010B	JHN
*Chromium	12.1	0.763		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:25	SW 6010B	JHN
*Lead	14.7	0.763		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:25	SW 6010B	JHN
Conventional Chemistry Parameters									
*pH	7.3	0.010		pH Units	1	3/12/13 11:30	3/12/13 15:32	SW 9045C	RSR
Percent Solids	32.5	0.100		%	1	3/13/13 8:55	3/13/13 15:20	ASTM D2216	RSR

143

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B8 (5-7.5)
 Collection Date: 3/7/13 10:00

Lab Order: 13C0195
 Lab ID: 13C0195-03
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Volatile Organic Compounds by GC-MS									
*Acetone	U	0.0446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Benzene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Bromodichloromethane	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Bromoforn	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Bromomethane	U	0.00893		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*2-Butanone	U	0.00893		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Carbon disulfide	U	0.00893		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Carbon tetrachloride	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Chlorobenzene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Chloroethane	U	0.00893		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Chloroform	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Chloromethane	U	0.00893		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Dibromochloromethane	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*1,1-Dichloroethane	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*1,2-Dichloroethane	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*1,1-Dichloroethene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*cis-1,2-Dichloroethene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*trans-1,2-Dichloroethene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*1,2-Dichloropropane	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*cis-1,3-Dichloropropene	U	0.00268		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*trans-1,3-Dichloropropene	U	0.00268		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Ethylbenzene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*2-Hexanone	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Methyl tert-butyl ether	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*4-Methyl-2-pentanone	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Methylene chloride	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Styrene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*1,1,2,2-Tetrachloroethane	U	0.00179		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Tetrachloroethene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Toluene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*1,1,1-Trichloroethane	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*1,1,2-Trichloroethane	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Trichloroethene	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Vinyl chloride	U	0.00446		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
*Xylenes (total)	U	0.0134		mg/Kg dry	1	3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
Surrogate: 4-Bromofluorobenzene		84 %		75-120		3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
Surrogate: 1,2-Dichloroethane-d4		98 %		75-119		3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD
Surrogate: Toluene-d8		108 %		78-114		3/11/13 12:11	3/12/13 23:41	SW 8260B Re	AJD

Semi-Volatile Organic Compounds by GC-MS

*Acenaphthene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Acenaphthylene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Anthracene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Benzo(a)anthracene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Benzo(b)fluoranthene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Benzo(k)fluoranthene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Benzo(g,h,i)perylene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Benzo(a)pyrene	U	0.0704		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Chrysene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP

1264

LABORATORY RESULTS

Client: True North Consultants
Project: Round Lake / Hart Rd.
Client Sample ID: B8 (5-7.5)
Collection Date: 3/7/13 10:00

Lab Order: 13C0195
Lab ID: 13C0195-03
Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Dibenz(a,h)anthracene	U	0.0704		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Fluoranthene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Fluorene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Indeno(1,2,3-cd)pyrene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Naphthalene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Phenanthrene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
*Pyrene	U	0.390		mg/Kg dry	1	3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
Surrogate: 2-Fluorobiphenyl		90 %		38-122		3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
Surrogate: Nitrobenzene-d5		97 %		45-136		3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP
Surrogate: 4-Terphenyl-d14		95 %		64-131		3/12/13 9:26	3/12/13 21:32	SW 8270C	BDP

Metals by ICP-MS

*Mercury	U	0.0922		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:33	SW 6020A	JHN
*Selenium	U	0.576		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:33	SW 6020A	JHN
*Silver	U	0.576		mg/Kg dry	2	3/11/13 14:11	3/15/13 0:33	SW 6020A	JHN

Metals by ICP

*Arsenic	5.60	0.576		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:29	SW 6010B	JHN
*Barium	75.1	2.88		mg/Kg dry	10	3/11/13 14:11	3/14/13 14:35	SW 6010B	JHN
*Cadmium	0.461	0.288		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:29	SW 6010B	JHN
*Chromium	20.6	0.288		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:29	SW 6010B	JHN
*Lead	9.56	0.288		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:29	SW 6010B	JHN

Conventional Chemistry Parameters

*pH	7.6	0.010		pH Units	1	3/12/13 11:30	3/12/13 15:32	SW 9045C	RSR
Percent Solids	84.0	0.100		%	1	3/13/13 8:55	3/13/13 15:20	ASTM D2216	RSR

165

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B9 (15-17.5)
 Collection Date: 3/7/13 11:20

Lab Order: 13C0195
 Lab ID: 13C0195-04
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Volatile Organic Compounds by GC-MS									
*Acetone	U	0.0590		mg/Kg dry	1	3/14/13 8:26	3/14/13 15:44	SW 8260B Re	AJD
*Benzene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Bromodichloromethane	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Bromoform	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Bromomethane	U	0.00800		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*2-Butanone	U	0.00800		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Carbon disulfide	U	0.00800		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Carbon tetrachloride	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Chlorobenzene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Chloroethane	U	0.00800		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Chloroform	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Chloromethane	U	0.00800		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Dibromochloromethane	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*1,1-Dichloroethane	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*1,2-Dichloroethane	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*1,1-Dichloroethene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*cis-1,2-Dichloroethene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*trans-1,2-Dichloroethene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*1,2-Dichloropropane	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*cis-1,3-Dichloropropene	U	0.00240		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*trans-1,3-Dichloropropene	U	0.00240		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Ethylbenzene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*2-Hexanone	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Methyl tert-butyl ether	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*4-Methyl-2-pentanone	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Methylene chloride	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Styrene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*1,1,2,2-Tetrachloroethane	U	0.00160		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Tetrachloroethene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Toluene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*1,1,1-Trichloroethane	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*1,1,2-Trichloroethane	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Trichloroethene	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Vinyl chloride	U	0.00400		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
*Xylenes (total)	U	0.0120		mg/Kg dry	1	3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
Surrogate: 4-Bromofluorobenzene		81 %		75-120		3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
Surrogate: 1,2-Dichloroethane-d4		107 %		75-119		3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD
Surrogate: Toluene-d8		113 %		78-114		3/11/13 12:11	3/13/13 0:11	SW 8260B Re	AJD

Semi-Volatile Organic Compounds by GC-MS

*Acenaphthene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Acenaphthylene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Anthracene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Benzo(a)anthracene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Benzo(b)fluoranthene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Benzo(k)fluoranthene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Benzo(g,h,i)perylene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Benzo(a)pyrene	U	0.0698		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Bis(2-chloroethoxy)methane	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B9 (15-17.5)
 Collection Date: 3/7/13 11:20

Lab Order: 13C0195
 Lab ID: 13C0195-04
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Bis(2-chloroethyl)ether	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Bis(2-chloroisopropyl)ether	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Bis(2-ethylhexyl)phthalate	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*4-Bromophenyl phenyl ether	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Butyl benzyl phthalate	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Carbazole	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*4-Chloro-3-methylphenol	U	0.775		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*4-Chloroaniline	U	0.611		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2-Chloronaphthalene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2-Chlorophenol	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*4-Chlorophenyl phenyl ether	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Chrysene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Di-n-butyl phthalate	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Di-n-octyl phthalate	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Dibenz(a,h)anthracene	U	0.0698		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Dibenzofuran	U	1.94		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*1,2-Dichlorobenzene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*1,3-Dichlorobenzene	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*1,4-Dichlorobenzene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*3,3'-Dichlorobenzidine	U	0.00582		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2,4-Dichlorophenol	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Diethyl phthalate	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Dimethyl phthalate	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2,4-Dimethylphenol	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*4,6-Dinitro-2-methylphenol	U	0.0264	M	mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2,4-Dinitrophenol	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2,4-Dinitrotoluene	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2,6-Dinitrotoluene	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Fluoranthene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Fluorene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Hexachlorobenzene	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Hexachlorobutadiene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Hexachlorocyclopentadiene	U	0.775		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Hexachloroethane	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Indeno(1,2,3-cd)pyrene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Isophorone	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2-Methylnaphthalene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2-Methylphenol	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
3 & 4-Methylphenol	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Naphthalene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2-Nitroaniline	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*3-Nitroaniline	U	0.00582		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*4-Nitroaniline	U	0.0698		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Nitrobenzene	U	0.0698		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2-Nitrophenol	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*4-Nitrophenol	U	1.94		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*N-Nitroso-di-n-propylamine	U	0.000694	M	mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
N-Nitrosodimethylamine	U	0.0204	M	mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*N-Nitrosodiphenylamine	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Pentachlorophenol	U	0.0116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B9 (15-17.5)
 Collection Date: 3/7/13 11:20

Lab Order: 13C0195
 Lab ID: 13C0195-04
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Phenanthrene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Phenol	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*Pyrene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*1,2,4-Trichlorobenzene	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	0.388		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	0.116		mg/Kg dry	1	3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
Surrogate: 2-Fluorobiphenyl		94 %		40-120		3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
Surrogate: 2-Fluorophenol		64 %		20-115		3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
Surrogate: Nitrobenzene-d5		102 %		45-135		3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
Surrogate: Phenol-d6		73 %		20-100		3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
Surrogate: 4-Terphenyl-d14		104 %		60-130		3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
Surrogate: 2,4,6-Tribromophenol		62 %		30-100		3/12/13 14:27	3/12/13 18:30	SW 8270C	JKA
Metals by ICP-MS									
*Mercury	U	0.0895		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:08	SW 6020A	JHN
*Selenium	U	0.560		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:08	SW 6020A	JHN
*Silver	U	0.560		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:08	SW 6020A	JHN
Metals by ICP									
*Arsenic	13.8	0.560		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:33	SW 6010B	JHN
*Barium	38.4	0.280		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:33	SW 6010B	JHN
*Cadmium	0.402	0.280		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:33	SW 6010B	JHN
*Chromium	12.1	0.280		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:33	SW 6010B	JHN
*Lead	7.92	0.280		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:33	SW 6010B	JHN
Conventional Chemistry Parameters									
*pH	7.8	0.010		pH Units	1	3/12/13 11:30	3/12/13 15:32	SW 9045C	RSR
Percent Solids	83.4	0.100		%	1	3/13/13 8:55	3/13/13 15:20	ASTM D2216	RSR

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B10 (7.5-10)
 Collection Date: 3/7/13 12:25

Lab Order: 13C0195
 Lab ID: 13C0195-05
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Semi-Volatile Organic Compounds by GC-MS									
*Acenaphthene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Acenaphthylene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Anthracene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Benzo(a)anthracene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Benzo(b)fluoranthene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Benzo(k)fluoranthene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Benzo(g,h,i)perylene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Benzo(a)pyrene	U	0.0759		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Chrysene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Dibenz(a,h)anthracene	U	0.0759		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Fluoranthene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Fluorene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Indeno(1,2,3-cd)pyrene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Naphthalene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Phenanthrene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
*Pyrene	U	0.421		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
Surrogate: 2-Fluorobiphenyl		85 %		38-122		3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
Surrogate: Nitrobenzene-d5		110 %		45-136		3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
Surrogate: 4-Terphenyl-d14		96 %		64-131		3/12/13 9:26	3/12/13 22:05	SW 8270C	BDP
Metals by ICP-MS									
*Mercury	U	0.100		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:17	SW 6020A	JHN
*Selenium	U	0.628		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:17	SW 6020A	JHN
*Silver	U	0.628		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:17	SW 6020A	JHN
Metals by ICP									
*Arsenic	14.1	0.628		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:36	SW 6010B	JHN
*Barium	52.4	0.314		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:36	SW 6010B	JHN
*Cadmium	0.604	0.314		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:36	SW 6010B	JHN
*Chromium	25.6	0.314		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:36	SW 6010B	JHN
*Lead	11.0	0.314		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:36	SW 6010B	JHN
Conventional Chemistry Parameters									
*pH	7.9	0.010		pH Units	1	3/12/13 11:30	3/12/13 15:32	SW 9045C	RSR
Percent Solids	75.3	0.100		%	1	3/13/13 8:55	3/13/13 15:20	ASTM D2216	RSR

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B11 (2.5-5)
 Collection Date: 3/7/13 14:05

Lab Order: 13C0195
 Lab ID: 13C0195-06
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Volatile Organic Compounds by GC-MS									
*Benzene	U	0.00376		mg/Kg dry	1	3/15/13 9:36	3/15/13 17:53	SW 8260B Re	BDP
*Ethylbenzene	U	0.00376		mg/Kg dry	1	3/15/13 9:36	3/15/13 17:53	SW 8260B Re	BDP
*Toluene	U	0.00376		mg/Kg dry	1	3/15/13 9:36	3/15/13 17:53	SW 8260B Re	BDP
*Xylenes (total)	U	0.0113		mg/Kg dry	1	3/15/13 9:36	3/15/13 17:53	SW 8260B Re	BDP
Surrogate: 4-Bromofluorobenzene		96 %		75-120		3/15/13 9:36	3/15/13 17:53	SW 8260B Re	BDP
Surrogate: 1,2-Dichloroethane-d4		100 %		75-119		3/15/13 9:36	3/15/13 17:53	SW 8260B Re	BDP
Surrogate: Toluene-d8		101 %		78-114		3/15/13 9:36	3/15/13 17:53	SW 8260B Re	BDP
Semi-Volatile Organic Compounds by GC-MS									
*Acenaphthene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Acenaphthylene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Anthracene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Benzo(a)anthracene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Benzo(b)fluoranthene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Benzo(k)fluoranthene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Benzo(g,h,i)perylene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Benzo(a)pyrene	U	0.0691		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Chrysene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Dibenz(a,h)anthracene	U	0.0691		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Fluoranthene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Fluorene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Indeno(1,2,3-cd)pyrene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Naphthalene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Phenanthrene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
*Pyrene	U	0.384		mg/Kg dry	1	3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
Surrogate: 2-Fluorobiphenyl		91 %		38-122		3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
Surrogate: Nitrobenzene-d5		102 %		45-136		3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
Surrogate: 4-Terphenyl-d14		85 %		64-131		3/12/13 9:26	3/12/13 22:38	SW 8270C	BDP
Metals by ICP-MS									
*Mercury	U	0.0930		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:25	SW 6020A	JHN
*Selenium	U	0.581		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:25	SW 6020A	JHN
*Silver	U	0.581		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:25	SW 6020A	JHN
Metals by ICP									
*Arsenic	7.79	0.581		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:40	SW 6010B	JHN
*Barium	45.7	0.291		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:40	SW 6010B	JHN
*Cadmium	0.461	0.291		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:40	SW 6010B	JHN
*Chromium	18.9	0.291		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:40	SW 6010B	JHN
*Lead	9.64	0.291		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:40	SW 6010B	JHN
Conventional Chemistry Parameters									
*pH	7.8	0.010		pH Units	1	3/12/13 11:30	3/12/13 15:32	SW 9045C	RSR
Percent Solids	83.5	0.100		%	1	3/13/13 8:55	3/13/13 15:20	ASTM D2216	RSR

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.
 Client Sample ID: B12 (17.5-20)
 Collection Date: 3/8/13 9:05

Lab Order: 13C0195
 Lab ID: 13C0195-07
 Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Semi-Volatile Organic Compounds by GC-MS									
*Acenaphthene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Acenaphthylene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Anthracene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Benzo(a)anthracene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Benzo(b)fluoranthene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Benzo(k)fluoranthene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Benzo(g,h,i)perylene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Benzo(a)pyrene	U	0.0657		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Chrysene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Dibenz(a,h)anthracene	U	0.0657		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Fluoranthene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Fluorene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Indeno(1,2,3-cd)pyrene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Naphthalene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Phenanthrene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
*Pyrene	U	0.365		mg/Kg dry	1	3/12/13 9:26	3/12/13 23:12	SW 8270C	BDP
Surrogate: 2-Fluorobiphenyl		97 %				38-122	3/12/13 9:26	3/12/13 23:12	SW 8270C
Surrogate: Nitrobenzene-d5		104 %				45-136	3/12/13 9:26	3/12/13 23:12	SW 8270C
Surrogate: 4-Terphenyl-d14		88 %				64-131	3/12/13 9:26	3/12/13 23:12	SW 8270C
Metals by ICP-MS									
*Mercury	U	0.0834		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:34	SW 6020A	JHN
*Selenium	U	0.521		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:34	SW 6020A	JHN
*Silver	U	0.521		mg/Kg dry	2	3/11/13 14:11	3/15/13 1:34	SW 6020A	JHN
Metals by ICP									
*Arsenic	4.87	0.521		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:44	SW 6010B	JHN
*Barium	29.9	0.261		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:44	SW 6010B	JHN
*Cadmium	0.400	0.261		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:44	SW 6010B	JHN
*Chromium	13.5	0.261		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:44	SW 6010B	JHN
*Lead	6.91	0.261		mg/Kg dry	1	3/11/13 14:11	3/14/13 13:44	SW 6010B	JHN
Conventional Chemistry Parameters									
*pH	8.4	0.010		pH Units	1	3/12/13 11:30	3/12/13 15:32	SW 9045C	RSR
Percent Solids	88.3	0.100		%	1	3/13/13 8:55	3/13/13 15:20	ASTM D2216	RSR

171

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001200 - SW 5035A VOA

Prepared: 03/11/2013 Analyzed: 03/12/2013

Blank (W001200-BLK1)

Acetone	U	0.0500	mg/Kg wet							
Benzene	U	0.00500	mg/Kg wet							
Bromodichloromethane	U	0.00500	mg/Kg wet							
Bromoform	U	0.00500	mg/Kg wet							
Bromomethane	U	0.0100	mg/Kg wet							
2-Butanone	U	0.0100	mg/Kg wet							
Carbon disulfide	U	0.00500	mg/Kg wet							
Carbon tetrachloride	U	0.00500	mg/Kg wet							
Chlorobenzene	U	0.0100	mg/Kg wet							
Chloroethane	U	0.00500	mg/Kg wet							
Chloroform	U	0.0100	mg/Kg wet							
Chloromethane	U	0.00500	mg/Kg wet							
Dibromochloromethane	U	0.00500	mg/Kg wet							
1,1-Dichloroethane	U	0.00500	mg/Kg wet							
1,2-Dichloroethane	U	0.00500	mg/Kg wet							
1,1-Dichloroethene	U	0.00500	mg/Kg wet							
cis-1,2-Dichloroethene	U	0.00500	mg/Kg wet							
trans-1,2-Dichloroethene	U	0.00500	mg/Kg wet							
1,2-Dichloropropane	U	0.00300	mg/Kg wet							
cis-1,3-Dichloropropene	U	0.00300	mg/Kg wet							
trans-1,3-Dichloropropene	U	0.00500	mg/Kg wet							
Ethylbenzene	U	0.00500	mg/Kg wet							
2-Hexanone	U	0.00500	mg/Kg wet							
Methyl tert-butyl ether	U	0.00500	mg/Kg wet							
4-Methyl-2-pentanone	U	0.00500	mg/Kg wet							
Methylene chloride	U	0.00500	mg/Kg wet							
Styrene	U	0.00200	mg/Kg wet							
1,1,2,2-Tetrachloroethane	U	0.00500	mg/Kg wet							
Tetrachloroethene	U	0.00500	mg/Kg wet							
Toluene	U	0.00500	mg/Kg wet							
1,1,1-Trichloroethane	U	0.00500	mg/Kg wet							
1,1,2-Trichloroethane	U	0.00500	mg/Kg wet							
Trichloroethene	U	0.00500	mg/Kg wet							
Vinyl chloride	U	0.00500	mg/Kg wet							
Xylenes (total)	U	0.0150	mg/Kg wet							
Surrogate: 4-Bromofluorobenzene	0.0485		mg/Kg wet	0.050000		97	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0490		mg/Kg wet	0.050000		98	75-119			
Surrogate: Toluene-d8	0.0480		mg/Kg wet	0.050000		96	78-114			

172

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch W001200 - SW 5035A VOA										
					Prepared: 03/11/2013		Analyzed: 03/12/2013			
LCS (W001200-BS1)										
Benzene	0.0502	0.00500	mg/Kg wet	0.050000		100	80-130			
Chlorobenzene	0.0506	0.00500	mg/Kg wet	0.050000		101	85-120			
1,1-Dichloroethene	0.0527	0.00500	mg/Kg wet	0.050000		105	70-130			
Ethylbenzene	0.0550	0.00500	mg/Kg wet	0.050000		110	77-132			
Toluene	0.0498	0.00500	mg/Kg wet	0.050000		100	80-130			
Trichloroethene	0.0536	0.00500	mg/Kg wet	0.050000		107	75-130			
Xylenes (total)	0.158	0.0150	mg/Kg wet	0.15000		105	80-130			
Surrogate: 4-Bromofluorobenzene	0.0482		mg/Kg wet	0.050000		96	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0455		mg/Kg wet	0.050000		91	75-119			
Surrogate: Toluene-d8	0.0484		mg/Kg wet	0.050000		97	78-114			

Batch W001265 - SW 5035A VOA

Blank (W001265-BLK1)										
					Prepared & Analyzed: 03/14/2013					
Acetone	U	0.0500	mg/Kg wet							
Benzene	U	0.00500	mg/Kg wet							
Bromodichloromethane	U	0.00500	mg/Kg wet							
Bromoform	U	0.00500	mg/Kg wet							
Bromomethane	U	0.0100	mg/Kg wet							
2-Butanone	U	0.0100	mg/Kg wet							
Carbon disulfide	U	0.0100	mg/Kg wet							
Carbon tetrachloride	U	0.00500	mg/Kg wet							
Chlorobenzene	U	0.00500	mg/Kg wet							
Chloroethane	U	0.0100	mg/Kg wet							
Chloroform	U	0.00500	mg/Kg wet							
Chloromethane	U	0.0100	mg/Kg wet							
Dibromochloromethane	U	0.00500	mg/Kg wet							
1,1-Dichloroethane	U	0.00500	mg/Kg wet							
1,2-Dichloroethane	U	0.00500	mg/Kg wet							
1,1-Dichloroethene	U	0.00500	mg/Kg wet							
cis-1,2-Dichloroethene	U	0.00500	mg/Kg wet							
trans-1,2-Dichloroethene	U	0.00500	mg/Kg wet							
1,2-Dichloropropane	U	0.00500	mg/Kg wet							
cis-1,3-Dichloropropene	U	0.00300	mg/Kg wet							
trans-1,3-Dichloropropene	U	0.00300	mg/Kg wet							
Ethylbenzene	U	0.00500	mg/Kg wet							
2-Hexanone	U	0.00500	mg/Kg wet							
Methyl tert-butyl ether	U	0.00500	mg/Kg wet							
4-Methyl-2-pentanone	U	0.00500	mg/Kg wet							
Methylene chloride	U	0.00500	mg/Kg wet							
Styrene	U	0.00500	mg/Kg wet							
1,1,2,2-Tetrachloroethane	U	0.00200	mg/Kg wet							
Tetrachloroethene	U	0.00500	mg/Kg wet							
Toluene	U	0.00500	mg/Kg wet							
1,1,1-Trichloroethane	U	0.00500	mg/Kg wet							

173

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001265 - SW 5035A VOA

Blank (W001265-BLK1)										
Prepared & Analyzed: 03/14/2013										
1,1,2-Trichloroethane	U	0.00500	mg/Kg wet							
Trichloroethene	U	0.00500	mg/Kg wet							
Vinyl chloride	U	0.00500	mg/Kg wet							
Xylenes (total)	U	0.0150	mg/Kg wet							
Surrogate: 4-Bromofluorobenzene	0.0479		mg/Kg wet	0.050000		96	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0500		mg/Kg wet	0.050000		100	75-119			
Surrogate: Toluene-d8	0.0494		mg/Kg wet	0.050000		99	78-114			

LCS (W001265-BS1)										
Prepared & Analyzed: 03/14/2013										
Benzene	0.0431	0.00500	mg/Kg wet	0.050000		86	80-130			
Chlorobenzene	0.0420	0.00500	mg/Kg wet	0.050000		84	85-120			
1,1-Dichloroethene	0.0454	0.00500	mg/Kg wet	0.050000		91	70-130			
Ethylbenzene	0.0433	0.00500	mg/Kg wet	0.050000		87	77-132			
Toluene	0.0398	0.00500	mg/Kg wet	0.050000		80	80-130			S
Trichloroethene	0.0438	0.00500	mg/Kg wet	0.050000		88	75-130			
Xylenes (total)	0.128	0.0150	mg/Kg wet	0.15000		85	80-130			
Surrogate: 4-Bromofluorobenzene	0.0506		mg/Kg wet	0.050000		101	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0525		mg/Kg wet	0.050000		105	75-119			
Surrogate: Toluene-d8	0.0502		mg/Kg wet	0.050000		100	78-114			

Matrix Spike (W001265-MS1)										
Source: 13C0195-01RE1 Prepared & Analyzed: 03/14/2013										
Benzene	0.0405	0.00600	mg/Kg dry	0.060040	ND	67	50-140			S
Chlorobenzene	0.0319	0.00600	mg/Kg dry	0.060040	ND	53	60-130			
1,1-Dichloroethene	0.0436	0.00600	mg/Kg dry	0.060040	ND	73	60-130			
Ethylbenzene	0.0333	0.00600	mg/Kg dry	0.060040	ND	55	50-140			
Toluene	0.0352	0.00600	mg/Kg dry	0.060040	ND	59	55-130			
Trichloroethene	0.0398	0.00600	mg/Kg dry	0.060040	ND	66	60-130			
Xylenes (total)	0.0656	0.0180	mg/Kg dry	0.18012	ND	36	60-130			S
Surrogate: 4-Bromofluorobenzene	0.0604		mg/Kg dry	0.060040		101	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0631		mg/Kg dry	0.060040		105	75-119			
Surrogate: Toluene-d8	0.0592		mg/Kg dry	0.060040		99	78-114			

174

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001265 - SW 5035A VOA

Matrix Spike Dup (W001265-MSD1)		Source: 13C0195-01RE1			Prepared & Analyzed: 03/14/2013					
Benzene	0.0423	0.00571	mg/Kg dry	0.057142	ND	74	50-140	4	20	
Chlorobenzene	0.0337	0.00571	mg/Kg dry	0.057142	ND	59	60-130	6	20	S
1,1-Dichloroethene	0.0439	0.00571	mg/Kg dry	0.057142	ND	77	60-130	0.7	20	
Ethylbenzene	0.0349	0.00571	mg/Kg dry	0.057142	ND	61	50-140	5	25	
Toluene	0.0372	0.00571	mg/Kg dry	0.057142	ND	65	55-130	6	25	
Trichloroethene	0.0400	0.00571	mg/Kg dry	0.057142	ND	70	60-130	0.4	20	
Xylenes (total)	0.101	0.0171	mg/Kg dry	0.17143	ND	59	60-130	43	25	R, S
Surrogate: 4-Bromofluorobenzene	0.0573		mg/Kg dry	0.057142		100	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0612		mg/Kg dry	0.057142		107	75-119			
Surrogate: Toluene-d8	0.0564		mg/Kg dry	0.057142		99	78-114			

Batch W001295 - SW 5035A VOA

Blank (W001295-BLK1)		Prepared & Analyzed: 03/15/2013								
Benzene	U	0.00500	mg/Kg wet							
Ethylbenzene	U	0.00500	mg/Kg wet							
Toluene	U	0.00500	mg/Kg wet							
Xylenes (total)	U	0.0150	mg/Kg wet							
Surrogate: 4-Bromofluorobenzene	0.0499		mg/Kg wet	0.050000		100	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0442		mg/Kg wet	0.050000		88	75-119			
Surrogate: Toluene-d8	0.0508		mg/Kg wet	0.050000		102	78-114			

LCS (W001295-BS1)		Prepared & Analyzed: 03/15/2013								
Benzene	0.0505	0.00500	mg/Kg wet	0.050000		101	80-130			
Ethylbenzene	0.0514	0.00500	mg/Kg wet	0.050000		103	77-132			
Toluene	0.0526	0.00500	mg/Kg wet	0.050000		105	80-130			
Xylenes (total)	0.157	0.0150	mg/Kg wet	0.15000		104	80-130			
Surrogate: 4-Bromofluorobenzene	0.0486		mg/Kg wet	0.050000		97	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0449		mg/Kg wet	0.050000		90	75-119			
Surrogate: Toluene-d8	0.0500		mg/Kg wet	0.050000		100	78-114			

175

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001295 - SW 5035A VOA

Matrix Spike (W001295-MS1)	Source: 13C0284-01			Prepared & Analyzed: 03/15/2013						
Benzene	0.0352	0.00618	mg/Kg dry	0.061805	ND	57	50-140			
Ethylbenzene	0.0244	0.00618	mg/Kg dry	0.061805	ND	40	50-140			S
Toluene	0.0300	0.00618	mg/Kg dry	0.061805	ND	48	55-135			S
Xylenes (total)	0.0709	0.0185	mg/Kg dry	0.18541	ND	38	60-130			S
Surrogate: 4-Bromofluorobenzene	0.0604		mg/Kg dry	0.061805		98	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0583		mg/Kg dry	0.061805		94	75-119			
Surrogate: Toluene-d8	0.0628		mg/Kg dry	0.061805		102	78-114			

Matrix Spike Dup (W001295-MSD1)	Source: 13C0284-01			Prepared & Analyzed: 03/15/2013						
Benzene	0.0408	0.00618	mg/Kg dry	0.061805	ND	66	50-140	15	20	
Ethylbenzene	0.0305	0.00618	mg/Kg dry	0.061805	ND	49	50-140	22	20	R, S
Toluene	0.0360	0.00618	mg/Kg dry	0.061805	ND	58	55-135	18	20	
Xylenes (total)	0.0881	0.0185	mg/Kg dry	0.18541	ND	48	60-130	22	20	R, S
Surrogate: 4-Bromofluorobenzene	0.0561		mg/Kg dry	0.061805		91	75-120			
Surrogate: 1,2-Dichloroethane-d4	0.0593		mg/Kg dry	0.061805		96	75-119			
Surrogate: Toluene-d8	0.0630		mg/Kg dry	0.061805		105	78-114			

176

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Semi-Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001217 - SW 3550B PNA

Blank (W001217-BLK1)

Prepared & Analyzed: 03/12/2013

Acenaphthene	U	0.333	mg/Kg wet							
Acenaphthylene	U	0.333	mg/Kg wet							
Anthracene	U	0.333	mg/Kg wet							
Benzo(a)anthracene	U	0.333	mg/Kg wet							
Benzo(b)fluoranthene	U	0.333	mg/Kg wet							
Benzo(k)fluoranthene	U	0.333	mg/Kg wet							
Benzo(g,h,i)perylene	U	0.333	mg/Kg wet							
Benzo(a)pyrene	U	0.0600	mg/Kg wet							
Chrysene	U	0.333	mg/Kg wet							
Dibenz(a,h)anthracene	U	0.0600	mg/Kg wet							
Fluoranthene	U	0.333	mg/Kg wet							
Fluorene	U	0.333	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	U	0.333	mg/Kg wet							
Naphthalene	U	0.333	mg/Kg wet							
Phenanthrene	U	0.333	mg/Kg wet							
Pyrene	U	0.333	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	0.655		mg/Kg wet	0.66667		98	38-122			
Surrogate: Nitrobenzene-d5	0.688		mg/Kg wet	0.66667		103	45-136			
Surrogate: 4-Terphenyl-d14	0.554		mg/Kg wet	0.66667		83	64-131			

LCS (W001217-BS1)

Prepared & Analyzed: 03/12/2013

Acenaphthene	0.525	0.333	mg/Kg wet	0.66667		79	50-135			
Acenaphthylene	0.572	0.333	mg/Kg wet	0.66667		86	51-134			
Anthracene	0.423	0.333	mg/Kg wet	0.66667		63	56-131			
Benzo(a)anthracene	0.598	0.333	mg/Kg wet	0.66667		90	61-144			
Benzo(b)fluoranthene	0.547	0.333	mg/Kg wet	0.66667		82	57-134			
Benzo(k)fluoranthene	0.547	0.333	mg/Kg wet	0.66667		82	59-168			
Benzo(g,h,i)perylene	0.646	0.333	mg/Kg wet	0.66667		97	56-147			
Benzo(a)pyrene	0.450	0.0600	mg/Kg wet	0.66667		67	41-133			
Chrysene	0.591	0.333	mg/Kg wet	0.66667		89	63-150			
Dibenz(a,h)anthracene	0.672	0.0600	mg/Kg wet	0.66667		101	60-170			
Fluoranthene	0.584	0.333	mg/Kg wet	0.66667		88	65-147			
Fluorene	0.464	0.333	mg/Kg wet	0.66667		70	47-154			
Indeno(1,2,3-cd)pyrene	0.640	0.333	mg/Kg wet	0.66667		96	59-132			
Naphthalene	0.583	0.333	mg/Kg wet	0.66667		87	40-135			
Phenanthrene	0.551	0.333	mg/Kg wet	0.66667		83	62-134			
Pyrene	0.568	0.333	mg/Kg wet	0.66667		85	64-147			
Surrogate: 2-Fluorobiphenyl	0.523		mg/Kg wet	0.66667		78	38-122			
Surrogate: Nitrobenzene-d5	0.678		mg/Kg wet	0.66667		102	45-136			
Surrogate: 4-Terphenyl-d14	0.514		mg/Kg wet	0.66667		77	64-131			

177

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Semi-Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001217 - SW 3550B PNA

Matrix Spike (W001217-MS1)		Source: 13C0193-10			Prepared & Analyzed: 03/12/2013					
Acenaphthene	0.846	0.412	mg/Kg dry	0.82432	ND	103	50-135			
Acenaphthylene	0.567	0.412	mg/Kg dry	0.82432	ND	69	51-134			
Anthracene	0.759	0.412	mg/Kg dry	0.82432	ND	92	56-131			
Benzo(a)anthracene	1.01	0.412	mg/Kg dry	0.82432	ND	122	61-144			
Benzo(b)fluoranthene	0.596	0.412	mg/Kg dry	0.82432	ND	72	57-134			
Benzo(k)fluoranthene	0.618	0.412	mg/Kg dry	0.82432	ND	75	59-168			
Benzo(g,h,i)perylene	0.611	0.412	mg/Kg dry	0.82432	ND	74	56-147			
Benzo(a)pyrene	0.626	0.0742	mg/Kg dry	0.82432	ND	76	41-133			
Chrysene	0.740	0.412	mg/Kg dry	0.82432	ND	90	63-150			
Dibenz(a,h)anthracene	0.628	0.0742	mg/Kg dry	0.82432	ND	76	60-170			
Fluoranthene	0.763	0.412	mg/Kg dry	0.82432	ND	93	65-147			
Fluorene	0.733	0.412	mg/Kg dry	0.82432	ND	89	47-154			
Indeno(1,2,3-cd)pyrene	0.740	0.412	mg/Kg dry	0.82432	ND	90	59-132			
Naphthalene	1.00	0.412	mg/Kg dry	0.82432	ND	122	40-135			
Phenanthrene	0.778	0.412	mg/Kg dry	0.82432	ND	94	62-134			
Pyrene	0.845	0.412	mg/Kg dry	0.82432	ND	102	64-147			
Surrogate: 2-Fluorobiphenyl	0.549		mg/Kg dry	0.82432		67	38-122			
Surrogate: Nitrobenzene-d5	0.749		mg/Kg dry	0.82432		91	45-136			
Surrogate: 4-Terphenyl-d14	0.733		mg/Kg dry	0.82432		89	64-131			

Matrix Spike Dup (W001217-MSD1)		Source: 13C0193-10			Prepared & Analyzed: 03/12/2013					
Acenaphthene	0.654	0.406	mg/Kg dry	0.81198	ND	81	50-135	26	20	R
Acenaphthylene	0.569	0.406	mg/Kg dry	0.81198	ND	70	51-134	0.3	20	
Anthracene	0.720	0.406	mg/Kg dry	0.81198	ND	89	56-131	5	20	
Benzo(a)anthracene	0.966	0.406	mg/Kg dry	0.81198	ND	119	61-144	4	20	
Benzo(b)fluoranthene	0.629	0.406	mg/Kg dry	0.81198	ND	77	57-134	5	20	
Benzo(k)fluoranthene	0.610	0.406	mg/Kg dry	0.81198	ND	75	59-168	1	20	
Benzo(g,h,i)perylene	0.671	0.406	mg/Kg dry	0.81198	ND	83	56-147	9	20	
Benzo(a)pyrene	0.617	0.0731	mg/Kg dry	0.81198	ND	76	41-133	1	20	
Chrysene	0.728	0.406	mg/Kg dry	0.81198	ND	90	63-150	2	20	
Dibenz(a,h)anthracene	0.728	0.0731	mg/Kg dry	0.81198	ND	79	60-170	3	20	
Fluoranthene	0.645	0.406	mg/Kg dry	0.81198	ND	107	65-147	13	20	
Fluorene	0.872	0.406	mg/Kg dry	0.81198	ND	83	47-154	8	20	
Indeno(1,2,3-cd)pyrene	0.677	0.406	mg/Kg dry	0.81198	ND	87	59-132	5	20	
Naphthalene	0.703	0.406	mg/Kg dry	0.81198	ND	87	59-132	5	20	
Phenanthrene	0.832	0.406	mg/Kg dry	0.81198	ND	102	40-135	19	20	
Pyrene	0.801	0.406	mg/Kg dry	0.81198	ND	99	62-134	3	20	
Surrogate: 2-Fluorobiphenyl	0.805	0.406	mg/Kg dry	0.81198	ND	99	64-147	5	20	
Surrogate: Nitrobenzene-d5	0.586		mg/Kg dry	0.81198		72	38-122			
Surrogate: 4-Terphenyl-d14	1.03		mg/Kg dry	0.81198		127	45-136			
	0.768		mg/Kg dry	0.81198		95	64-131			

178

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Semi-Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch W001227 - SW 3550B BNA										
Blank (W001227-BLK1)										
Prepared & Analyzed: 03/12/2013										
Acenaphthene	U	0.333	mg/Kg wet							
Acenaphthylene	U	0.333	mg/Kg wet							
Anthracene	U	0.333	mg/Kg wet							
Benzo(a)anthracene	U	0.333	mg/Kg wet							
Benzo(b)fluoranthene	U	0.333	mg/Kg wet							
Benzo(k)fluoranthene	U	0.333	mg/Kg wet							
Benzo(g,h,i)perylene	U	0.333	mg/Kg wet							
Benzo(a)pyrene	U	0.0600	mg/Kg wet							
Bis(2-chloroethoxy)methane	U	0.333	mg/Kg wet							
Bis(2-chloroethyl)ether	U	0.333	mg/Kg wet							
Bis(2-chloroisopropyl)ether	U	0.333	mg/Kg wet							
Bis(2-ethylhexyl)phthalate	U	0.333	mg/Kg wet							
4-Bromophenyl phenyl ether	U	0.333	mg/Kg wet							
Butyl benzyl phthalate	U	0.333	mg/Kg wet							
Carbazole	U	0.333	mg/Kg wet							
4-Chloro-3-methylphenol	U	0.666	mg/Kg wet							
4-Chloroaniline	U	0.333	mg/Kg wet							
2-Chloronaphthalene	U	0.333	mg/Kg wet							
2-Chlorophenol	U	0.333	mg/Kg wet							
4-Chlorophenyl phenyl ether	U	0.333	mg/Kg wet							
Chrysene	U	0.333	mg/Kg wet							
Di-n-butyl phthalate	U	0.333	mg/Kg wet							
Di-n-octyl phthalate	U	0.333	mg/Kg wet							
Dibenz(a,h)anthracene	U	0.0600	mg/Kg wet							
Dibenzofuran	U	1.66	mg/Kg wet							
1,2-Dichlorobenzene	U	0.333	mg/Kg wet							
1,3-Dichlorobenzene	U	0.100	mg/Kg wet							
1,4-Dichlorobenzene	U	0.333	mg/Kg wet							
3,3'-Dichlorobenzidine	U	0.00500	mg/Kg wet							
2,4-Dichlorophenol	U	0.333	mg/Kg wet							
Diethyl phthalate	U	0.333	mg/Kg wet							
Dimethyl phthalate	U	0.333	mg/Kg wet							
2,4-Dimethylphenol	U	0.333	mg/Kg wet							
4,6-Dinitro-2-methylphenol	U	1.66	mg/Kg wet							M
2,4-Dinitrophenol	U	0.100	mg/Kg wet							
2,4-Dinitrotoluene	U	0.100	mg/Kg wet							
2,6-Dinitrotoluene	U	0.100	mg/Kg wet							
Fluoranthene	U	0.333	mg/Kg wet							
Fluorene	U	0.333	mg/Kg wet							
Hexachlorobenzene	U	0.100	mg/Kg wet							
Hexachlorobutadiene	U	0.333	mg/Kg wet							
Hexachlorocyclopentadiene	U	0.666	mg/Kg wet							
Hexachloroethane	U	0.333	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	U	0.333	mg/Kg wet							

179

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Semi-Volatile Organic Compounds by GC-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001227 - SW 3550B BNA

Blank (W001227-BLK1)

Prepared & Analyzed: 03/12/2013

Isophorone	U	0.333	mg/Kg wet							
2-Methylnaphthalene	U	0.333	mg/Kg wet							
2-Methylphenol	U	0.333	mg/Kg wet							
3 & 4-Methylphenol	U	0.100	mg/Kg wet							
Naphthalene	U	0.333	mg/Kg wet							
2-Nitroaniline	U	0.100	mg/Kg wet							
3-Nitroaniline	U	0.00500	mg/Kg wet							
4-Nitroaniline	U	0.0600	mg/Kg wet							
Nitrobenzene	U	0.0600	mg/Kg wet							
2-Nitrophenol	U	0.333	mg/Kg wet							
4-Nitrophenol	U	1.66	mg/Kg wet							
N-Nitroso-di-n-propylamine	U	0.00100	mg/Kg wet							M
N-Nitrosodiphenylamine	U	0.333	mg/Kg wet							
Pentachlorophenol	U	0.0100	mg/Kg wet							
Phenanthrene	U	0.333	mg/Kg wet							
Phenol	U	0.333	mg/Kg wet							
Pyrene	U	0.333	mg/Kg wet							
1,2,4-Trichlorobenzene	U	0.333	mg/Kg wet							
2,4,5-Trichlorophenol	U	0.333	mg/Kg wet							
2,4,6-Trichlorophenol	U	0.100	mg/Kg wet							

Surrogate: 2-Fluorobiphenyl	0.665		mg/Kg wet	0.66667		100	40-120			
Surrogate: 2-Fluorophenol	0.712		mg/Kg wet	1.0000		71	20-115			
Surrogate: Nitrobenzene-d5	0.703		mg/Kg wet	0.66667		105	45-135			
Surrogate: Phenol-d6	0.760		mg/Kg wet	1.0000		76	20-100			
Surrogate: 4-Terphenyl-d14	0.710		mg/Kg wet	0.66667		107	60-130			
Surrogate: 2,4,6-Tribromophenol	0.647		mg/Kg wet	1.0000		65	30-100			

LCS (W001227-BS1)

Prepared & Analyzed: 03/12/2013

Acenaphthene	0.629	0.333	mg/Kg wet	0.66667		94	30-140			
4-Chloro-3-methylphenol	1.50	0.666	mg/Kg wet	1.3333		112	30-180			
2-Chlorophenol	1.34	0.333	mg/Kg wet	1.3333		100	35-150			
1,4-Dichlorobenzene	0.639	0.333	mg/Kg wet	0.66667		96	30-105			
2,4-Dinitrotoluene	0.637	0.100	mg/Kg wet	0.66667		96	35-130			
4-Nitrophenol	1.12	1.66	mg/Kg wet	1.3333		84	30-150			
N-Nitroso-di-n-propylamine	0.776	0.00100	mg/Kg wet	0.66667		116	40-130			
Pentachlorophenol	1.15	0.0100	mg/Kg wet	1.3333		86	40-190			
Phenol	1.24	0.333	mg/Kg wet	1.3333		93	30-190			
Pyrene	0.676	0.333	mg/Kg wet	0.66667		101	35-140			
1,2,4-Trichlorobenzene	0.616	0.333	mg/Kg wet	0.66667		92	40-115			

Surrogate: 2-Fluorobiphenyl	0.693		mg/Kg wet	0.66667		104	40-120			
Surrogate: 2-Fluorophenol	0.672		mg/Kg wet	1.0000		67	20-115			
Surrogate: Nitrobenzene-d5	0.698		mg/Kg wet	0.66667		105	45-135			
Surrogate: Phenol-d6	0.733		mg/Kg wet	1.0000		73	20-100			
Surrogate: 4-Terphenyl-d14	0.755		mg/Kg wet	0.66667		113	60-130			
Surrogate: 2,4,6-Tribromophenol	0.693		mg/Kg wet	1.0000		69	30-100			

180

LABORATORY RESULTS

Client: True North Consultants
Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Metals by ICP-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001206 - SW 3050B Metals

Blank (W001206-BLK1) Prepared: 03/11/2013 Analyzed: 03/12/2013

Mercury	U	0.0800	mg/Kg wet							
Selenium	U	0.500	mg/Kg wet							
Silver	U	0.500	mg/Kg wet							

LCS (W001206-BS1) Prepared: 03/11/2013 Analyzed: 03/12/2013

Mercury	0.947	0.0800	mg/Kg wet	1.0000		95	80-120			
Selenium	23.8	0.500	mg/Kg wet	25.000		95	80-120			
Silver	2.62	0.500	mg/Kg wet	2.5000		105	80-120			

Matrix Spike (W001206-MS1) Source: 13C0177-01 Prepared: 03/11/2013 Analyzed: 03/14/2013

Mercury	1.09	0.0989	mg/Kg dry	1.2368	ND	88	75-125			
Selenium	30.6	0.618	mg/Kg dry	30.921	0.413	97	75-125			
Silver	2.87	0.618	mg/Kg dry	3.0921	ND	93	75-125			

Matrix Spike Dup (W001206-MSD1) Source: 13C0177-01 Prepared: 03/11/2013 Analyzed: 03/14/2013

Mercury	1.11	0.0982	mg/Kg dry	1.2270	ND	91	75-125	2	20	
Selenium	31.1	0.614	mg/Kg dry	30.676	0.413	100	75-125	2	20	
Silver	2.93	0.614	mg/Kg dry	3.0676	ND	96	75-125	2	20	

LABORATORY RESULTS

Client: True North Consultants
Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch W001205 - SW 3050B Metals

Blank (W001205-BLK1)

Prepared: 03/11/2013 Analyzed: 03/14/2013

Arsenic	U	0.500	mg/Kg wet							
Barium	U	0.250	mg/Kg wet							
Cadmium	U	0.250	mg/Kg wet							
Chromium	U	0.250	mg/Kg wet							
Lead	U	0.250	mg/Kg wet							

LCS (W001205-BS1)

Prepared: 03/11/2013 Analyzed: 03/14/2013

Arsenic	23.5	0.500	mg/Kg wet	25.000		94	85-115			
Barium	23.9	0.250	mg/Kg wet	25.000		95	85-115			
Cadmium	24.1	0.250	mg/Kg wet	25.000		97	85-115			
Chromium	23.5	0.250	mg/Kg wet	25.000		94	85-115			
Lead	23.7	0.250	mg/Kg wet	25.000		95	85-115			

Matrix Spike (W001205-MS1)

Source: 13C0177-01

Prepared: 03/11/2013 Analyzed: 03/14/2013

Arsenic	35.1	0.618	mg/Kg dry	30.921	7.45	89	75-125			
Barium	76.8	0.309	mg/Kg dry	30.921	45.0	103	75-125			E
Cadmium	26.8	0.309	mg/Kg dry	30.921	0.464	85	75-125			
Chromium	48.0	0.309	mg/Kg dry	30.921	18.4	96	75-125			
Lead	38.1	0.309	mg/Kg dry	30.921	11.0	88	75-125			

Matrix Spike Dup (W001205-MSD1)

Source: 13C0177-01

Prepared: 03/11/2013 Analyzed: 03/14/2013

Arsenic	33.5	0.614	mg/Kg dry	30.676	7.45	85	75-125	5	20	
Barium	75.4	0.307	mg/Kg dry	30.676	45.0	99	75-125	2	20	E
Cadmium	26.0	0.307	mg/Kg dry	30.676	0.464	83	75-125	3	20	
Chromium	46.3	0.307	mg/Kg dry	30.676	18.4	91	75-125	4	20	
Lead	36.2	0.307	mg/Kg dry	30.676	11.0	82	75-125	5	20	

LABORATORY RESULTS

Client: True North Consultants
Project: Round Lake / Hart Rd.

Lab Order: 13C0195

SPLP Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch W001501 - SW 3005A Metals										
Blank (W001501-BLK1)										
Prepared & Analyzed: 03/25/2013										
Chromium	U	0.00500	mg/L							
LCS (W001501-BS1)										
Prepared & Analyzed: 03/25/2013										
Chromium	0.488	0.00500	mg/L	0.50000		98	85-115			
Matrix Spike (W001501-MS1)										
Source: 13C0195-01										
Prepared & Analyzed: 03/25/2013										
Chromium	0.509	0.00500	mg/L	0.50000	0.00249	101	75-125			
Matrix Spike Dup (W001501-MSD1)										
Source: 13C0195-01										
Prepared & Analyzed: 03/25/2013										
Chromium	0.513	0.00500	mg/L	0.50000	0.00249	102	75-125	0.9	20	

LABORATORY RESULTS

Client: True North Consultants
 Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Conventional Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch W001233 - SW 9045C pH										
Duplicate (W001233-DUP1)		Source: 13C0177-08			Prepared & Analyzed: 03/12/2013					
pH	7.5	0.010	pH Units		7.4			1	5	
Batch W001236 - ASTM D2216 Moisture										
Blank (W001236-BLK1)		Prepared & Analyzed: 03/13/2013								
Percent Solids	U	0.100	%							
Duplicate (W001236-DUP1)		Source: 13C0206-04			Prepared & Analyzed: 03/13/2013					
Percent Solids	77.6	0.100	%		77.5			0.2	20	

LABORATORY RESULTS

Client: True North Consultants
Project: Round Lake / Hart Rd.

Lab Order: 13C0195

Notes and Definitions

- S2 Surrogate recovery exceeds the acceptance criteria due to matrix interference, but there is no observable concentration in associated analyte(s).
- S Spike recovery outside acceptance limits.
- R RPD outside acceptance limits.
- M Reporting limit set between LOQ and MDL.
- I Matrix interference.
- E Result above quantitation range.
- C1 Analyte result confirmed by second analysis.
- * NELAC certified compound.
- U Analyte not detected (i.e. less than RL or MDL).

185

Chain of Custody Record

Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
 Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9660
 Central/Southern IL Office - Phone (217) 414-7762 - Facsimile (217) 223-7922



Client	True North Consultants						Reporting	
	Address	City/State/Zip Code	Phone/Facsimile	Project Name/Number	Project Location	☐ Resid	☐ Ind/Comm	
	1240 Iroquois Avenue, Suite 210	Naperville, Illinois 60563	630.717.2880/630.689.5881	Round Lake Beach/Hart Rd	Hart & Sunset	☐ A ☐ D	☐ B ☐ E	
	T113080					☐ C ☐ F	☐ Resid	
Contact Person	Marjory McMahon						☐ Indust	
Sample Description	Date	Sampling Time	Matrix Code	Preserv Code	No. of Containers	Sample Type	Analysis and/or Method Requested	Sampler Comments
B6 (10-12.5)	Mar 8 2013	1025	S	5	4	X	PNAS	
B7 (23-24)	Mar 8 2013	1145	S	5	4	X	RCRA Metals	
B8 (5-7.5)	Mar 7 2013	1000	S	5	4	X	PH	
B9 (15-17.5)	Mar 7 2013	1120	S	5	4	X	VOC	
B10 (7.5-10)	Mar 7 2013	1225	S	5	4	X	BETX	
B11 (2.5-5)	Mar 7 2013	1405	S	5	4	X	SVOC	
B12 (17.5-20)	Mar 8 2013	905	S	5	4	X		
RLB Comp	Mar 8 2013	1200	S		4	X		HOLD
Matrix Code	A - Aqueous		DW - Drinking Water		GW - Ground Water		NA - Non-Aqueous Liquid	
Preserv Code	0 - None		1 - HCl		2 - H2SO4		3 - HNO3	
	S - Solid		4 - NaOH		5 - 5035 Kit		X - Other (Specify)	
Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment		
<i>Mye [Signature]</i>	030813	1500	<i>[Signature]</i>	3/8/13	1500	UPS		
				3/8/13	1730	379-R/9:30		
Instructions:								Temperature (°C)
Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>								3.0
Date Required: 4.5 days								On wet ice? <input checked="" type="radio"/> Yes <input type="radio"/> No

186

Chain of Custody Record

Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
 Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9880
 Central/Southern IL Office - Phone (217) 414-7762 - Facsimile (217) 223-7922



Client	Analysis and/or Method Requested										Reporting			
	PNAs	RCRA Metals	pH	VOC	BTEX	SVOC	Resid	Ind/Comm	A	B	C	F	Resid	Indust
True North Consultants 1240 Iroquois Avenue, Suite 210 Naperville, Illinois 60563 630.717.2880/630.689.5881 Round Lake Beach/Hart Rd Hart & Sunset T113080 Marjory McMahon														
Sample Description	Date	Sampling Time	Matrix Code	Preserv Code	No. of Containers	Sample Type	NA - Non-Aqueous Liquid	3 - HNO3	S - Solid	4 - NaOH	O - Oil	5 - 5035 Kit	X - Other (Specify)	X - Other (Specify)
B6 (10-12.5)	Mar 8 2013	1025	S	5	4	X	X	X	X					
B7 (23-24)	Mar 8 2013	1145	S	5	4	X	X	X	X					
B8 (5-7.5)	Mar 7 2013	1000	S	5	4	X	X	X	X					
B9 (15-17.5)	Mar 7 2013	1120	S	5	4	X	X	X	X	X				
B10 (7.5-10)	Mar 7 2013	1225	S	5	4	X	X	X	X					
B11 (2.5-5)	Mar 7 2013	1405	S	5	4	X	X	X	X					
B12 (17.5-20)	Mar 8 2013	905	S	5	4	X	X	X	X					
RLB Comp	Mar 8 2013	1200	S		4	X	X	X	X					HOLD
Matrix Code	Preserv Code	Date	Time	Requisition #	Date	Time	Requisition #	Date	Time	Method of Shipment	Temperature (°C)			
A - Aqueous 0 - None	DW - Drinking Water 1 - HCl	030813	1500	620	3/8/13	1500	620	3/8/13	1500	UPS	3.0			

Instructions: Turnaround Time: Standard Rush
 Date Required: 4.5 days
 On wet ice? Yes No



STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
NELAP - RECOGNIZED



ENVIRONMENTAL LABORATORY ACCREDITATION

is hereby granted to

PRAIRIE ANALYTICAL SYSTEMS, INCORPORATED

1210 CAPITAL AIRPORT DRIVE

SPRINGFIELD, IL 62707-8413

NELAP ACCREDITED

ACCREDITATION NUMBER #100323



According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

Celeste M. Crowley
 Acting Manager
 Environmental Laboratory Accreditation Program

John South
 Accreditation Officer
 Environmental Laboratory Accreditation Program

Certificate No.: 003095
 Expiration Date: 01/31/2014
 Issued On: 02/06/2013

**State of Illinois
Environmental Protection Agency**

Certificate No.: 003095

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

Drinking Water, Inorganic

SM2130B, 18Ed

Turbidity

SM2320B, 18Ed

Alkalinity

SM2340B, 18Ed

Hardness

SM4110B, 18Ed

Chloride

Nitrite

Fluoride

Orthophosphate

Nitrate

Sulfate

SM4500CN-CE, 18Ed

Cyanide

SM4500H-B, 18Ed

Hydrogen Ion (pH)

SM5310C, 20Ed

Total Organic Carbon (TOC)

USEPA150.1

Hydrogen Ion (pH)

USEPA180.1

Turbidity

USEPA200.7R4.4

Aluminum

Beryllium

Chromium

Iron

Nickel

Zinc

Arsenic

Cadmium

Copper

Magnesium

Silver

Barium

Calcium

Hardness (calc.)

Manganese

Sodium

USEPA200.8R5.4

Aluminum

Barium

Chromium

Manganese

Nickel

Thallium

Antimony

Beryllium

Copper

Mercury

Selenium

Zinc

Arsenic

Cadmium

Lead

Molybdenum

Silver

USEPA300.0R2.1

Chloride

Fluoride

Nitrate

189

**State of Illinois
Environmental Protection Agency**

Certificate No.:

003095

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

Drinking Water, Inorganic	USEPA300.0R2.1	Nitrite
Orthophosphate	Sulfate	
Drinking Water, Organic		
<i>USEPA524.2R4.1</i>		
1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene
1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dichloroethane
1,2-Dichloropropane	1,4-Dichlorobenzene	Benzene
Bromodichloromethane	Bromoform	Carbon tetrachloride
Chlorobenzene	Chlorodibromomethane	Chloroform
cis-1,2-Dichloroethene	Dichloromethane (Methylene chloride)	Ethylbenzene
Methyl tert-butyl ether (MTBE)	Styrene	Tetrachloroethene
Toluene	Total trihalomethanes	trans-1,2-Dichloroethene
Trichloroethylene	Vinyl chloride	Xylenes (total)
<i>USEPA525.2R2.0</i>		
4,4'-DDT	Alachlor	Aldrin
Atrazine	Benzo(a)pyrene	Di (2-ethylhexyl) adipate
Di (2-ethylhexyl) phthalate	Dieldrin	Endrin
gamma-BHC (Lindane)	Heptachlor	Heptachlor epoxide
Hexachlorobenzene	Hexachlorocyclopentadiene	Methoxychlor
Simazine		
Hazardous and Solid Waste, Inorganic		
<i>1010A</i>		
Ignitability		
<i>1311 (Solid Only)</i>		
TCLP (Organic and Inorganic)		
<i>1312 (Solid Only)</i>		
Synthetic Precipitation Leaching Procedure		
<i>6010B</i>		
Aluminum	Antimony	Arsenic
Barium	Beryllium	Boron
Cadmium	Calcium	Chromium
Cobalt	Copper	Iron
Lead	Magnesium	Manganese
Molybdenum	Nickel	Potassium
Selenium	Silica	Sodium
Strontium	Thallium	Tin
Titanium	Vanadium	Zinc
<i>6020A</i>		
Aluminum	Antimony	Arsenic
Barium	Beryllium	Boron
Cadmium	Calcium	Chromium
Cobalt	Copper	Iron
Lead	Magnesium	Manganese
Mercury	Molybdenum	Nickel
Potassium	Selenium	Silver

190

**State of Illinois
Environmental Protection Agency**

Certificate No.:

003095

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

Hazardous and Solid Waste, Inorganic	6020A	Sodium
Thallium	Vanadium	Zinc
7196A		
Chromium VI		
9014		
Cyanide		
9034		
Sulfides		
9040B (Aqueous Only)		
Hydrogen Ion (pH)		
9040C (Aqueous Only)		
Hydrogen Ion (pH)		
9045C (Solid Only)		
Hydrogen Ion (pH)		
9045D (Solid Only)		
Hydrogen Ion (pH)		
9056A		
Bromide	Chloride	Fluoride
Nitrate	Nitrite	Phosphate
Sulfate		
9060A		
Total Organic Carbon (TOC)		
9065		
Phenolics		
9081		
Caion-exchange Capacity		
9095A		
Paint Filter		
Hazardous and Solid Waste, Organic		
8015B		
Diesel range organics (DRO)	Gasoline range organics (GRO)	
8081A		
4,4'-DDD	4,4'-DDE	4,4'-DDT
Aldrin	alpha-BHC	alpha-Chlordane
beta-BHC	Chlordane - not otherwise specified	delta-BHC
Dieldrin	Endosulfan I	Endosulfan II
Endosulfan sulfate	Endrin	Endrin aldehyde
Endrin ketone	gamma-BHC (Lindane)	gamma-Chlordane
Heptachlor	Heptachlor epoxide	Methoxychlor
Toxaphene		
8082		
PCB-1016	PCB-1221	PCB-1232
PCB-1242	PCB-1248	PCB-1254

**State of Illinois
Environmental Protection Agency**

Certificate No.:

003095

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

Hazardous and Solid Waste, Organic

8082

PCB-1260

8260B		
1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane
1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene
1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane
1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane
1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene
1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
2-Butanone (Methyl ethyl ketone, MEK)	2-Chloroethyl vinyl ether	2-Chlorotoluene
2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone (Methyl isobutyl ketone)
Acetone	Acetonitrile	Acrolein (Propenal)
Acrylonitrile	Benzene	Bromobenzene
Bromochloromethane	Bromodichloromethane	Bromoform
Bromomethane	Carbon disulfide	Carbon tetrachloride
Chlorobenzene	Chlorodibromomethane (Dibromochloromethane)	Chloroethane
Chloroform	Chloromethane	cis-1,2-Dichloroethene
cis-1,3-Dichloropropene	Dibromomethane	Dichlorodifluoromethane
Dichloromethane (Methylene chloride)	Ethylbenzene	Hexachlorobutadiene
Isopropylbenzene	Methyl-t-butyl ether	Naphthalene
n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene
sec-Butylbenzene	Styrene	tert-Butylbenzene
Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane
Vinyl acetate	Vinyl chloride	Xylenes (Total)
8270C		
1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene
1,4-Dichlorobenzene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol
2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol
2,4-Dinitrotoluene (2,4-DNT)	2,6-Dinitrotoluene (2,6-DNT)	2-Chloronaphthalene
2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol (o-Cresol)
2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine
3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl phenyl ether
4-Methylphenol (p-Cresol)	4-Nitroaniline	4-Nitrophenol
Acenaphthene	Acenaphthylene	Anthracene
Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene
Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-chloroethoxy) methane
Bis(2-chloroethyl) ether	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate
Butyl benzyl phthalate	Carbazole	Carbofuran (Furaden)
Chlorobenzilate	Chrysene	Dibenz(a,h)anthracene
Dibenzofuran	Diethyl phthalate	Dimethyl phthalate
Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene
Fluorene	Hexachlorobenzene	Hexachlorobutadiene
Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd) pyrene
Isophorone	Naphthalene	Nitrobenzene
N-Nitrosodimethylamine	N-Nitrosodi-n-propylamine	N-Nitrosodiphenylamine

**State of Illinois
Environmental Protection Agency**

Certificate No.:

003095

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

Hazardous and Solid Waste, Organic:	8270C:	o-Cresol (2-Methylphenol)
p-Cresol (4-Methylphenol)	Pentachlorophenol	Phenanthrene
Phenol	Pyrene	
8270C Mod_Farm Chemicals		
Acetochlor	Alachlor	Atrazine
Butylate	Chlorpyrifos	Cyanazine
EPTC	Metolachlor	Metribuzin
Pendimethalin	Prometon	Simazine
Terbufos	Trifluralin	
8321B		
2,4,5-T	2,4,5-TP (Silvex)	2,4-D
2,4-DB	Aldicarb (Temik)	Carbofuran (Furaden)
Dalapon	Dicamba	Dinoseb
MCPA	MCPP	Oxamyl
Wastewater, Inorganic		
SM2130B,2001		
Turbidity		
SM2310B,1997		
Acidity		
SM2320B,1997 (Aqueous Only)		
Alkalinity		
SM2340B,1997		
Hardness		
SM2540B,1997 (Aqueous Only)		
Residue (Total)		
SM2540C,1997 (Aqueous Only)		
Residue (TDS)		
SM2540D,1997 (Aqueous Only)		
Residue (TSS)		
SM3500Cr-B,2009		
Chromium VI		
SM4110B,2000		
Bromide	Chloride	Fluoride
Nitrate	Nitrate-Nitrite (as N)	Nitrite
Orthophosphate (as P)	Sulfate	
SM4500Cl-G,2000 (Aqueous Only)		
Chlorine, Total Residual		
SM4500CN-E,1999 (Aqueous Only)		
Cyanide		
SM4500H-B,2000 (Aqueous Only)		
Hydrogen Ion (pH)		
SM4500NH3-D,1997		
Ammonia	Total Kjeldahl Nitrogen	

**State of Illinois
Environmental Protection Agency**

Certificate No.:

003095

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

Wastewater, Inorganic	SM45000-G,2001 (Aqueous Only)	
Oxygen - Dissolved		
SM4500P-E,1999 (Aqueous Only)		
Orthophosphate (as P)	Phosphorus	
SM4500S-F,2000		
Sulfide		
SM5210B,2001		
Biochemical Oxygen Demand (BOD) (Aqueous Only)	Carbonaceous Biochemical Oxygen Demand (
SM5220D,1997 (Aqueous Only)		
Chemical Oxygen Demand (COD)		
SM5310C,2000 (Aqueous Only)		
Total Organic Carbon (TOC)		
USEPA150.2,1982		
Hydrogen Ion (pH)		
USEPA160.4,1971 (Aqueous Only)		
Residue (Volatile)		
USEPA1664A (Aqueous Only)		
Oil and Grease		
USEPA180.1R2.0,1993 (Aqueous Only)		
Turbidity		
USEPA200.7,1994		
Aluminum	Antimony	Arsenic
Barium	Beryllium	Boron
Cadmium	Calcium	Chromium
Cobalt	Copper	Iron
Lead	Magnesium	Manganese
Molybdenum	Nickel	Potassium
Selenium	Sodium	Thallium
Tin	Titanium	Vanadium
Zinc		
USEPA200.8,1994		
Aluminum	Antimony	Arsenic
Barium	Beryllium	Boron
Cadmium	Calcium	Chromium
Cobalt	Copper	Iron
Lead	Magnesium	Manganese
Molybdenum	Nickel	Potassium
Selenium	Silver	Sodium
Thallium	Tin	Titanium
Vanadium	Zinc	
USEPA300.0R2.1,1993 (Aqueous Only)		
Bromide	Chloride	Fluoride
Nitrate	Nitrate-Nitrite (as N)	Nitrite
Orthophosphate (as P)	Sulfate	

**State of Illinois
Environmental Protection Agency**

Certificate No.:

003095

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

Wastewater, Inorganic

USEPA310.2,1974 (Aqueous Only)

Alkalinity

USEPA410.4R2.0,1993 (Aqueous Only)

Chemical Oxygen Demand (COD)

USEPA420.1,1978 (Aqueous Only)

Phenolics

EDR VISTACheck® Report

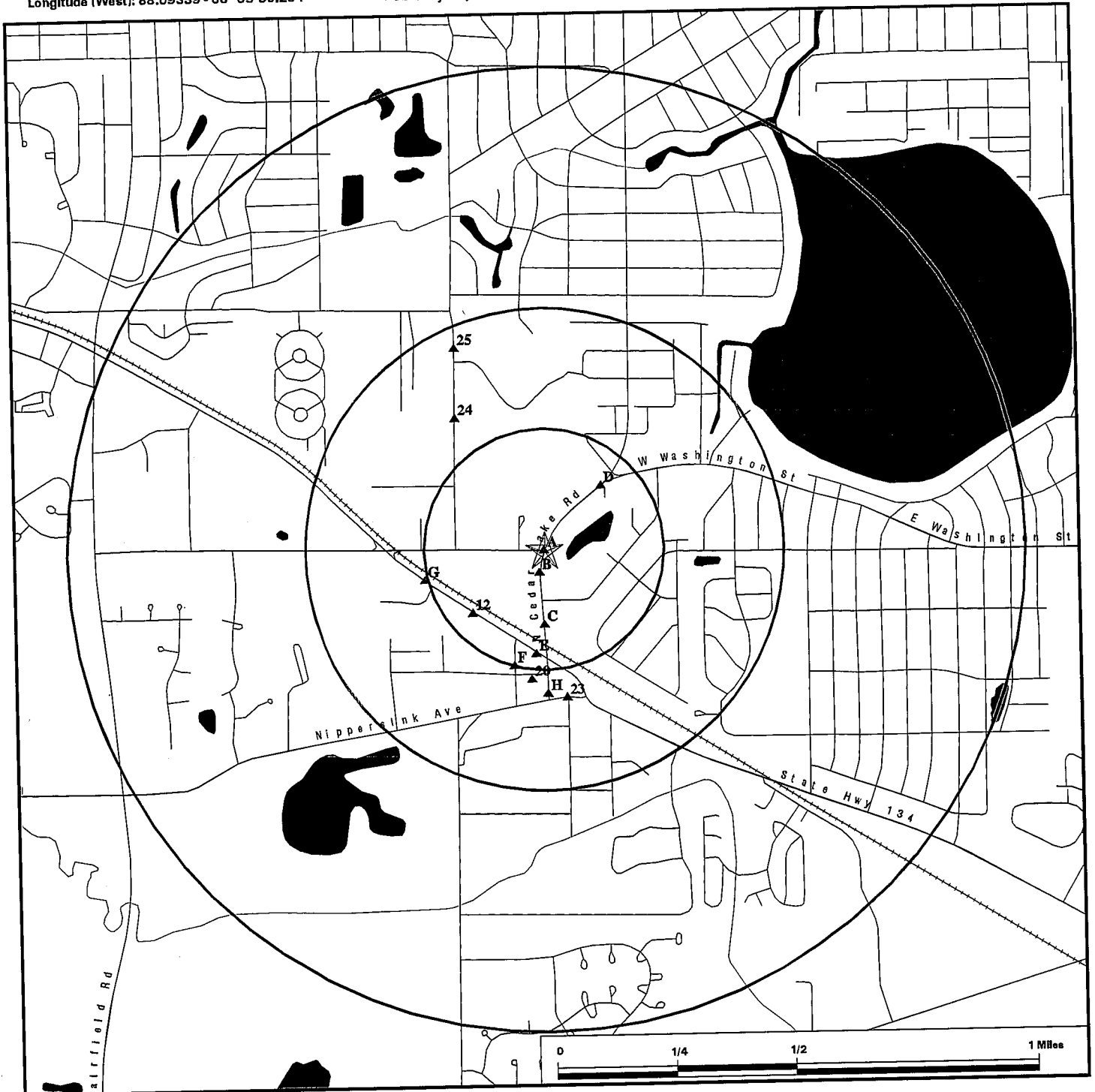


Nationwide Customer Service
 Telephone: 1-800-352-0050
 Internet: www.edrnet.com

Winston Engineering
 500 N CEDAR LAKE RD
 ROUND LAKE, IL 60073

Latitude (North): 42.357241 - 42°21'26.0676"
 Longitude (West): 88.09339 - 88°05'36.204"

February 07, 2013



- ★ Target Property
- ▲ Toxic Sites
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA

196

EDR VISTACheck[®] Report

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bae2a363-dafd-4186-a125-458ebbf79ed

197

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	0.500		0	0	0	NR	NR	0
Proposed NPL	0.500		0	0	0	NR	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	0.500		0	0	0	NR	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	0.500		0	0	0	NR	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		2	0	NR	NR	NR	2
RCRA-CESQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SSU	0.500		0	0	0	NR	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
LF SPECIAL WASTE	0.500		0	0	0	NR	NR	0
IL NIPC	0.500		0	0	0	NR	NR	0
CCDD	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	3	7	NR	NR	10

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUST TRUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	5	NR	NR	NR	5
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
SRP	0.500		0	0	1	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	0.500		0	0	0	NR	NR	0
FUDS	0.500		0	0	0	NR	NR	0
CONSENT	0.500		0	0	0	NR	NR	0
ROD	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
HWAR	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
IMPDMENT	0.500		0	0	1	NR	NR	1
AIRS	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	0.500		0	0	0	NR	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
PIMW	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Proprietary Records

EDR MGP	0.500		0	0	0	NR	NR	0
EDR US Hist Auto Stat	0.250		0	2	NR	NR	NR	2
EDR US Hist Cleaners	0.250		1	1	NR	NR	NR	2

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s) EDR ID Number
 EPA ID Number

A1 **THE GRIEVE CORPORATION**
500 HART RD
< 1/8 **ROUND LAKE, IL 60073**
1 ft.

RCRA-SQG **1001213806**
FINDS **ILR000046169**

Site 1 of 4 in cluster A

Relative:
Higher

RCRA-SQG:

Actual:
774 ft.

Date form received by agency: 12/04/1997
 Facility name: THE GRIEVE CORPORATION
 Facility address: 500 HART RD
 ROUND LAKE, IL 60073
 EPA ID: ILR000046169
 Contact: PAT CALABRESE
 Contact address: 500 HART RD
 ROUND LAKE, IL 60073
 Contact country: US
 Contact telephone: (847) 546-8225
 Contact email: Not reported
 EPA Region: 05
 Classification: Small Small Quantity Generator
 Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CORPORATION
 Owner/operator address: 500 HART RD
 ROUND LAKE, IL 60073
 Owner/operator country: Not reported
 Owner/operator telephone: (847) 546-8225
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: No
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Hazardous Waste Summary:

Waste code: D001
 Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS

201

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

THE GRIEVE CORPORATION (Continued)

1001213806

CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110005960816

Environmental Interest/Information System

ACES (Illinois - Agency Compliance And Enforcement System) is the Illinois EPA Project to facilitate the permitting operations

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

A2

**ROUND LAKE MIDDLE SCHOOL
 500 N CEDAR LAKE RD
 ROUND LAKE, IL 60073**

**FINDS 1008311059
 N/A**

< 1/8
 1 ft.

Site 2 of 4 in cluster A

**Relative:
 Higher**

FINDS:

Registry ID: 110022001947

**Actual:
 774 ft.**

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

202

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)
 EDR ID Number
 EPA ID Number

A3 **MAGEE MIDDLE SCHOOL**
500 NORTH CEDAR LAKE RD
ROUND LAKE, IL 60073
 < 1/8
 1 ft.
Site 3 of 4 in cluster A

FINDS **1014702214**
 N/A

Relative:
Higher

FINDS:

Registry ID: 110043114260

Actual:
774 ft.

Environmental Interest/Information System

NCES (National Center for Education Statistics) is the primary federal entity for collecting and analyzing data related to education in the United States and other nations and the institute of education sciences.

A4 **MAGEE MIDDLE SCHOOL**
500 N CEDAR LAKE RD
ROUND LAKE, IL 60073
 < 1/8
 1 ft.
Site 4 of 4 in cluster A

NPDES **S110708119**
 N/A

Relative:
Higher

NPDES:

Permit Id No: ILR10I971
 Date Permit Issued: 8/11/2008
 Type Of Permit: State Government
 Latitude: + 42 21' 30" 0
 Longitude: - 88 5' 35" 0
 Facility Receiving Water: SQUAW CREEK
 Effective Date: 8/11/2008
 Expiration Date: 7/31/2013
 Current Major/Minor: Minor

Actual:
774 ft.

B5 **ONE HOUR DRY CLEANING**
SSW **456 N CEDAR LAKE RD**
 < 1/8 **ROUND LAKE, IL 60073**
 0.048 mi.
 251 ft. **Site 1 of 2 in cluster B**

RCRA-SQG **1000117844**
FINDS **ILD047317425**

Relative:
Higher

RCRA-SQG:

Date form received by agency: 07/14/1989
 Facility name: ONE HOUR DRY CLEANING
 Facility address: 456 N CEDAR LAKE RD
 ROUND LAKE, IL 60073
 EPA ID: ILD047317425
 Mailing address: 456 CEDAR LAKE RD
 ROUND LAKE, IL 60073
 Contact: SUN KIM
 Contact address: 456 CEDAR LAKE RD
 ROUND LAKE, IL 60073
 Contact country: US
 Contact telephone: (312) 546-2343
 Contact email: Not reported
 EPA Region: 05
 Classification: Small Small Quantity Generator
 Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of

Actual:
774 ft.

203

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

ONE HOUR DRY CLEANING (Continued)

1000117844

hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: KI, SUN CHUL
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

204

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

Site _____ Database(s) _____ EDR ID Number
 _____ EPA ID Number

ONE HOUR DRY CLEANING (Continued)

1000117844

FINDS:

Registry ID: 110005829229

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

B6
SSW
 < 1/8
 0.048 mi.
 251 ft.

456 N CEDAR LAKE RD
ROUND LAKE, IL 60073

EDR US Hist Cleaners 1015063590
N/A

Site 2 of 2 in cluster B

Relative:
Higher

EDR Historical Cleaners:

Name: ONE HOUR DRY CLEANERS
 Year: 2001
 Address: 456 N CEDAR LAKE RD

Actual:
 774 ft.

Name: ONE HOUR DRY CLEANERS
 Year: 2002
 Address: 456 N CEDAR LAKE RD

Name: ONE HOUR DRY CLEANERS
 Year: 2003
 Address: 456 N CEDAR LAKE RD

Name: ONE HOUR DRY CLEANERS
 Year: 2005
 Address: 456 N CEDAR LAKE RD

C7
South
 1/8-1/4
 0.151 mi.
 795 ft.

A TIRE COUNTY SERVICE INC
363 N CEDAR LAKE RD
ROUND LAKE, IL 60073

RCRA NonGen / NLR 1000261237
LUST ILD025817693
UST

Site 1 of 3 in cluster C

Relative:
Higher

RCRA NonGen / NLR:

Date form received by agency: 11/01/2007
 Facility name: A TIRE COUNTY SERVICE INC
 Facility address: 363 N CEDAR LAKE RD
 ROUND LAKE, IL 60073

Actual:
 793 ft.

EPA ID: ILD025817693
 Contact: ENV COORDINATOR
 Contact address: Not reported

Not reported
 Contact country: Not reported
 Contact telephone: (847) 546-7491

Contact email: Not reported
 EPA Region: 05
 Land type: Private

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

A TIRE COUNTY SERVICE INC (Continued)

1000261237

Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: NAME NOT REPORTED
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: KOHLMAYER EDWARD A
Owner/operator address: ADDRESS NOT REPORTED
CITY NOT REPORTED, AK 99998
Owner/operator country: Not reported
Owner/operator telephone: (312) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 05/12/1988
Facility name: A TIRE COUNTY SERVICE INC
Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Zolo

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

A TIRE COUNTY SERVICE INC (Continued)

1000261237

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 12/12/1996
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

LUST:

Incident Num: 20110697
IL EPA Id: 0971505011
Product: Gasoline
IEMA Date: 06/30/2011
Project Manager: McGill
Project Manager Phone: (217) 524-5137
Email: Scott.McGill@Illinois.gov
PRP Name: Not reported
PRP Contact: Not reported
PRP Address: Not reported
PRP City,St,Zip: Not reported
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

Incident Num: 901275
IL EPA Id: 0971505011
Product: Unleaded Gas
IEMA Date: 05/11/1990
Project Manager: McGill
Project Manager Phone: (217) 524-5137
Email: Scott.McGill@Illinois.gov
PRP Name: A-Tire County Service
PRP Contact: John Olson
PRP Address: 363 North Cedar Lake Rd.
PRP City,St,Zip: Round Lake, IL 60073
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: P.A.
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 08/14/2006

207

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

A TIRE COUNTY SERVICE INC (Continued)

1000261237

45 Report Received: 08/14/2006
NFA/NFR Letter: Not reported
NFR Date Recorded: Not reported

UST:

Facility ID: 2006179
Facility Status: CLOSED
Facility Type: SELF-SERVICE STATION
Owner Name: A Tire County Service, Inc.
Owner Id: U0000122
Owner Address: 363 North Cedar Lake Road
Owner City,St,Zip: Round Lake, IL 60073

Tank Number: 1
Tank Capacity: 5000
Tank Substance: Gasoline
Last Used Date: 6/28/2006
OSFM First Notify Date: 3/26/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1974
Green Tag Decal: F000186
Green Tag Issue Date: 5/3/2004
Green Tag Expire Date: 12/31/2007
Self Service Permit Inspection Date: 9/20/2005
Self Service Permit Expire Date: 12/31/2007
Fee Due: \$0.00

Tank Number: 2
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: 6/28/2006
OSFM First Notify Date: 3/26/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1974
Green Tag Decal: F000186
Green Tag Issue Date: 5/3/2004
Green Tag Expire Date: 12/31/2007
Self Service Permit Inspection Date: 9/20/2005
Self Service Permit Expire Date: 12/31/2007
Fee Due: \$0.00

Tank Number: 3
Tank Capacity: 4000
Tank Substance: Gasoline
Last Used Date: 6/28/2006
OSFM First Notify Date: 3/26/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: 1/1/1974
Green Tag Decal: F000186
Green Tag Issue Date: 5/3/2004
Green Tag Expire Date: 12/31/2007
Self Service Permit Inspection Date: 9/20/2005

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

A TIRE COUNTY SERVICE INC (Continued)

EDR ID Number
EPA ID Number

Database(s)

1000261237

Self Service Permit Expire Date: 12/31/2007
Fee Due: \$0.00

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 1/1/1977
OSFM First Notify Date: 7/1/2011
Tank Status: Out of service
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: F000186
Green Tag Issue Date: 5/3/2004
Green Tag Expire Date: 12/31/2007
Self Service Permit Inspection Date: 9/20/2005
Self Service Permit Expire Date: 12/31/2007
Fee Due: \$0.00

C8
South
1/8-1/4
0.151 mi.
795 ft.

363 N CEDAR LAKE RD
ROUND LAKE, IL 60073
Site 2 of 3 in cluster C

EDR US Hist Auto Stat 1015450381
N/A

Relative:
Higher
Actual:
793 ft.

EDR Historical Auto Stations:

Name: A TIRE COUNTY SERVICE INC
Year: 2002
Address: 363 N CEDAR LAKE RD

Name: A TIRE COUNTY SERVICE INC
Year: 2003
Address: 363 N CEDAR LAKE RD

Name: A TIRE COUNTY SERVICE
Year: 2007
Address: 363 N CEDAR LAKE RD

Name: A TIRE COUNTY SERVICE
Year: 2008
Address: 363 N CEDAR LAKE RD

Name: ATIRE COUNTY SVC
Year: 2010
Address: 363 N CEDAR LAKE RD

Name: ATIRE COUNTY SERVICE
Year: 2011
Address: 363 N CEDAR LAKE RD

Name: ATIRE COUNTY SERVICE
Year: 2012
Address: 363 N CEDAR LAKE RD

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

EDR ID Number
 EPA ID Number

C9 **METRA ROUND LAKE STATION**
South **357 NORTH CEDAR LAKE ROAD**
1/8-1/4 **ROUND LAKE, IL 60073**
0.157 mi.
828 ft. **Site 3 of 3 in cluster C**

LUST **U004126673**
UST **N/A**

Relative:
Higher

LUST:

Incident Num: 20081532
 IL EPA Id: 0971505059
 Product: Fuel Oil
 IEMA Date: 10/15/2008
 Project Manager: Not reported
 Project Manager Phone: Not reported
 Email: Not reported
 PRP Name: Not reported
 PRP Contact: Not reported
 PRP Address: Not reported
 PRP City,St,Zip: Not reported
 PRP Phone: Not reported
 Site Classification: Not reported
 Section 57.5(g) Letter: 734
 Date Section 57.5(g) Letter: 03/30/2009
 Non LUST Determination Letter: Not reported
 20 Report Received: Not reported
 45 Report Received: Not reported
NFA/NFR Letter: Not reported
 NFR Date Recorded: Not reported

Actual:
793 ft.

UST:

Facility ID: 2044187
 Facility Status: EXEMPT
Facility Type: **NONE**
 Owner Name: Metra Round Lake Station
 Owner Id: U0034962
 Owner Address: 357 North Cedar Lake Road
 Owner City,St,Zip: Round Lake, IL 60073

Tank Number: 1
 Tank Capacity: 1000
 Tank Substance: Heating Oil
 Last Used Date: 12/31/1973
 OSFM First Notify Date: Not reported
Tank Status: **Exempt from registration**
 Red Tag Issue Date: Not reported
 Install Date: Not reported
Green Tag Decal: **Not reported**
Green Tag Issue Date: **Not reported**
Green Tag Expire Date: **Not reported**
Self Service Permit Inspection Date: **Not reported**
Self Service Permit Expire Date: **Not reported**
 Fee Due: Not reported

210

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

EDR ID Number
 EPA ID Number

Site

Database(s)

D10 **602, LLC**
NE **602 NORTH CEDAR LAKE ROAD**
1/8-1/4 **ROUND LAKE, IL 60073**
0.179 mi.
944 ft. **Site 1 of 2 in cluster D**

LUST **S108255667**
 N/A

Relative:
Lower

LUST:

Incident Num: 20061584
 IL EPA Id: 0971505055
 Product: Gasoline
 IEMA Date: 12/18/2006
 Project Manager: Not reported
 Project Manager Phone: Not reported
 Email: Not reported
 PRP Name: Cedar Lake LLC
 PRP Contact: Jerry Hartman
 PRP Address: 1632 Sequoi Trail
 PRP City,St,Zip: Glenview, IL 60025
 PRP Phone: 8475282052
 Site Classification: Not reported
 Section 57.5(g) Letter: 734
 Date Section 57.5(g) Letter: Not reported
 Non LUST Determination Letter: Not reported
 20 Report Received: 01/16/2007
 45 Report Received: Not reported
NFA/NFR Letter: Not reported
 NFR Date Recorded: Not reported

Actual:
764 ft.

D11 **RESTAURANT**
NE **602 N CEDAR LAKE RD**
1/8-1/4 **ROUND LAKE, IL 60073**
0.179 mi.
944 ft. **Site 2 of 2 in cluster D**

UST **U004068229**
 N/A

Relative:
Lower

UST:

Facility ID: 2043471
 Facility Status: EXEMPT
Facility Type: NONE
 Owner Name: Chicago Land Trust #8002347543
 Owner Id: U0033805
 Owner Address: 8926 N Greenwood Ave #142 Gerald Hartman
 Owner City,St,Zip: Niles, IL 60714

Actual:
764 ft.

Tank Number: 1
 Tank Capacity: 2000
 Tank Substance: Gasoline
 Last Used Date: 12/31/1973
 OSFM First Notify Date: 1/2/2007
Tank Status: Exempt from registration
 Red Tag Issue Date: Not reported
 Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
 Fee Due: Not reported

Tank Number: 2

211

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

EDR ID Number
EPA ID Number
Database(s)

RESTAURANT (Continued)

U004068229

Tank Capacity: 1000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 1/2/2007
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 3
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: 12/31/1973
OSFM First Notify Date: 1/2/2007
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

Tank Number: 4
Tank Capacity: 1000
Tank Substance: Heating Oil
Last Used Date: 12/31/1973
OSFM First Notify Date: 1/2/2007
Tank Status: Exempt from registration
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
Fee Due: Not reported

12
SW
1/8-1/4
0.197 mi.
1041 ft.

545 RAILROAD AVE
ROUND LAKE, IL 60073

EDR US Hist Auto Stat 1015548140
N/A

Relative: Higher
Actual: 779 ft.
EDR Historical Auto Stations:
Name: CLASSY CHASSIS AUTO CLINIC INC
Year: 2008
Address: 545 RAILROAD AVE
Name: CLASSY CHASSIS AUTO CLINIC

212

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

EDR ID Number
 EPA ID Number

Site

1015548140

(Continued)

Year:	2009
Address:	545 RAILROAD AVE
Name:	CLASSY CHASSIS AUTO CLINIC
Year:	2010
Address:	545 RAILROAD AVE
Name:	CLASSY CHASSIS AUTO CLINIC
Year:	2011
Address:	545 RAILROAD AVE
Name:	CLASSY CHASSIS AUTO CLINIC
Year:	2012
Address:	545 RAILROAD AVE

E13 **VILLAGE OF ROUND LAKE**
South **NORTH EAST CORNER CEDAR LAKE/NIPPERSINK ROAD**
1/8-1/4 **ROUND LAKE, IL 60073**
0.212 mi.
1119 ft. **Site 1 of 3 in cluster E**

UST **U003670135**
N/A

Relative:	UST:	
Higher	Facility ID:	2037344
	Facility Status:	EXEMPT
Actual:	Facility Type:	NONE
794 ft.	Owner Name:	Village Of Round Lake
	Owner Id:	U0027570
	Owner Address:	442 Cedar Lake Road
	Owner City,St,Zip:	Round Lake, IL 60073

Tank Number:	1
Tank Capacity:	500
Tank Substance:	Diesel Fuel
Last Used Date:	12/1/1973
OSFM First Notify Date:	10/5/1998
Tank Status:	Exempt from registration
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	Not reported
Green Tag Issue Date:	Not reported
Green Tag Expire Date:	Not reported
Self Service Permit Inspection Date:	Not reported
Self Service Permit Expire Date:	Not reported
Fee Due:	Not reported

Tank Number:	2
Tank Capacity:	1000
Tank Substance:	Diesel Fuel
Last Used Date:	12/1/1973
OSFM First Notify Date:	10/5/1998
Tank Status:	Exempt from registration
Red Tag Issue Date:	Not reported
Install Date:	1/1/1902
Green Tag Decal:	Not reported
Green Tag Issue Date:	Not reported
Green Tag Expire Date:	Not reported
Self Service Permit Inspection Date:	Not reported

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

VILLAGE OF ROUND LAKE (Continued)

U003670135

Self Service Permit Expire Date: Not reported
Fee Due: Not reported

E14
 South
 1/8-1/4
 0.217 mi.
 1147 ft.

413 RAILROAD AVE
ROUND LAKE, IL 60073

Site 2 of 3 in cluster E

EDR US Hist Cleaners 1015057550
 N/A

Relative:
Higher

Actual:
795 ft.

EDR Historical Cleaners:

Name: ROUND LAKE DRY CLEANERS
 Year: 2010
 Address: 413 RAILROAD AVE

Name: ROUND LAKE CLEANERS
 Year: 2011
 Address: 413 RAILROAD AVE

Name: ROUND LAKE CLEANERS
 Year: 2012
 Address: 413 RAILROAD AVE

E15
 South
 1/8-1/4
 0.220 mi.
 1161 ft.

(VACANT)
216 CEDAR LAKE RD.
ROUND LAKE, IL 60073

Site 3 of 3 in cluster E

UST U003715329
 N/A

Relative:
Higher

Actual:
796 ft.

UST:

Facility ID: 2039430
 Facility Status: EXEMPT
 Facility Type: **COMMERCIAL / RETAIL**
 Owner Name: Yolanda Lomeli
 Owner Id: U0030290
 Owner Address: 419 W Nippersink Ave
 Owner City,St,Zip: Round Lake, IL 60073

Tank Number: 1
 Tank Capacity: 550
 Tank Substance: Heating Oil
 Last Used Date: 12/31/1973
 OSFM First Notify Date: 2/29/2000
Tank Status: Exempt from registration
 Red Tag Issue Date: Not reported
 Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
 Fee Due: Not reported

Tank Number: 2
 Tank Capacity: 550
 Tank Substance: Heating Oil

214

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

EDR ID Number
 EPA ID Number

U003715329

(VACANT) (Continued)

Last Used Date: 12/31/1973
 OSFM First Notify Date: 2/29/2000
Tank Status: Exempt from registration
 Red Tag Issue Date: Not reported
 Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
 Fee Due: Not reported

Tank Number: 3
 Tank Capacity: 500
 Tank Substance: Heating Oil
 Last Used Date: 12/31/1973
 OSFM First Notify Date: 8/20/2001
Tank Status: Exempt from registration
 Red Tag Issue Date: Not reported
 Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
 Fee Due: Not reported

Tank Number: 4
 Tank Capacity: 500
 Tank Substance: Heating Oil
 Last Used Date: 12/31/1973
 OSFM First Notify Date: 8/20/2001
Tank Status: Exempt from registration
 Red Tag Issue Date: Not reported
 Install Date: Not reported
Green Tag Decal: Not reported
Green Tag Issue Date: Not reported
Green Tag Expire Date: Not reported
Self Service Permit Inspection Date: Not reported
Self Service Permit Expire Date: Not reported
 Fee Due: Not reported

F16
 SSW
 1/8-1/4
 0.230 mi.
 1216 ft.

NORTHERN ILL DECORATING
350 GOODNOW BLVD
ROUND LAKE, IL 60073
 Site 1 of 2 in cluster F

RCRA-CESQG 1004695432
 FINDS ILR000017301

Relative:
Higher

RCRA-CESQG:
 Date form received by agency: 02/21/1996
 Facility name: NORTHERN ILL DECORATING
 Facility address: 350 GOODNOW BLVD
 ROUND LAKE, IL 60073
 EPA ID: ILR000017301
 Contact: JAY DZIK
 Contact address: 350 GOODNOW BLVD

Actual:
797 ft.

215

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

EDR ID Number
EPA ID Number

NORTHERN ILL DECORATING (Continued)

1004695432

ROUND LAKE, IL 60073
Contact country: US
Contact telephone: (708) 740-1237
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: DZIK JAY
Owner/operator address: 350 GOODNOW BLVD
ROUND LAKE, IL 60073
Owner/operator country: Not reported
Owner/operator telephone: (708) 740-1237
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
Used oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE

216

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

EDR ID Number
EPA ID Number
Database(s)

NORTHERN ILL DECORATING (Continued)

1004695432

MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D035
Waste name: METHYL ETHYL KETONE

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110005941437

Environmental Interest/Information System

ACES (Illinois - Agency Compliance And Enforcement System) is the Illinois EPA Project to facilitate the permitting operations

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

G17 POURES, ALEX
WSW RT. 134
1/4-1/2 ROUND LAKE, IL 60073
0.250 mi.
1322 ft. Site 1 of 2 in cluster G

LUST S103294673
N/A

Relative: LUST:
Higher Incident Num: 922852
IL EPA Id: 0971505009
Actual: Product: Gasoline
780 ft. IEMA Date: 10/10/1992
Project Manager: Ransdell
Project Manager Phone: (217) 557-6938

217

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

EDR ID Number
EPA ID Number

POURES, ALEX (Continued)

S103294673

Email: James.Ransdell@illinois.gov
PRP Name: Alex Poures
PRP Contact: Not reported
PRP Address: P.O. Box 218
PRP City,St,Zip: La Grange, IL 60525
PRP Phone: Not reported
Site Classification: Not reported
Section 57.5(g) Letter: 731
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: Not reported
45 Report Received: Not reported
NFA/NFR Letter: 02/04/2011
NFR Date Recorded: Not reported

G18 COLE, LORI
WSW 657 RAILROAD AVENUE
1/4-1/2 ROUND LAKE, IL 60073
0.260 mi.
1371 ft. Site 2 of 2 in cluster G

LUST S108480311
N/A

Relative: LUST:
Higher Incident Num: 20070355
IL EPA Id: 0971505056
Actual: Product: Other Petro
779 ft. IEMA Date: 03/23/2007
Project Manager: McGill
Project Manager Phone: (217) 524-5137
Email: Scott.McGill@Illinois.gov
PRP Name: John A. Magee Ten & Eleven
PRP Contact: Judith Magee
PRP Address: 130 Dittmer Lane #1B
PRP City,St,Zip: Lindenhurst, IL 60046
PRP Phone: 8472234019
Site Classification: Not reported
Section 57.5(g) Letter: 734
Date Section 57.5(g) Letter: Not reported
Non LUST Determination Letter: Not reported
20 Report Received: 04/13/2007
45 Report Received: 07/25/2007
NFA/NFR Letter: 08/17/2007
NFR Date Recorded: 10/20/2009

F19 1ST STATE BANK OF ROUND LAKE
SSW 301 GOODNOW BLVD.
1/4-1/2 ROUND LAKE, IL 60073
0.264 mi.
1396 ft. Site 2 of 2 in cluster F

LUST S104564521
N/A

Relative: LUST:
Higher Incident Num: 20001518
IL EPA Id: 0971505037
Actual: Product: Other Petro
801 ft. IEMA Date: 08/10/2000
Project Manager: Donnelly
Project Manager Phone: (217) 557-8764

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

Database(s)
 EPA ID Number

EDR ID Number
 EPA ID Number

1ST STATE BANK OF ROUND LAKE (Continued)

S104564521

Email: Jason.Donnelly@illinois.gov
 PRP Name: 1st State Bank of Round Lake
 PRP Contact: Jill Gross
 PRP Address: 1777 North Cedar Lake Rd.
 PRP City,St,Zip: Round Lake, IL 60073
 PRP Phone: 8475462111
 Site Classification: Not reported
 Section 57.5(g) Letter: 732
 Date Section 57.5(g) Letter: Not reported
 Non LUST Determination Letter: Not reported
 20 Report Received: 08/21/2000
 45 Report Received: 09/28/2000
 NFA/NFR Letter: 10/08/2003
 NFR Date Recorded: 10/16/2003

20
 South
 1/4-1/2
 0.269 mi.
 1421 ft.

WILLIAM ANEST

**IMPDMNT S105250630
 N/A**

, IL

Relative:
 Higher

SIA:
 Area: 0.00000000000
 Perimeter: 0.00000000000
 County FIPS Code: 097
 Place Code: 66027
 Type of Impoundment Facility: MUNICIPAL
 SIA Number: 00068
 # of impoundments at Site: 001
 IEPA ID: 0
 NPDES Permit #: IL0049000
 SIC Code 2: 4952
 Latitude: 422112
 Longitude: 0880538
 Date Facility Id'd and Inventoried: 41779
 Land owner street address: 357 N CEDAR LAKE ROAD
 Land Owner City,St,Zip: ROUND LAKE, IL 60073
 Operator of impoundment: Not reported
 Operator address: Not reported
 Operator City,St,Zip: 0
 State Abbreviation: Not reported
 County FIPS Code: Not reported
 Place Code: 0
 Type of Impoundment Facility 2: Not reported
 SIA Number: Not reported
 Unique impoundment Number: Not reported
 Purpose For Impoundment: Not reported
 Explanation For Above: Not reported
 Age of Impoundment in Years: Not reported
 Impoundment Currently In Use: Not reported
 # of years in Operation if In Use: Not reported
 Unique Record # assigned by S. Schock: P4213
 Last Year of Operation if Not in Use: Not reported
 Surface Area of all impoundments (acres): Not reported
 Surface Area of all impoundments (acres): Not reported
 Average Influent (Gal/day) Into Impoundment: Not reported
 Year of Record for above (influent) average: Not reported
 Average Effluent (gal/day) out of impoundment: Not reported

Actual:
 800 ft.

219

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

EDR ID Number
 EPA ID Number

Site

Database(s)

WILLIAM ANEST (Continued)

S105250630

Year of record for above (effluent) average:	Not reported
Year of record for above average:	Not reported
Year of record for above average:	Not reported
Avg Effluent for all Impoundments at facility:	Not reported
Year of Record for above Average:	Not reported
Bottom of Liner:	Not reported
If Liner Type ?? Above, Thickness (Inches):	Not reported
Description of Liner Type If ?? Above:	Not reported
If Agricultural Impoundment, Type of Livestock:	Not reported
If Agricultural Impoundment, Average Daily # Livestock:	Not reported
Number of Monitoring Wells:	Not reported
Frequency Of Groundwater Samplings:	Not reported
Explanation Of GW Sampling if Other:	Not reported
GW Quality Changes Detected:	Not reported
Seepage Affected Drnk Water Wells Within 1 Mile:	Not reported
Site Features:	Not reported
Dun and Bradst # Identifying Facility Type 2:	Not reported
Dun and Bradst # Identifying Operator Business 2:	Not reported
Dun and Bradst # Identifying Facility Type 2:	Not reported
Dun and Bradst # Identifying Operator Business 2:	Not reported
SIC Code 2:	Not reported

H21 **LOMELI, YOLANDA**
South **234 NORTH CEDAR LAKE RD.**
1/4-1/2 **ROUND LAKE, IL 60073**
0.294 mi.
1553 ft. **Site 1 of 2 in cluster H**

LUST **S105060116**
N/A

Relative:
Higher

LUST:

Actual:
798 ft.

Incident Num:	20011371
IL EPA Id:	0971505039
Product:	Other Petro
IEMA Date:	08/15/2001
Project Manager:	Jones
Project Manager Phone:	(217) 524-1253
Email:	Steve.Jones@Illinois.gov
PRP Name:	Yolanda Lomeli
PRP Contact:	Not reported
PRP Address:	419 West Nippersink Ave.
PRP City,St,Zip:	Round Lake, IL 60073
PRP Phone:	8475466718
Site Classification:	Not reported
Section 57.5(g) Letter:	732
Date Section 57.5(g) Letter:	Not reported
Non LUST Determination Letter:	Not reported
20 Report Received:	10/05/2001
45 Report Received:	10/05/2001
NFA/NFR Letter:	01/11/2002
NFR Date Recorded:	05/14/2002

220

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

EDR ID Number
 EPA ID Number

Site Database(s)

H22 **ROUND LAKE, VILLAGE OF**
South **219 NORTH CEDAR LAKE RD.**
1/4-1/2 **ROUND LAKE, IL 60073**
0.302 mi.
1593 ft. **Site 2 of 2 in cluster H**

LUST **S104529052**
 N/A

Relative: **LUST:**
Higher Incident Num: 982224
 IL EPA Id: 0971505031
Actual: Product: Deisel
798 ft. IEMA Date: 09/08/1998
 Project Manager: Rahman
 Project Manager Phone: (217) 782-9848
 Email: Mohammed.Rahman@illinois.gov
 PRP Name: Village of Round Lake
 PRP Contact: Raymond Wolfel
 PRP Address: 442 North Cedar Lake Rd.
 PRP City,St,Zip: Round Lake, IL 60073-2802
 PRP Phone: 8475460963
 Site Classification: Not reported
 Section 57.5(g) Letter: 732
 Date Section 57.5(g) Letter: Not reported
 Non LUST Determination Letter: Not reported
 20 Report Received: 10/26/1998
 45 Report Received: 10/26/1998
 NFA/NFR Letter: 08/17/1999
 NFR Date Recorded: 02/01/2000

23 **ROUND LAKE BP (SS# 140)**
South **320 WEST NIPPERSINK ROAD**
1/4-1/2 **ROUND LAKE, IL 60073**
0.309 mi.
1630 ft.

LUST **U001137596**
UST **N/A**

Relative: **LUST:**
Higher Incident Num: 901960
 IL EPA Id: 0971505013
Actual: Product: Gasoline
797 ft. IEMA Date: 07/13/1990
 Project Manager: Friedel
 Project Manager Phone: (217) 785-5736
 Email: Melinda.Friedel@illinois.gov
 PRP Name: Amoco Oil Co.
 PRP Contact: Lyle Bruce
 PRP Address: 28100 Torch Pkwy., 6-S
 PRP City,St,Zip: Warrenville, IL 60555
 PRP Phone: Not reported
 Site Classification: Not reported
 Section 57.5(g) Letter: 734
 Date Section 57.5(g) Letter: Not reported
 Non LUST Determination Letter: Not reported
 20 Report Received: Not reported
 45 Report Received: Not reported
 NFA/NFR Letter: Not reported
 NFR Date Recorded: Not reported

UST:
 Facility ID: 2023158
 Facility Status: ACTIVE

221

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

EDR ID Number
EPA ID Number

Database(s)

ROUND LAKE BP (SS# 140) (Continued)

U001137596

Facility Type: SELF-SERVICE STATION
Owner Name: Graham Enterprise, Inc.
Owner Id: U0023084
Owner Address: 446 Morris Ave. P.O. Box 777
Owner City,St,Zip: Mundelein, IL 600601919

Tank Number: 1
Tank Capacity: 500
Tank Substance: Used Oil
Last Used Date: 7/1/1990
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M000325
Green Tag Issue Date: 6/7/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: 6/7/2011
Self Service Permit Expire Date: 12/31/2013
Fee Due: \$0.00

Tank Number: 2
Tank Capacity: 8000
Tank Substance: Gasoline
Last Used Date: 7/1/1990
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M000325
Green Tag Issue Date: 6/7/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: 6/7/2011
Self Service Permit Expire Date: 12/31/2013
Fee Due: \$0.00

Tank Number: 3
Tank Capacity: 10000
Tank Substance: Gasoline
Last Used Date: 7/1/1990
OSFM First Notify Date: 4/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: M000325
Green Tag Issue Date: 6/7/2011
Green Tag Expire Date: 12/31/2013
Self Service Permit Inspection Date: 6/7/2011
Self Service Permit Expire Date: 12/31/2013
Fee Due: \$0.00

Tank Number: 4
Tank Capacity: 10000
Tank Substance: Gasoline

222

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

EDR ID Number
EPA ID Number
Database(s)

ROUND LAKE BP (SS# 140) (Continued)

U001137596

Last Used Date: 7/1/1990
OSFM First Notify Date: 4/25/1986
Tank Status: **Removed**
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: **M000325**
Green Tag Issue Date: **6/7/2011**
Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **6/7/2011**
Self Service Permit Expire Date: **12/31/2013**
Fee Due: \$0.00

Tank Number: 5
Tank Capacity: 12000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 7/30/1996
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 1/1/1990
Green Tag Decal: **M000325**
Green Tag Issue Date: **6/7/2011**
Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **6/7/2011**
Self Service Permit Expire Date: **12/31/2013**
Fee Due: \$0.00

Tank Number: 6
Tank Capacity: 12000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 7/30/1996
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 1/1/1990
Green Tag Decal: **M000325**
Green Tag Issue Date: **6/7/2011**
Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **6/7/2011**
Self Service Permit Expire Date: **12/31/2013**
Fee Due: \$0.00

Tank Number: 7
Tank Capacity: 12000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 7/30/1996
Tank Status: **Currently in use**
Red Tag Issue Date: Not reported
Install Date: 1/1/1990
Green Tag Decal: **M000325**
Green Tag Issue Date: **6/7/2011**
Green Tag Expire Date: **12/31/2013**
Self Service Permit Inspection Date: **6/7/2011**

223

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

EDR ID Number
 EPA ID Number

Database(s)

U001137596

ROUND LAKE BP (SS# 140) (Continued)

Self Service Permit Expire Date: 12/31/2013
 Fee Due: \$0.00

24
 NNW
 1/4-1/2
 0.330 mi.
 1740 ft.

TRIAD CIRCUITS, INC.
 703 SUNSET DRIVE
 ROUND LAKE, IL 60073

SRP S111826350
 N/A

Relative:
 Lower

SRP:

Actual:
 761 ft.

IL EPA Id: 0971505005
 US EPA Id: ILD980794739
 Longitude: -88.09623
 Latitude: 42.36097
 Contact Name: Shawn Bixler
 Contact Address: 8585 368th Avenue
 Contact Address2: Not reported
 Contact City,St,Zip: Burlington, WI 53105-
 Contact Phone: (847) 287-7724
 Date Enrolled: 04/27/2012
 Point Of Contact: Kara Magyar
 Consultant Company: Gabriel Environmental Services
 Consultant Address: 1421 North Elston Avenue
 Consultant Address2: Not reported
 Consultant City,St,Zip: Chicago, IL 60642-
 Consultant Phone: (773) 486-2123
 Proj Mgr Assigned: Mergen
 Sec. 4 Letter Date: Not reported
 NFR Recorded: Not reported
 Active: True
 Total Acres: 1.149
 No Further Remediation Letter Dt: Not reported
 Remediation Applicant Co: Estate of Walter Uhwat
 Remediation Applicant Title: Ms.
 Remediation Applicant Name: Not reported
 Remediation Applicant Company: Not reported
 Remediation Applicant Address: Not reported
 Remediation Applicant Address 2: Not reported
 Remediation Applicant City,St,Zip: Not reported
 Illinois EPA: Not reported
 Site Name: Not reported
 NFR Letter: Not reported
 NFR Letter Date Recorded: Not reported
 Site Type: Not reported
 Comprehensive/Focused: Not reported
 Institutional Controls: Not reported
 Barrier: Not reported
 Worker Caution: Not reported
 Acres: Not reported

224

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s) EDR ID Number
 EPA ID Number

25
 NNW
 1/4-1/2
 0.458 mi.
 2417 ft.

ROUND LAKE AREA SCHOOL DISTRICT 116
811 NORTH SUNSET
ROUND LAKE, IL 60073

LUST U000165759
UST N/A

Relative:
Higher

LUST:

Incident Num: 911300
 IL EPA Id: 0971505017
 Product: Gasoline
 IEMA Date: 05/15/1991
 Project Manager: Lee-Hill
 Project Manager Phone: Not reported
 Email: Not reported
 PRP Name: Round Lake Area Schools
 PRP Contact: Mary Davis
 PRP Address: 316 South Rosedale Ct.
 PRP City,St,Zip: Round Lake, IL 60073
 PRP Phone: Not reported
 Site Classification: Not reported
 Section 57.5(g) Letter: 731
 Date Section 57.5(g) Letter: Not reported
 Non LUST Determination Letter: Not reported
 20 Report Received: 06/20/1991
 45 Report Received: 02/29/1992
NFA/NFR Letter: 08/17/1994
 NFR Date Recorded: Not reported

Actual:
780 ft.

UST:

Facility ID: 2005761
 Facility Status: ACTIVE
Facility Type: **SCHOOL/COLLEGE**
 Owner Name: Round Lake Area School District 116
 Owner Id: U0013157
 Owner Address: 316 South Rosedale Court
 Owner City,St,Zip: Round Lake, IL 60073

Tank Number: 1
 Tank Capacity: 8000
 Tank Substance: Gasoline
 Last Used Date: 5/17/1991
 OSFM First Notify Date: 3/25/1986
Tank Status: **Removed**
 Red Tag Issue Date: Not reported
 Install Date: Not reported
Green Tag Decal: **L006836**
Green Tag Issue Date: **12/14/2010**
Green Tag Expire Date: **12/31/2012**
Self Service Permit Inspection Date: **8/31/2012**
Self Service Permit Expire Date: **12/31/2014**
 Fee Due: \$0.00

Tank Number: 2
 Tank Capacity: 2000
 Tank Substance: Gasoline
 Last Used Date: 5/17/1991
 OSFM First Notify Date: 3/25/1986
Tank Status: **Removed**

225

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EPA ID Number
EDR ID Number

ROUND LAKE AREA SCHOOL DISTRICT 116 (Continued)

U000165759

Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L006836
Green Tag Issue Date: 12/14/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: 8/31/2012
Self Service Permit Expire Date: 12/31/2014
Fee Due: \$0.00

Tank Number: 3
Tank Capacity: 250
Tank Substance: Used Oil
Last Used Date: 5/17/1991
OSFM First Notify Date: 3/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L006836
Green Tag Issue Date: 12/14/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: 8/31/2012
Self Service Permit Expire Date: 12/31/2014
Fee Due: \$0.00

Tank Number: 4
Tank Capacity: 9000
Tank Substance: Heating Oil
Last Used Date: 5/17/1991
OSFM First Notify Date: 3/25/1986
Tank Status: Removed
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L006836
Green Tag Issue Date: 12/14/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: 8/31/2012
Self Service Permit Expire Date: 12/31/2014
Fee Due: \$0.00

Tank Number: 5
Tank Capacity: 560
Tank Substance: Used Oil
Last Used Date: Not reported
OSFM First Notify Date: 8/6/1991
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: Not reported
Green Tag Decal: L006836
Green Tag Issue Date: 12/14/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: 8/31/2012
Self Service Permit Expire Date: 12/31/2014
Fee Due: \$0.00

226

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

EDR ID Number
EPA ID Number

Database(s)

ROUND LAKE AREA SCHOOL DISTRICT 116 (Continued)

U000165759

Tank Number: 6
Tank Capacity: 8000
Tank Substance: Diesel Fuel
Last Used Date: Not reported
OSFM First Notify Date: 12/6/1991
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 8/1/1991
Green Tag Decal: L006836
Green Tag Issue Date: 12/14/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: 8/31/2012
Self Service Permit Expire Date: 12/31/2014
Fee Due: \$0.00

Tank Number: 7
Tank Capacity: 6000
Tank Substance: Gasoline
Last Used Date: Not reported
OSFM First Notify Date: 12/6/1991
Tank Status: Currently in use
Red Tag Issue Date: Not reported
Install Date: 8/1/1991
Green Tag Decal: L006836
Green Tag Issue Date: 12/14/2010
Green Tag Expire Date: 12/31/2012
Self Service Permit Inspection Date: 8/31/2012
Self Service Permit Expire Date: 12/31/2014
Fee Due: \$0.00

227

Count: 29 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
GAGES LAKE	1011482240	WOODLAND PRIMARY SCHOOL	17366 W GAGES LAKE RD	60030	FINDS
GRAYS LAKE	S108111306	EDCO	RT 137 & CASEY RD	60030	SWF/IF
GRAYS LAKE	S110360262	DURHAM SCHOOL SERVICES	31446 N ALLEGHANY RD	60030	TIER 2
GRAYS LAKE	1008121462	WOODVIEW SCHOOL	340 ALLEGHANY	60030	FINDS
GRAYS LAKE	S110152240	DURHAM SCHOOL SERVICES	880 S RT 83	60030	TIER 2
GRAYS LAKE	U004110533	GRAYSLAKE CITGO	2 S RT 83	60030	UST
GRAYS LAKE	U004110572	BP 83	1275 N RT 83	60030	UST
GRAYS LAKE	1000452975	SPEEDWAY 7511	491 S RT 83	60030	RCRA-CESQG
GRAYS LAKE	S106541669	VILLAGE II CLEANERS INC	1278 N RT 83	60030	DRYCLEANERS
GRAYS LAKE	S111286627	SJS PRAIRIE MED, LLC	480 S USHY 45	60030	SRP
HAINESVILLE	1008118190	COMMUNITY CONS SCHOOL DIST 46	101 BELVIDERE RD	60030	FINDS
ROUND LAKE	S110363582	ONE HOUR MARTINIZING	456 CEDAR LAKE RD	60073	ENG CONTROLS, INST CONTROL, S
ROUND LAKE	1008311060	RAYMOND ELLIS ELEM SCHOOL	720 W CENTRAL PARK	60073	FINDS
ROUND LAKE	1011853258	VILLAGE MIDDLE SCHOOL	880 NIPPRISINK	60073	FINDS
ROUND LAKE	S105226813	MUNSON MARINE	3153 N RT 12	60073	LUST
ROUND LAKE	U004158157	SUN RAYS ENTERPRISES, INC. D/B/A ROUND LAKE MARATHON	1175 W STATE 134	60073	UST
ROUND LAKE	1014952726	CVS PHARMACY 7170	1229 W STATE 134	60073	RCRA-SQG
ROUND LAKE	1001481606	GLOBAL TECHNOLOGIES	800 N SUNSET DR	60073	RCRA-SQG, FINDS
ROUND LAKE	1014703498	PARK WEST SCHOOL	400 W TOWNLINE RD	60073	FINDS
ROUND LAKE	1014703497	PARK EAST SCHOOL	400 W TOWNLINE RD	60073	FINDS
ROUND LAKE BEACH	U004123064	AVON SCHOOL	1617 N RT 83	60073	UST
ROUND LAKE BEACH	S111826409	SILVER OAK CLEANERS	2560 N RT 83	60073	DRYCLEANERS
ROUND LAKE BEACH	1008372751	HOME DEPOT 8431	2050 N RT 83	60073	RCRA-SQG
ROUND LAKE BEACH	S106541394	PRO CLEANERS	2171 N RT 83	60073	DRYCLEANERS
ROUND LAKE BEACH	1011484319	AVON CENTER ELEM SCHOOL	1617 N RTE 83	60073	FINDS
ROUND LAKE BEACH	S109327781	COMMUNITY CONSOLIDATED SCHOOL DISTRICT #41	1617 N STHY 83	60073	LUST
ROUND LAKE BEACH	1001024634	ROUND LAKE BEACH VILLAGE OF	SUNSET DR S	60073	RCRA-SQG, FINDS
ROUND LAKE BEACH	U003972570	AMOCO SS #16415, FACH24822	34225 RT 45	60030	UST
THIRD LAKE	1004694521	CLASSIC LOOK BODY WERKS INC	27588 W HWY 120	60073	RCRA-CESQG, FINDS
VOLO					

228

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 Round Lake

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

State of Illinois
DEPARTMENT OF TRANSPORTATION
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
CALCIUM CHLORIDE APPLIED

Effective: June 1, 1958
Revised: January 1, 2007

All references to Sections or Articles in this specification shall be construed to mean a specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

Description. This work consists of furnishing and applying to aggregate base or surface courses, a solution of calcium chloride. The same type of solution shall be used throughout the work.

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

Item	Article/Section
(a) Water.....	1002
(b) Calcium Chloride - CaCl ₂ (Note 1)	1013.01

Note 1. The Engineer shall determine percent calcium chloride required. The Contractor shall provide the State with the appropriate mixing formula for Type S and water to achieve the required percentage. The Contractor shall supply the Type L at the percent calcium chloride specified.

Equipment. A tank truck or spreader unit assembly, equipped with spray bars and nozzles shall be used. A positive displacement pump driven from a power source or from the wheels of the spreader/unit assembly shall be used to develop sufficient pressure at the spray bar nozzles to insure uniform distribution of the solution at the specified application rate. Spray bars of various lengths shall be used so that the solution may be applied in widths varying from 1.2 to 7.2 meters (4 to 24 feet). The motor vehicle shall be capable of maintaining a constant speed during the time of application. The tank truck or spreader/unit assembly shall be equipped with a suitable device, visible to the driver, to accurately determine the rate at which the solution is applied. Suitable charts shall be furnished to enable correlation of the vehicle speed and rate of application.

When the tank truck is used to mix calcium chloride Type S with water, the pump and piping shall be so arranged that thorough mixing of the ingredients will be accomplished as rapidly as possible without excessive heating.

Certification. At the time of delivery, the supplier shall furnish the purchaser two copies of the delivery report that shall contain the following data:

- (a) The liters (gallons) at 25 °C (77 °F) and weight of solution delivered.
- (b) The specific gravity and temperature of the solution at the time of loading.
- (c) The percentage of calcium chloride in the solution.
- (d) The percentage of magnesium chloride and alkali chlorides contained in the solution

Sampling and Testing. The first truck load shipped of a contract will be sampled at its destination by the purchaser's personnel. Random check samples representing 10% of the contract quantity shall be taken of subsequent loads. The samples shall be packaged in an 1 quart plastic container and sent with the certification data sheet to the Bureau of Materials and Physical Research, 125 East Ash Street, Springfield, IL 62704, for testing.

CONSTRUCTION REQUIREMENTS

General. The rate of application per square meter (square yard) and the quantity shown in the contract is based on the amount of chloride to be applied. The actual application rate shall be the rate shown in the contract divided by the decimal equivalent of the percent chloride.

Application Rate. The rate of application shall be _____ kg per square meter (_____ pounds per square yard)

Note 2. The normal application rate is 0.68 kg per square meter (1.2 pounds per square yard). The specified application rate shall be between 0.45 to 0.84 kg per square meter (0.8 to 1.5 pounds per square yard).

Application of Calcium Chloride Solution. The solution shall be applied to the base or surface course through the spray bars in not more than two applications. The entire surface shall be covered uniformly without excessive transverse or longitudinal overlap. The solution may be applied to irregular-shaped areas by means approved by the Engineer.

Method of Measurement. Calcium chloride applied will be measured for payment by mass (weight) in metric tons (tons).

The quantity of calcium chloride for which payment will be made will be the total mass (weight) multiplied by the decimal equivalent of the percent of anhydrous chloride.

Basis of Payment. This work will be paid for at the contract unit price bid per metric ton (ton) for CALCIUM CHLORIDE APPLIED.

AUTOMATED FLAGGER ASSISTANCE DEVICES (BDE)

Effective: January 1, 2008

Description. This work shall consist of furnishing and operating automated flagger assistance devices (AFADs) as part of the work zone traffic control and protection for two-lane highways where two-way traffic is maintained over one lane of pavement. Use of these devices shall be at the option of the Contractor.

Equipment. AFADs shall be according to the FHWA memorandum, "MUTCD - Revised Interim Approval for the use of Automated Flagger Assistance Devices in Temporary Traffic Control Zones (IA-4R)", dated January 28, 2005. The devices shall be mounted on a trailer or a moveable cart and shall meet the requirements of NCHRP 350, Category 4.

The AFAD shall be the Stop/Slow type. This device uses remotely controlled "STOP" and "SLOW" signs to alternately control right-of-way.

Signs for the AFAD shall be according to Article 701.03 of the Standard Specifications and the MUTCD. The signs shall be 24 x 24 in. (600 x 600 mm) having an octagon shaped "STOP" sign on one side and a diamond shaped "SLOW" sign on the opposite side. The letters on the signs shall be 8 in. (200 mm) high. If the "STOP" sign has louvers, the full sign face shall be visible at a distance of 50 ft (15 m) and greater.

The signs shall be supplemented with one of the following types of lights.

- (a) Flashing Lights. When flashing lights are used, white or red flashing lights shall be mounted within the "STOP" sign face and white or yellow flashing lights within the "SLOW" sign face.
- (b) Stop and Warning Beacons. When beacons are used, a stop beacon shall be mounted 24 in. (600 mm) or less above the "STOP" sign face and a warning beacon mounted 24 in. (600 mm) or less above, below, or to the side of the "SLOW" sign face. As an option, a Type B warning light may be used in lieu of the warning beacon.

A "WAIT ON STOP" sign shall be placed on the right hand side of the roadway at a point where drivers are expected to stop. The sign shall be 24 x 30 in. (600 x 750 mm) with a black legend and border on a white background. The letters shall be at least 6 in. (150 mm) high.

This device may include a gate arm or mast arm that descends to a horizontal position when the "STOP" sign is displayed and rises to a vertical position when the "SLOW" sign is displayed. When included, the end of the arm shall reach at least to the center of the lane being controlled. The arm shall have alternating red and white retroreflective stripes, on both sides, sloping downward at 45 degrees toward the side on which traffic will pass. The stripes shall be 6 in. (150 mm) in width and at least 2 in. (50 mm) in height.

Flagging Requirements. Flaggers and flagging requirements shall be according to Article 701.13 of the Standard Specifications and the following.

AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. The flaggers shall be able to view the face of the AFAD and approaching traffic during operation.

To stop traffic, the "STOP" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall descend to a horizontal position. To permit traffic to move, the "SLOW" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall rise to a vertical position.

If used at night, the AFAD location shall be illuminated according to Section 701 of the Standard Specifications.

When not in use, AFADs will be considered nonoperating equipment and shall be stored according to Article 701.11 of the Standard Specifications.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the various traffic control items included in the contract.

80192

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/otag/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

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)

Effective: September 1, 2000

Revised: August 2, 2011

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is

based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 18.00 % 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

GRANULAR MATERIALS (BDE)

Effective: November 1, 2012

Revise the title of Article 1003.04 of the Standard Specifications to read:

“1003.04 Fine Aggregate for Bedding, Trench Backfill, Embankment, Porous Granular Backfill, Sand Backfill for Underdrains, and French Drains.”

Revise Article 1003.04(c) of the Standard Specifications to read:

“(c) Gradation. The fine aggregate gradations for granular embankment, granular backfill, bedding, and trench backfill for pipe culverts and storm sewers shall be FA 1, FA 2, or FA 6 through FA 21.

The fine aggregate gradation for porous granular embankment, porous granular backfill, french drains, and sand backfill for underdrains shall be FA 1, FA 2, or FA 20, except the percent passing the No. 200 (75 µm) sieve shall be 2±2.”

Revise Article 1004.05(c) of the Standard Specifications to read:

“(c) Gradation. The coarse aggregate gradations shall be as follows.

Application	Gradation
Blotter	CA 15
Granular Embankment, Granular Backfill, Bedding, and Trench Backfill for Pipe Culverts and Storm Sewers	CA 6, CA 9, CA 10, CA 12, CA17, CA18, and CA 19
Porous Granular Embankment, Porous Granular Backfill, and French Drains	CA 7, CA 8, CA 11, CA 15, CA 16 and CA 18”

80303

HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: April 1, 2012

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced ten feet apart longitudinally along the unconfined pavement edge and centered at the random density test location.”

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

“Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4%	91.0%
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0%	90.0%
IL-9.5,IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4%	90.0%

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%
All Other	Ndesign = 30	93.0 - 97.4%	90.0%"

80246

LIQUIDATED DAMAGES (BDE)

Effective: April 1, 2013

Revise the table in Article 108.09 of the Standard Specifications to read:

"Schedule of Deductions for Each Day of Overrun in Contract Time			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
\$ 0	\$ 100,000	\$ 475	\$ 675
100,000	500,000	750	1,050
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,275	1,725
3,000,000	6,000,000	1,425	2,000
6,000,000	12,000,000	2,300	3,450
12,000,000	And over	6,775	9,525"

80320

LRFD STORM SEWER BURIAL TABLES (BDE)

Effective: November 1, 2013

Revise Article 550.02 of the Standard Specifications to read as follows:

Item	Article Section
(a) Clay Sewer Pipe	1040.02
(b) Extra Strength Clay Pipe	1040.02
(c) Concrete Sewer, Storm Drain, and Culvert Pipe	1042
(d) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe	1042
(e) Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (Note 1)	1042
(f) Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe (Note 1)	1042
(g) Polyvinyl Chloride (PVC) Pipe	1040.03
(h) Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior	1040.03
(i) Corrugated Polypropylene (CPP) Pipe with Smooth Interior	1040.07
(j) Rubber Gaskets and Preformed Flexible Joint Sealants for Concrete Pipe	1056
(k) Mastic Joint Sealer for Pipe	1055
(l) External Sealing Band	1057
(m) Fine Aggregate (Note 2)	1003.04
(n) Coarse Aggregate (Note 3)	1004.05
(o) Reinforcement Bars and Welded Wire Fabric	1006.10
(p) Handling Hole Plugs	1042.16
(q) Polyethylene (PE) Pipe with a Smooth Interior	1040.04
(r) Corrugated Polyethylene (PE) Pipe with a Smooth Interior	1040.04

Note 1. The class of elliptical and arch pipe used for various storm sewer sizes and heights of fill shall conform to the requirements for circular pipe.

Note 2. The fine aggregate shall be moist.

Note 3. The coarse aggregate shall be wet."

Revise the table for permitted materials in Article 550.03 of the Standard Specifications as follows:

"Class	Materials
A	Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
B	Rigid Pipes: Clay Sewer Pipe Extra Strength Clay Pipe Concrete Sewer, Storm Drain, and Culvert Pipe Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe Flexible Pipes: Polyvinyl Chloride (PVC) Pipe Corrugated Polyvinyl Chloride Pipe (PVC) with a Smooth Interior Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polyethylene (PE) Pipe with a Smooth Interior Corrugated Polypropylene (CPP) Pipe with a Smooth Interior"

Replace the storm sewers tables in Article 550.03 of the Standard Specifications with the following:

255

STORM SEWERS																
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE																
Nominal Diameter in.	Type 1							Type 2								
	Fill Height: 3' and less With 1' minimum cover							Fill Height: Greater than 3' not exceeding 10'								
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP
10	NA	3	X	X	X	X	X	NA	1	*X	X	X	X	X	X	NA
12	IV	NA	X	X	X	X	X	X	1	*X	X	X	X	X	X	X
15	IV	NA	NA	X	X	NA	X	X	1	*X	X	X	X	NA	X	X
18	IV	NA	NA	X	X	X	X	X	2	X	X	X	X	X	X	X
21	III	NA	NA	X	X	NA	NA	NA	2	X	X	X	X	NA	NA	NA
24	III	NA	NA	X	X	X	X	X	2	X	X	X	X	X	X	X
27	III	NA	NA	NA	NA	NA	NA	NA	3	X	NA	NA	NA	NA	NA	NA
30	IV	NA	NA	X	X	X	X	X	3	X	X	X	X	X	X	X
33	III	NA	NA	NA	NA	NA	NA	NA	NA	X	NA	NA	NA	NA	NA	NA
36	III	NA	NA	NA	X	X	X	X	NA	X	X	X	X	X	X	X
42	II	NA	X	X	NA	X	X	NA	NA	X	X	X	X	X	X	NA
48	II	NA	X	X	NA	X	X	NA	NA	X	X	X	X	X	X	NA
54	II	NA	NA	NA	NA	NA	NA	NA	NA	X	NA	NA	NA	NA	NA	NA
60	II	NA	NA	NA	NA	NA	NA	NA	NA	X	NA	NA	NA	NA	NA	NA
66	II	NA	NA	NA	NA	NA	NA	NA	NA	X	NA	NA	NA	NA	NA	NA
72	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
78	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
84	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
90	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
96	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
102	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
108	II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
 CSP Concrete Sewer, Storm drain, and Culvert Pipe
 PVC Polyvinyl Chloride Pipe
 CPVC Corrugated Polyvinyl Chloride Pipe
 ESCP Extra Strength Clay Pipe
 PE Polyethylene Pipe with a Smooth Interior
 CPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material may be used for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe

256

STORM SEWERS (Metric)
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED
FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE

Nominal Diameter in.	Type 1											Type 2					
	Fill Height: 1 m' and less With 300 mm minimum cover											Fill Height: Greater than 1 m not exceeding 3 m					
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	
250	NA	3	X	X	X	X	X	NA	1	*X	X	X	X	X	NA		
300	IV	NA	X	X	X	X	X	II	1	*X	X	X	X	X	X		
375	IV	NA	NA	X	NA	NA	X	II	1	*X	X	X	NA	X	X		
450	IV	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X		
525	III	NA	NA	X	X	NA	NA	II	2	X	X	X	NA	NA	NA		
600	III	NA	NA	X	X	X	X	II	2	X	X	X	X	X	X		
675	III	NA	NA	NA	NA	NA	NA	II	3	X	NA	NA	NA	NA	NA		
750	IV	NA	NA	X	X	X	X	II	3	X	X	X	X	X	X		
825	III	NA	NA	NA	NA	NA	NA	II	NA	X	NA	NA	NA	NA	NA		
900	III	NA	NA	NA	X	X	X	II	NA	X	X	X	X	NA	X		
1050	II	NA	X	X	NA	X	X	II	NA	X	NA	NA	NA	NA	NA		
1200	II	NA	X	NA	NA	X	X	II	NA	X	X	X	X	NA	NA		
1350	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA		
1500	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	X		
1650	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA		
1800	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA		
1950	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA		
2100	II	NA	NA	NA	NA	NA	NA	II	NA	NA	NA	NA	NA	NA	NA		
2250	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA		
2400	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA		
2550	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA		
2700	II	NA	NA	NA	NA	NA	NA	III	NA	NA	NA	NA	NA	NA	NA		

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
 CSP Concrete Sewer, Storm drain, and Culvert Pipe
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 CPVC Corrugated Polyvinyl Chloride Pipe
 ESCP Extra Strength Clay Pipe
 PE Polyethylene Pipe with a Smooth Interior
 CPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material may be used for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe

LS2

258

STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE															
Nominal Diameter in.	Type 3 Fill Height: Greater than 10' not exceeding 15'										Type 4 Fill Height: Greater than 15' not exceeding 20'				
	RCCP	CSP	ESCP	PVC	CPVC	PE	GPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPP
	10	NA	2	X	X	X	X	X	NA	NA	3	X	X	X	X
12	III	2	X	X	X	X	NA	X	IV	NA	X	X	X	X	NA
15	III	3	X	X	X	NA	NA	X	IV	NA	X	X	X	NA	X
18	III	NA	X	X	X	X	NA	X	IV	NA	X	X	X	NA	NA
21	III	NA	X	X	X	NA	NA	NA	IV	NA	X	X	X	NA	NA
24	III	NA	NA	NA	X	X	NA	NA	IV	NA	X	X	X	NA	NA
27	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
30	III	NA	NA	NA	X	X	NA	X	IV	NA	X	X	X	NA	NA
33	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
36	III	NA	NA	NA	X	X	NA	NA	IV	NA	X	X	X	NA	NA
42	III	NA	NA	NA	X	X	NA	NA	IV	NA	X	X	X	NA	NA
48	III	NA	NA	NA	X	X	NA	NA	IV	NA	X	X	X	NA	NA
54	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
60	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
66	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
72	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
78	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
84	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
90	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
96	III	NA	NA	NA	NA	NA	NA	NA	IV	NA	NA	NA	NA	NA	NA
102	IV	NA	NA	NA	NA	NA	NA	NA	1680	NA	NA	NA	NA	NA	NA
108	1360	NA	NA	NA	NA	NA	NA	NA	1700	NA	NA	NA	NA	NA	NA

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 CPVC Corrugated Polyvinyl Chloride Pipe
 ESCP Extra Strength Clay Pipe
 PE Polyethylene Pipe with a Smooth Interior
 GPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material may be used for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe
 Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

STORM SEWERS (metric)															
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE															
Nominal Diameter in.	Type 3							Type 4							
	Fill Height: Greater than 3 m not exceeding 4.5 m							Fill Height: Greater than 4.5 m not exceeding 6 m							
	RCCP	CSP	ESCP	PVC	CPVC	PE	CPE	CPP	RCCP	CSP	ESCP	PVC	CPVC	PE	CPP
250	NA	2	X	X	X	X	X	NA	3	X	X	X	X	X	NA
300	III	2	X	X	X	NA	NA	X	NA	NA	X	X	X	X	NA
375	III	3	X	X	NA	NA	NA	X	NA	NA	X	X	NA	NA	X
450	III	NA	X	X	X	X	NA	X	NA	NA	X	X	X	X	NA
525	III	NA	NA	NA	X	NA	NA	NA	NA	NA	X	X	X	NA	NA
600	III	NA	NA	X	X	NA	NA	NA	NA	NA	X	X	X	NA	NA
675	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
750	III	NA	NA	NA	X	X	NA	X	NA	NA	X	X	X	X	NA
825	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
900	III	NA	NA	NA	X	X	NA	X	NA	NA	X	X	X	X	NA
1050	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	X	NA	X	NA
1200	III	NA	NA	NA	X	X	NA	NA	NA	NA	X	NA	NA	X	NA
1350	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1500	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1650	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1800	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1950	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2100	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2250	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2400	III	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2550	IV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2700	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
 CSP Concrete Sewer, Storm drain, and Culvert Pipe
 PVC Polyvinyl Chloride Pipe
 CPVC Corrugated Polyvinyl Chloride Pipe
 ESCP Extra Strength Clay Pipe
 PE Polyethylene Pipe with a Smooth Interior
 CPE Corrugated Polyethylene Pipe with a Smooth Interior
 CPP Corrugated Polypropylene pipe with a Smooth Interior
 X This material may be used for the given pipe diameter and fill height.
 NA This material is Not Acceptable for the given pipe diameter and fill height.
 * May also use Standard Strength Clay Pipe
 Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

552

STORM SEWERS									
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE									
Nominal Diameter in.	Type 5				Type 6			Type 7	
	Fill Height: Greater than 20' not exceeding 25'				Fill Height: Greater than 25' not exceeding 30'			Fill Height: Greater than 30' not exceeding 35'	
	RCCP	PVC	CPVC		RCCP	PVC	CPVC	RCCP	CPVC
10	NA	X	X	X	NA	X	X	NA	X
12	IV	X	X	X	V	X	X	V	X
15	IV	X	X	X	V	X	X	V	X
18	IV	X	X	X	V	X	X	V	X
21	IV	X	X	X	V	X	X	V	X
24	IV	X	X	X	V	X	X	V	X
27	IV	NA	NA	NA	V	NA	NA	V	NA
30	IV	X	X	X	V	X	X	V	X
33	IV	NA	NA	NA	V	NA	NA	V	NA
36	IV	X	X	X	V	X	X	V	X
42	IV	X	NA	NA	V	X	NA	V	NA
48	IV	X	NA	NA	V	X	NA	V	NA
54	IV	NA	NA	NA	V	NA	NA	V	NA
60	IV	NA	NA	NA	V	NA	NA	V	NA
66	IV	NA	NA	NA	V	NA	NA	V	NA
72	V	NA	NA	NA	V	NA	NA	V	NA
78	2020	NA	NA	NA	2370	NA	NA	2730	NA
84	2020	NA	NA	NA	2380	NA	NA	2740	NA
90	2030	NA	NA	NA	2390	NA	NA	2750	NA
96	2040	NA	NA	NA	2400	NA	NA	2750	NA
102	2050	NA	NA	NA	2410	NA	NA	2760	NA
108	2060	NA	NA	NA	2410	NA	NA	2770	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay Pipe

X This material may be used for the given pipe diameter and fill height.

NA This material is Not Acceptable for the given pipe diameter and fill height.

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

192

STORM SEWERS (metric)									
KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE									
Nominal Diameter in.	Type 5				Type 6				Type 7
	Fill Height: Greater than 20' not exceeding 25'				Fill Height: Greater than 25' not exceeding 30'				Fill Height: Greater than 30' not exceeding 35'
	RCCP	PVC	CPVC		RCCP	PVC	CPVC		RCCP
250	NA	X	X	NA	NA	X	X	NA	X
300	IV	X	X	V	V	X	X	V	X
375	IV	X	X	V	V	X	X	V	X
450	IV	X	X	V	V	X	X	V	X
525	IV	X	X	V	V	X	X	V	X
600	IV	X	X	V	V	X	X	V	X
675	IV	NA	NA	V	NA	NA	NA	V	NA
750	IV	X	X	V	X	X	X	V	X
825	IV	NA	NA	V	NA	NA	NA	V	NA
900	IV	X	X	V	X	X	X	V	X
1050	IV	X	NA	V	NA	NA	NA	V	NA
1200	IV	X	NA	V	NA	NA	NA	V	NA
1350	IV	NA	NA	V	NA	NA	NA	V	NA
1500	IV	NA	NA	V	NA	NA	NA	V	NA
1650	IV	NA	NA	V	NA	NA	NA	V	NA
1800	V	NA	NA	V	NA	NA	NA	V	NA
1950	100	NA	NA	110	NA	NA	NA	130	NA
2100	100	NA	NA	110	NA	NA	NA	130	NA
2250	100	NA	NA	110	NA	NA	NA	130	NA
2400	100	NA	NA	120	NA	NA	NA	130	NA
2550	100	NA	NA	120	NA	NA	NA	130	NA
2700	100	NA	NA	120	NA	NA	NA	130	NA

RCCP Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

PVC Polyvinyl Chloride Pipe

CPVC Corrugated Polyvinyl Chloride Pipe

ESCP Extra Strength Clay Pipe

X This material may be used for the given pipe diameter and fill height.

NA This material is Not Acceptable for the given pipe diameter and fill height.

Note RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

Revise the sixth paragraph of Article 550.06 of the Standard Specifications to read:

"PVC, PE and CPP pipes shall be joined according to the manufacturer's specifications."

Revise the first and second paragraphs of Article 550.08 of the Standard Specifications to read:

"550.08 Deflection Testing for Storm Sewers. All PVC, PE, and CPP storm sewers shall be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted. The testing shall be performed in the presence of the Engineer.

For PVC, PE, and CPP storm sewers with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC, PE, and CPP storm sewers with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel shall be used."

Revise the fifth paragraph of Article 550.08 to read as follows.

"The outside diameter of the mandrel shall be 95 percent of the base inside diameter. For all PVC pipe the base inside diameter shall be defined using ASTM D 3034 methodology. For all PE and CPP pipe, the base inside diameter shall be defined as the average inside diameter based on the minimum and maximum tolerances specified in the corresponding ASTM or AASHTO material specifications."

Revise the first paragraph of Article 1040.03 of the Standard Specifications to read:

"1040.03 Polyvinyl Chloride (PVC) Pipe. Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements."

Delete Articles 1040.03(e) and (f) of the Standard Specifications.

Revise Articles 1040.04(c) and (d) of the Standard Specifications to read:

(c) PE Profile Wall Pipe for Insertion Lining. The pipe shall be according to ASTM F 894. When used for insertion lining of pipe culverts, the pipe liner shall have a minimum pipe stiffness of 46 psi (317 kPa) at five percent deflection for nominal inside diameters of 42 in. (1050 mm) or less. For nominal inside diameters of greater than 42 in. (1050 mm), the pipe liner shall have a minimum pipe stiffness of 32.5 psi (225 kPa) at five percent deflection. All sizes shall have wall construction that presents essentially smooth internal and external surfaces.

(d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written

certification that the material meets those properties and the resin used to manufacture the pipe meets or exceeds the minimum cell classification requirements.”

Add the following to Section 1040 of the Standard Specifications:

“1040.08 Polypropylene (PP) Pipe. Storage and handling shall be according to the manufacturer's recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.

- (a) Corrugated PP Pipe with a Smooth Interior. The pipe shall be according to AAHSTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D.
- (b) Perforated Corrugated PP Pipe with A Smooth Interior. The pipe shall be according to AASHTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type SP. In addition, the top centerline of the pipe shall be marked so that it is readily visible from the top of the trench before backfilling, and the upper ends of the slot perforations shall be a minimum of ten degrees below the horizontal.”

80325

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 REMOVAL (BDE)

Effective: April 1, 2013

Revise Article 440.07(c) of the Standard Specifications to read:

“(c) Adjustment of Quantities. The quantity of pavement removal will be adjusted if the thickness of the existing pavement varies more than 15 percent from that shown on the plans. The quantity will be either increased or decreased according to the following table.

% change of thickness	% change of quantity
0 to less than 15	0
15 to less than 20	10
20 to less than 30	15
30 to less than 50	20

If the thickness of the existing pavement varies by 50 percent or more from that shown on the plans, the character of the work will be considered significantly changed and an adjustment to the contract will be made according to Article 104.02.

When an adjustment is made for variations in pavement thickness a resulting adjustment will also be made in the earthwork quantities when applicable.

No adjustment will be made for variations in the amount of reinforcement.”

80321

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

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| 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

PLACING AND CONSOLIDATING CONCRETE (BDE)

Effective: January 1, 2013

Revise the first paragraph of Article 503.06 of the Standard Specifications to read:

"503.06 Forms. Forms shall be set and maintained to the lines and grades shown on the plans, and shall be tight to prevent concrete leakage."

Revise Article 503.07 of the Standard Specifications to read:

"503.07 Placing and Consolidating. No concrete shall be placed on ice, snow, or frozen foundation material.

The method and manner of placing concrete shall be such as to avoid segregation or separation of the aggregates or the displacement of the reinforcement. The external surface of all concrete shall be thoroughly worked during the operations of placing in such a manner as to work the mortar against the forms to produce a smooth finish free of honeycomb and with a minimum of water and air pockets.

Open troughs and chutes shall extend as nearly as practicable to the point of deposit. Dropping the concrete a distance of more than 5 ft (1.5 m) or depositing a large quantity at any point and running or working it along the forms will not be permitted. The concrete for walls with an average thickness of 12 in. (300 mm) or less shall be placed with tubes so that the drop is not greater than 5 ft (1.5 m).

For self-consolidating concrete, the maximum distance of horizontal flow from the point of deposit shall be 15 ft (4.6 m). The distance may be increased if the dynamic segregation index (DSI) at the maximum flow distance is 10.0 percent or less according to Illinois Test Procedure SCC-8 (Option C). The maximum distance using the DSI shall be 25 ft (7.6 m). In addition, this specified horizontal flow distance shall apply to precast products. In the case of precast prestressed concrete products, refer to the Department's "Manual of Fabrication for Precast Prestressed Concrete Products" for the specified horizontal flow distance requirements.

When the form height for placing the self-consolidating concrete is greater than 10 ft (3.0 m), direct monitoring of form pressure shall be performed by the Contractor according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

When concrete is pumped, the equipment shall be suitable in kind and adequate in capacity for the work and arranged so that vibrations will not damage freshly placed concrete. Aluminum

268

pipe or conduit will not be permitted in pumping or placing concrete. Mixed concrete shall be supplied to maintain continuous operation of the pumping equipment.

When air entrained concrete is pumped, an accessory or accessories shall be incorporated in the discharge components to minimize air loss. The maximum allowable air loss caused by the pumping operation shall be 3.0 percent with the minimum air content at the point of discharge meeting the requirements of Article 1020.04.

Placing of concrete shall be regulated so that the pressures caused by the wet concrete will not exceed those used in the design of the forms. Special care shall be taken to fill each part of the forms by depositing the concrete as near its final position as possible, to work the coarser aggregates back from the face, and to force the concrete under and around the reinforcement bars without displacing them. Leakage through forms onto beams or girders shall not be allowed to harden and shall be removed while in a plastic state.

The concrete shall be consolidated by internal vibration unless self-consolidating concrete is used. Self-consolidating concrete may be used for inaccessible locations where consolidation by internal vibration is not practicable. The self consolidating 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 may only be permitted if it can be used in a manner that does not cause segregation as determined by the Engineer. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

The Contractor shall provide and use a sufficient number of vibrators to ensure that consolidation can be started immediately after the concrete has been deposited in the forms.

The vibrators shall be inserted into the concrete immediately after it is deposited and shall be moved throughout the mass so as to thoroughly work the concrete around the reinforcement, embedded fixtures, and into the corners and angles of the forms. Vibrators shall not be attached to the forms, reinforcement bars, or the surface of the concrete.

Application of vibrators shall be at points uniformly spaced and not farther apart than twice the radius over which the vibration is visibly effective. The duration of the vibration at the points of insertion shall be sufficient to thoroughly consolidate the concrete into place but shall not be continued so as to cause segregation. When consolidating concrete in bridge decks, the vibrator shall be vertically inserted into the concrete for 3 - 5 seconds or for a period of time determined by the Engineer. Vibration shall be supplemented by spading when required by the Engineer. In addition to the internal vibration required herein, formed surfaces which will be exposed to view after completion of the work shall be spaded with a spading tool approved by the Engineer.

Concrete shall be placed in continuous horizontal layers. When it is necessary by reason of an emergency to place less than a complete horizontal layer in one operation, such layer shall terminate in a vertical bulkhead. Separate batches shall follow each other closely and in no case shall the interval of time between the placing of successive batches be greater than 20 minutes.

If mix foaming or detrimental material is observed during placement or at the completion of a pour, the material shall be removed while the concrete is still plastic

After the concrete has taken its initial set, care shall be exercised to avoid jarring the forms or placing any strain on the ends of projecting reinforcement.”

Revise Article 516.12(a) of the Standard Specifications to read:

“(a) Free Fall Placement. The free fall placement shall only be permitted in shafts that can be dewatered to ensure less than 3 in. (75 mm) of standing water exist at the time of placement without causing side wall instability. The height of free fall placement shall be a maximum of 60 ft (18.3 m) as measured from the discharge end, but it shall be reduced to a maximum of 30 ft (9.1 m) when self-consolidating concrete is used. The Contractor shall obtain approval from the Engineer to place self-consolidating concrete by free fall.

Concrete placed by free fall shall fall directly to the base without contacting either the rebar cage or shaft sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Drop chutes used to direct placement of free fall concrete shall consist of a smooth tube of either one continuous section or multiple pieces that can be added and removed. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. The drop chute shall be supported so that free fall does not exceed the specified maximum 60 ft (18.3 m) or 30 ft (9.1 m) at all times from the discharge end, and to ensure the concrete does not strike the rebar cage. If placement cannot be satisfactorily accomplished by free fall in the opinion of the Engineer, either a tremie or pump shall be used to accomplish the pour.”

80316

PLANTING WOODY PLANTS (BDE)

Effective: January 1, 2012

Revised: August 1, 2012

Revise the second sentence of Article 253.01 of the Standard Specifications to read:

“This work shall consist of furnishing, transporting, and planting woody plants such as trees, shrubs, evergreens, vines, and seedlings.”

Revise Article 253.02(a) of the Standard Specifications to read:

“(a) Trees, Shrubs, Evergreens, Vines and Seedlings 1081.01”

Revise the first sentence of Article 253.08(a) of the Standard Specifications to read:

“(a) Excavation for Deciduous Trees and Evergreen Trees.”

Revise the first sentence of Article 253.08(b) of the Standard Specifications to read:

“(b) Excavation for Deciduous Shrubs, Evergreen Shrubs, Vines, and Seedlings.”

Revise the first sentence of Article 253.13 of the Standard Specifications to read:

“All deciduous and evergreen trees, with the exception of multi-stem or clump form specimens, over 8 ft (2.5 m) in height shall require three 6 ft (2 m) long steel posts so placed that they are equidistant from each other and adjacent to the outside of the ball.”

Revise the first sentence of the second paragraph of Article 253.14 of the Standard Specifications to read:

“This period of establishment for the plants shall not delay acceptance of the entire project and final payment due if the contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities subject to this period of establishment, multiplied by their contract unit prices.”

Revise the third sentence of Article 253.16 of the Standard Specifications to read:

“Trees, shrubs, evergreens, and vines will be measured as each individual plant.”

Revise Article 253.17 of the Standard Specifications to read:

“**253.17 Basis of Payment.** This work will be paid for at the contract unit price per each for TREES, SHRUBS, EVERGREENS, or VINES, of the species, root type, and plant size specified; and per unit for SEEDLINGS. Payment will be made according to the following schedule.

(a) Initial Payment. Upon completion of planting, mulch covering, wrapping, and bracing, 90 percent of the pay item(s) will be paid.

(b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining ten percent of the pay item(s) will be paid.”

Revise the first paragraph of Article 1081.01 of the Standard Specifications to read:

“**1081.01 Trees, Shrubs, Evergreens, Vines, and Seedlings.** Trees, shrubs, evergreens, vines, and seedlings shall be according to the current standards adopted by the ANLA.”

80278

PORTLAND CEMENT CONCRETE (BDE)

Effective: January 1, 2012

Revised: November 1, 2013

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), however the minimum portland cement content in the mixture shall be 170 lbs/cu yd (101 kg/cu m). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply and a Level III PCC Technician shall develop the mix design."

Revise the second paragraph of Article 503.22 of the Standard Specifications to read:

Other cast-in-place concrete for structures will be paid for at the contract unit price per cubic yard (cubic meter) for CONCRETE HANDRAIL, CONCRETE ENCASUREMENT, and SEAL COAT CONCRETE."

Add the following to Article 1003.02 of the Standard Specifications:

(e) Alkali Reaction.

(1) ASTM C 1260. Each fine aggregate will be tested by the Department for alkali reaction according to ASTM C 1260. The test will be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.90 percent or greater. The Engineer will determine the assigned expansion value for each aggregate, and these values will be made available on the Department's Alkali-Silica Potential Reactivity Rating List. The Engineer may differentiate aggregate based on ledge, production method, gradation number, or other factors. An expansion value of 0.03 percent will be assigned to limestone or dolomite fine

aggregates (manufactured stone sand). However, the Department reserves the right to perform the ASTM C 1260 test.

- (2) ASTM C 1293 by Department. In some instances, such as chert natural sand or other fine aggregates, testing according to ASTM C 1260 may not provide accurate test results. In this case, the Department may only test according to ASTM C 1293.
- (3) ASTM C 1293 by Contractor. If an individual aggregate has an ASTM C 1260 expansion value that is unacceptable to the Contractor, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The laboratory performing the ASTM C 1293 test shall be approved by the Department according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Laboratory Requirements for Alkali-Silica Reactivity (ASR) Testing".

The ASTM C 1293 test shall be performed with Type I or II portland cement having a total equivalent alkali content ($\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$) of 0.80 percent or greater. The interior vertical wall of the ASTM C 1293 recommended container (pail) shall be half covered with a wick of absorbent material consisting of blotting paper. If the testing laboratory desires to use an alternate container, wick of absorbent material, or amount of coverage inside the container with blotting paper, ASTM C 1293 test results with an alkali-reactive aggregate of known expansion characteristics shall be provided to the Engineer for review and approval. If the expansion is less than 0.040 percent after one year, the aggregate will be assigned an ASTM C 1260 expansion value of 0.08 percent that will be valid for two years, unless the Engineer determines the aggregate has changed significantly. If the aggregate is manufactured into multiple gradation numbers, and the other gradation numbers have the same or lower ASTM C 1260 value, the ASTM C 1293 test result may apply to multiple gradation numbers.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 test result. When the Contractor performs the test, a split sample shall be provided to the Engineer. The Engineer may also independently obtain a sample at any time. The aggregate will be considered reactive if the Contractor or Engineer obtains an expansion value of 0.040 percent or greater.

Revise the first paragraph of Article 1004.01(e)(5) of the Standard Specifications to read:

"Crushed concrete, crushed slag, or lightweight aggregate for portland cement concrete shall be stockpiled in a moist condition (saturated surface dry or greater) and the moisture content shall be maintained uniformly throughout the stockpile by periodic sprinkling."

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) ASTM C 1260. 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
(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 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 cw/cu yd (3)		Water / Cement Ratio lb/lb	Slump 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	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.	
		512									
		734									
		837									
SC	Seal Coat	503	5.65 (1) 6.05 (2)	7.05	0.32 - 0.44	3 - 5	3500 (650)		Optional 6.0 max. CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, or CA 11		
SI	Structures (except Superstructure) Sidewalk Slope Wall Encasement Box Culverts End Section and Collar Curb, Gutter, Curb & Gutter, Median, and Paved Ditch Concrete Barrier Sign Structures Spread Footing Concrete Foundation Pole Foundation (12) Traffic Signal Foundation Drilled Shaft (12) Square or Rectangular	503	5.65 (1) 6.05 (2)	7.05	0.32 - 0.44	2 - 4 (5)	3500 (650)		5.0 - 8.0 (5)	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)	
		424									
		511									
		512									
		540									
		542									
		606									
		637									
		734									
		836									
		878									

Notes:

- (1) Central-mixed.
- (2) Truck-mixed or shrink-mixed.
- (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 2 1/2 in. and the air content range shall be 5.5 to 8.0 percent.
- (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 coarse 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 gradation sizes may be used with the approval of the Engineer. Refer also to Article 1004.02(d) for additional information on combining sizes.

TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA (metric)

Class of Conc.	Use	Specification Section Reference	Cement Factor kg/cu.m (3)		Water / Cement Ratio kg/kg	Slump 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) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734 837	395	418	0.32 - 0.44	150 - 200 (6)	27,500 (4650)		5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.																				
											SC	Seal Coat	503	335 (1) 360 (2)	418	0.32 - 0.44	75 - 125	24,000 (4500)	Optional 6.0 max.	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 5 & CA 11, CA 7, or CA 11										
																					SI	Structures (except Superstructure) Sidewalk Slope Wall Encasement Box Culverts End Section and Collar Curb, Gutter, Curb & Gutter, Median, and Paved Ditch Concrete Barrier Sign Structures Spread Footing Concrete Foundation Pole Foundation (12) Traffic Signal Foundation Drilled Shaft (12) Square or Rectangular	503 424 511 512 540 542 606 637 734 836 878	335 (1) 360 (2)	418	0.32 - 0.44	50 - 100 (5)	24,000 (4500)	5.0 - 8.0 (5)	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)

283

Notes:

- (1) Central-mixed.
- (2) Truck-mixed or shrink-mixed.
- (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 64 mm and the air content range shall be 5.5 to 8.0 percent.
- (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 coarse 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.

Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation. Self-consolidating concrete mix designs may be developed for Class BS, PC, PS, DS, and SI concrete. Self-consolidating concrete mix designs may also be developed for precast concrete products that are not subjected to Class PC concrete requirements according to Section 1042. The mix design criteria for the concrete mixture shall be according to Article 1020.04 with the following exceptions.

- (a) The slump requirements shall not apply.
- (b) The concrete mixture should be uniformly graded, and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" may 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 minimum 95 percent pass the 3/4 in. (19 mm) sieve. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (c) The slump flow range shall be 22 in. (560 mm) minimum to 28 in. (710 mm) maximum and tested according to Illinois Test Procedure SCC-2.
- (d) The visual stability index shall be a maximum of 1 and tested according to Illinois Test Procedure SCC-2.
- (e) The J-Ring value shall be a maximum of 2 in. (50 mm) and tested according to Illinois Test Procedure SCC-3. The L-Box blocking ratio shall be a minimum of 80 percent and tested according to Illinois Test Procedure SCC-3. The Contractor has the option to select either test.
- (f) The hardened visual stability index shall be a maximum of 1 and tested according to Illinois Test Procedure SCC-6.
- (g) If Class PC concrete requirements do not apply to the precast concrete product according to Section 1042, the maximum cement factor shall be 7.05 cwt/cu yd (418 kg/cu m) and the maximum allowable water/cement ratio shall be 0.44.
- (h) If the measured slump flow, visual stability index, J-Ring value, or L-Box blocking ratio fall 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.

The Contractor may use water or self-consolidating admixtures at the jobsite to obtain the specified slump flow, visual stability index, J-ring value, or L-box blocking ratio. The maximum design water/cement ratio shall not be exceeded.

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 Contractor's 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 by the Engineer 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 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, 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 820 lbs/cu yd (485 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 and latex mixtures), precast, and precast prestressed concrete, one of the mixture options provided in Article 1020.05(d)(2) shall be used to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The mixture options are not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate, or sodium formate. The mixture options will not be required for the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy.

The mixture options shall not apply to concrete revetment mats, insertion lining of pipe culverts, portland cement mortar fairing course, controlled low-strength material, miscellaneous grouts that are not prepackaged, Class PP-3 concrete, Class PP-4 concrete, and Class PP-5 concrete.

- (1) Aggregate Groups. Each combination of aggregates used in a mixture will be assigned to an aggregate group. The point at which the coarse aggregate and fine aggregate expansion values intersect in the following table will determine the group.

Aggregate Groups			
Coarse Aggregate or Coarse Aggregate Blend ASTM C 1260 Expansion	Fine Aggregate Or Fine Aggregate Blend ASTM C 1260 Expansion		
	≤0.16%	>0.16% - 0.27%	>0.27%
≤0.16%	Group I	Group II	Group III
>0.16% - 0.27%	Group II	Group II	Group III
>0.27%	Group III	Group III	Group IV

- (2) Mixture Options. Based upon the aggregate group, the following mixture options shall be used. However, the Department may prohibit a mixture option if field performance shows a deleterious alkali-silica reaction or Department testing indicates the mixture may experience a deleterious alkali-silica reaction.

Reduction of Risk for Deleterious Alkali-Silica Reaction					
Aggregate Groups	Mixture Options				
	Option 1	Option 2	Option 3	Option 4	Option 5
Group I	Mixture options are not applicable. Use any cement or finely divided mineral.				
Group II	X	X	X	X	X
Group III	X	Combine Option 2 with Option 3	Combine Option 2 with Option 3	X	X
Group IV	X	Combine Option 2 with Option 4	Invalid Option	Combine Option 2 with Option 4	X

"X" denotes valid mixture option for aggregate group.

- 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 or fine aggregate is blended, the weighted expansion value shall be calculated separately for the coarse and fine aggregate as follows:

$$\text{Weighted Expansion Value} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots$$

Where: a, b, c... = percentage of aggregate in the blend;
A, B, C... = expansion value for that aggregate.

- b. Mixture Option 2. A finely divided mineral shall be used as described in 1), 2), 3), or 4) that follow. In addition, a blended cement with a finely divided mineral may be added to a separate finely divided mineral to meet the following requirements, provided the finely divided minerals are the same material. However, adding together two different finely divided minerals to obtain the specified minimum percentage of one material will not be permitted for 1), 2), 3), and 4). Refer to Mixture Option 5 to address this situation.

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, a 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 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 may have the concrete 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 field curing box for initial curing and a water storage tank for final curing. The field curing box will be required when an air temperature below 60 °F (16 °C) is expected during the initial curing period. The device shall maintain the initial curing temperature range specified in Illinois Modified AASHTO T 23, and may be insulated or power operated as appropriate.

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 concrete, crushed slag or lightweight aggregate shall be according to Article 1004.01(e)(5).

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. For self-consolidating concrete, a minimum of 100 revolutions is required in all cases. Additional mixing beyond 100 revolutions shall be at agitating speed unless additions of water, admixtures, 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. For self-consolidating concrete, a minimum of 100 revolutions is required in the truck mixer. Additional mixing beyond 100 revolutions shall be at agitating speed, unless additions of water, admixtures, 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 and admixtures 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, truck-mixed, or shrink-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. The top surfaces of abutments and piers shall be cured according to Article 1020.13(a)(3) or (5).
- 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 all finishing work to the concrete surface has been completed, it shall be sealed with membrane curing compound of the type specified within ten minutes. The seal shall be maintained for the specified curing period. The edges of the concrete shall, likewise, be sealed within ten minutes after the forms are removed. Two separate applications, applied at least one minute apart, each at the rate of not less than 1 gal/250 sq ft (0.16 L/sq m) will be required upon the surfaces and edges of the concrete. These applications shall be made with the mechanical equipment specified. Type III compound shall be agitated immediately before and during the application.

At locations where the coating is discontinuous or where pin holes show or where the coating is damaged due to any cause and on areas adjacent to sawed joints, immediately after sawing is completed, an additional coating of membrane curing compound shall be applied at the above specified rate. The equipment used may be of the same type as that used for coating variable widths of pavement. Before the additional coating is applied adjacent to sawed joints, the cut faces of the joint shall

be protected by inserting a suitable flexible material in the joint, or placing an adhesive width of impermeable material over the joint, or by placing the permanent sealing compound in the joint. Material, other than the permanent sealing compound, used to protect cut faces of the joint, shall remain in place for the duration of the curing period. In lieu of applying the additional coating, the area of the sawed joint may be cured according to any other method permitted.

When rain occurs before an application of membrane curing compound has dried, and the coating is damaged, the Engineer may require another application be made in the same manner and at the same rate as the original coat. The Engineer may order curing by another method specified, if unsatisfactory results are obtained with membrane curing compound.

- (5) **Wetted Cotton Mat Method.** After the surface of concrete has been textured or finished, it shall be covered immediately with dry or damp cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without marring the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 4 ft (1.2 m) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3).

- (b) **Removing and Replacing Curing Covering.** When curing methods specified above in Article 1020.13(a), (1), (2), or (3) are used for concrete pavement, the curing covering for each day's paving shall be removed to permit testing of the pavement surface with a profilograph or straightedge, as directed by the Engineer.

Immediately after testing, the surface of the pavement shall be wetted thoroughly and the curing coverings replaced. The top surface and the edges of the concrete shall not be left unprotected for a period of more than 1/2 hour.

- (c) Protection of Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 32 °F (0 °C), or lower, or if the actual temperature drops to 32 °F (0 °C), or lower, concrete less than 72 hours old shall be provided at least the following protection.

Minimum Temperature	Protection
25 – 32 °F (-4 – 0 °C)	Two layers of polyethylene sheeting, one layer of polyethylene and one layer of burlap, or two layers of waterproof paper.
Below 25 °F (-4 °C)	6 in. (150 mm) of straw covered with one layer of polyethylene sheeting or waterproof paper.

These protective covers shall remain in place until the concrete is at least 96 hours old. When straw is required on pavement cured with membrane curing compound, the compound shall be covered with a layer of burlap, polyethylene sheeting or waterproof paper before the straw is applied.

After September 15, there shall be available to the work within four hours, sufficient clean, dry straw to cover at least two days production. Additional straw shall be provided as needed to afford the protection required. Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (d) Protection of Concrete Structures From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low below 45 °F (7 °C), or if the actual temperature drops below 45 °F (7 °C), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities, and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. When winter construction is specified, the Contractor shall proceed with the construction, including excavation, pile driving, concrete, steel erection, and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced.

- (1) Protection Method I. The concrete shall be completely covered with insulating material such as fiberglass, rock wool, or other approved commercial insulating material having the minimum thermal resistance R, as defined in ASTM C 168, for

the corresponding minimum dimension of the concrete unit being protected as shown in the following table.

Minimum Pour Dimension		Thermal Resistance R
in.	(mm)	
6 or less	(150 or less)	R=16
> 6 to 12	(> 150 to 300)	R=10
> 12 to 18	(> 300 to 450)	R=6
> 18	(> 450)	R=4

The insulating material manufacturer shall clearly mark the insulating material with the thermal resistance R value.

The insulating material shall be completely enclosed on sides and edges with an approved waterproof liner and shall be maintained in a serviceable condition. Any tears in the liner shall be repaired in a manner approved by the Engineer. The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period.

On formed surfaces, the insulating material shall be attached to the outside of the forms with wood cleats or other suitable means to prevent any circulation of air under the insulation and shall be in place before the concrete is placed. The blanket insulation shall be applied tightly against the forms. The edges and ends shall be attached so as to exclude air and moisture. If the blankets are provided with nailing flanges, the flanges shall be attached to the studs with cleats. Where tie rods or reinforcement bars protrude, the areas adjacent to the rods or bars shall be adequately protected in a manner satisfactory to the Engineer. Where practicable, the insulation shall overlap any previously placed concrete by at least 1 ft (300 mm). Insulation on the underside of floors on steel members shall cover the top flanges of supporting members. On horizontal surfaces, the insulating material shall be placed as soon as the concrete has set, so that the surface will not be marred and shall be covered with canvas or other waterproof covering. The insulating material shall remain in place for a period of seven days after the concrete is placed.

The Contractor may remove the forms, providing the temperature is 35 °F (2 °C) and rising and the Contractor is able to wrap the particular section within two hours from the time of the start of the form removal. The insulation shall remain in place for the remainder of the seven days curing period.

- (2) Protection Method II. The concrete shall be enclosed in adequate housing and the air surrounding the concrete kept at a temperature of not less than 50 °F (10 °C) nor more than 80 °F (27 °C) for a period of seven days after the concrete is placed. The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period. All exposed surfaces within the housing shall be cured according to the Index Table.

The Contractor shall provide adequate fire protection where heating is in progress and such protection shall be accessible at all times. The Contractor shall maintain labor to keep the heating equipment in continuous operation.

At the close of the heating period, the temperature shall be decreased to the approximate temperature of the outside air at a rate not to exceed 15 °F (8 °C) per 12 hour period, after which the housing maybe removed. The surface of the concrete shall be permitted to dry during the cooling period.

- (3) Protection Method III. As soon as the surface is sufficiently set to prevent marring, the concrete shall be covered with 12 in. (300 mm) of loose, dry straw followed by a layer of impermeable covering. The edges of the covering shall be sealed to prevent circulation of air and prevent the cover from flapping or blowing. The protection shall remain in place until the concrete is seven days old. If construction operations require removal, the protection removed shall be replaced immediately after completion or suspension of such operations.

1020.14 Temperature Control for Placement. Temperature control for concrete placement shall be according to the following.

- (a) Concrete other than Structures. Concrete may be placed when the air temperature is above 35 °F (2 °C) and rising, and concrete placement shall stop when the falling temperature reaches 40 °F (4 °C) or below, unless otherwise approved by the Engineer.

The temperature of concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete at point of placement 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 at point of placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

When insulated forms are used according to Article 1020.13(d)(1), the maximum temperature of the concrete mixture immediately before placement shall be 80 °F (25 °C).

When concrete is placed in contact with previously placed concrete, the temperature of the freshly mixed concrete may be increased 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 should be uniformly graded and preference for larger size aggregate should be used in the mix design. Article 1004.02(d)(2) shall apply and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" may 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.

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. Other required test parameters for the mathematical model may be assumed if appropriate.

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 (28 °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 (4 °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. 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.

- (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 equal to or 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 EQUIPMENT (BDE)

Effective: November 1, 2013

Add the following to the first paragraph of Article 1103.03(a)(5) of the Standard Specifications to read:

“As an alternative to a locking key, the start and finish time for mixing may be automatically printed on the batch ticket. The start and finish time shall be reported to the nearest second.”

80326

PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

“(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.”

80328

316A

QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Revised: November 1, 2013

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. However, the Level II PCC Technician may request to be available if

operations are satisfactory. Approval shall be obtained from the Engineer, 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.

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 strength specimens may be placed in the same field curing box for initial curing and may be cured in the same water storage tank for final curing.
 - (2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will be considered reasonable 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)
Slump Flow (Self-Consolidating Concrete (SCC))	1.5 in. (40 mm)
Visual Stability Index (SCC)	Not Applicable
J-Ring (SCC)	1.5 in. (40 mm)
L-Box (SCC)	10 %
Hardened Visual Stability Index (SCC)	Not Applicable
Dynamic Segregation Index (SCC)	1.0 %
Flow (Controlled Low-Strength Material (CLSM))	1.5 in. (40 mm)
Strength (Controlled Low-Strength Material (CLSM))	40 psi (275 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, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), 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, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength or hardened visual stability index 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, jobsite air content, jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, and jobsite flow (CLSM); 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 or hardened visual stability index 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, jobsite air content jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, jobsite flow (CLSM); 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 or hardened visual stability index 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 revolution counter reading (final reading optional) at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; and total amount of water added at the jobsite.
- (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	2, 11, 27, and 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2,500 cu yd (1,900 cu m) for each gradation number ^{3/}	2, 11, 27, and 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 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or 255
Mixture ^{5/}	Slump Air Content Unit Weight / Yield Slump Flow (SCC) Visual Stability Index (SCC) J-Ring (SCC) ^{6/} L-Box (SCC) ^{6/} Temperature	As needed to control production	T 141 and T 119 T 141 and T 152 or T 196 T 141 and T 121 SCC-1 and SCC-2 SCC-1 and SCC-2 SCC-1 and SCC-3 SCC-1 and SCC-4 T 141 and T 309
Mixture (CLSM) ^{7/}	Flow Air Content Temperature	As needed to control production	Illinois Test Procedure 307

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. 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.

The Contractor may also perform other available self-consolidating concrete (SCC) tests at the plant to control mixture production.

- 6/ The Contractor shall select the J-Ring or L-Box test for plant sampling and testing.

- 7/ The Contractor may also perform strength testing according to Illinois Test Procedure 307.

SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant ^{2/}	IL Modified AASHTO Test Method
Pavement, Shoulder, Base Course, Base Course Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump ^{3/ 4/}	1 per 500 cu yd (400 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 1250 cu yd (1000 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
Bridge Approach Slab ^{9/} , Bridge Deck ^{9/} , Bridge Deck Overlay ^{9/} , Superstructure ^{9/} , Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump ^{3/ 4/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 or T 141, T 177 and T 23
Seal Coat	Slump ^{3/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 250 cu yd (200 cu m) or minimum 1/day when air is entrained	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
The Item will use a Self-Consolidating Concrete Mixture	Slump Flow ^{3/} VSI ^{3/} J-Ring ^{3/ 11/} L-Box ^{3/ 11/}	Perform at same frequency that is specified for the Item's slump	SCC-1 & SCC-2 SCC-1 & SCC-2 SCC-1 & SCC-3 SCC-1 & SCC-4
The Item will use a Self-Consolidating Concrete Mixture	HVSI ^{12/}	Minimum 1/day at start of production for that day	SCC-1 and SCC-6
The Item will use a Self-Consolidating Concrete Mixture	Dynamic Segregation Index (DSI)	Minimum 1/week at start of production for that week	SCC-1 and SCC-8 (Option C)
The Item will use a Self-Consolidating Concrete Mixture	Air Content ^{3/ 5/ 6/}	Perform at same frequency that is specified for the Item's air content	SCC-1 and T 152 or T 196
The Item will use a Self-Consolidating Concrete Mixture	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	Perform at same frequency that is specified for the Item's strength	SCC-1, T 22 and T 23 or SCC-1, 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, Compressive Strength (28-day) ^{13/} , and Temperature	First truck load delivered and as needed to control production thereafter	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.

If the Contractor's or Engineer's test result for any jobsite mixture test is not within the specification limits, all subsequent truck loads delivered shall be tested by the Contractor until the problem is corrected.

- 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. For self-consolidating concrete, the construction items shall have the same slump flow, visual stability index, J-Ring, L-Box, 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. For self consolidating concrete, the temperature, slump flow, visual stability index, J-Ring or L-Box, 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, 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.
- 7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of two 6 x 12 in. (150 x 300 mm) cylinder breaks, three 4 x 8 in. (100 x 200 mm) cylinder breaks, or two beam breaks for

field tests. Per Illinois Modified AASHTO T 23, cylinders shall be 6 x 12 in. (150 x 300 mm) when the nominal maximum size of the coarse aggregate exceeds 1 in. (25 mm).

- 8/ In addition to the strength test, a slump test, air content test, and temperature test shall be performed on the same sample. For self-consolidating concrete, a slump flow test, visual stability index test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample as the strength test. 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.
- 11/ The Contractor shall select the J-Ring or L-Box test for jobsite sampling and testing.
- 12/ In addition to the hardened visual stability index (HVSI) test, a slump flow test, visual stability index (VSI) test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample. The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.
- 13/ The test of record for strength shall be the day indicated in Article 1019.04. In addition to the strength test, a flow test, air content test, and temperature test shall be performed on the same sample. The strength test may be waived by the Engineer if future removal of the material is not a concern.

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, Slump Flow, Visual Stability Index, J-Ring, L-Box, Hardened Visual Stability Index, Dynamic Segregation Index and Strength	As determined by the Engineer.
	Flow, Air Content, Strength (28-day), and Dynamic Cone Penetration for Controlled Low-Strength Material (CLSM)	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/} , Air Content ^{2/3/} , Slump Flow ^{2/} , Visual Stability Index ^{2/} , J-Ring ^{2/} and L-box ^{2/}	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.
	Hardened Visual Stability Index ^{2/}	As determined by the Engineer.
	Dynamic Segregation Index ^{2/}	As determined by the Engineer.
	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.
	Flow, Air Content, and Strength (28-day) for Controlled Low-Strength Material (CLSM)	As determined by the Engineer.

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- 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

RAILROAD PROTECTIVE LIABILITY INSURANCE (5 AND 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

<u>NAMED INSURED & ADDRESS</u>	<u>NUMBER & SPEED OF PASSENGER TRAINS</u>	<u>NUMBER & SPEED OF FREIGHT TRAINS</u>
Metra*	M-F 36 @ 60 mph max	M-F 2 @ 35 mph max
547 W. Jackson Blvd., 15 th Floor	Sat 22 @ 60 mph max	Sat 2 @ 35 mph max
Chicago, Illinois 60661	Sun 20 @ 60 mph max	Sun 2 @ 35 mph max

Attn: Dan Kneita

*The Commuter Rail Division of the Regional Transportation Authority, a division of an Illinois municipal corporation, and its affiliated separate public corporation known as the Northeast Illinois Regional Commuter Railroad Corporation, both operating under the service mark Metra, as now exists or may hereafter be constituted or acquired, and the Regional Transportation Authority, an Illinois municipal corporation and any other railroads operating on Metra property and/or other railroads as required are named as additional insured.

DOT/AAR No.: 386442W
RR Division: MWD

RR Mile Post: 44.24
RR Sub-Division: Fox Lake

For Freight/Passenger Information Contact: Peter Zwolfer
For Insurance Information Contact: Marilyn Schlismann

Phone: 312-322-8999
Phone: 312-322-7093

DOT/AAR No.:
RR Division:

RR Mile Post:
RR Sub-Division:

For Freight/Passenger Information Contact:
For Insurance Information Contact:

Phone:
Phone:

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

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

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

REINFORCEMENT BARS (BDE)

Effective: November 1, 2013

Revise the first and second paragraphs of Article 508.05 of the Standard Specifications to read:

“508.05 Placing and Securing. All reinforcement bars shall be placed and tied securely at the locations and in the configuration shown on the plans prior to the placement of concrete. Manual welding of reinforcement may only be permitted on precast concrete products as indicated in the current Bureau of Materials and Physical Research Policy Memorandum “Quality Control / Quality Assurance Program for Precast Concrete Products”, and for precast prestressed concrete products as indicated in the Department’s current “Manual for Fabrication of Precast Prestressed Concrete Products”. Reinforcement bars shall not be placed by sticking or floating into place or immediately after placement of the concrete.

Bars shall be tied at all intersections, except where the center to center dimension is less than 1 ft (300 mm) in each direction, in which case alternate intersections shall be tied. Molded plastic clips may be used in lieu of wire to secure bar intersections, but shall not be permitted in horizontal bar mats subject to construction foot traffic or to secure longitudinal bar laps. Plastic clips shall adequately secure the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. Plastic clips may be recycled plastic, and shall meet the approval of the Engineer. The number of ties as specified shall be doubled for lap splices at the stage construction line of concrete bridge decks when traffic is allowed on the first completed stage during the pouring of the second stage.”

Revise the fifth paragraph of Article 508.05 of the Standard Specifications to read:

“Supports for reinforcement in bridge decks shall be metal. For all other concrete construction the supports shall be metal or plastic. Metal bar supports shall be made of cold-drawn wire, or other approved material and shall be either epoxy coated, galvanized or plastic tipped. When the reinforcement bars are epoxy coated, the metal supports shall be epoxy coated. Plastic supports may be recycled plastic. Supports shall be provided in sufficient number and spaced to provide the required clearances. Supports shall adequately support the reinforcement bars, and shall permit the concrete to flow through and fully encase the reinforcement. The legs of supports shall be spaced to allow an opening that is a minimum 1.33 times the nominal maximum aggregate size used in the concrete. Nominal maximum aggregate size is defined as the largest sieve which retains any of the aggregate sample particles. All supports shall meet the approval of the Engineer.”

Revise the first sentence of the eighth paragraph of Article 508.05 of the Standard Specifications to read:

“Epoxy coated reinforcement bars shall be tied with plastic coated wire, epoxy coated wire, or molded plastic clips where allowed.”

Add the following sentence to the end of the first paragraph of Article 508.06(c) of the Standard Specifications:

"In addition, the total slip of the bars within the splice sleeve of the connector after loading in tension to 30 ksi (207 MPa) and relaxing to 3 ksi (20.7 MPa) shall not exceed 0.01 in. (254 microns)."

Revise Article 1042.03(d) of the Standard Specifications to read:

"(d) Reinforcement and Accessories: The concrete cover over all reinforcement shall be within $\pm 1/4$ in. (± 6 mm) of the specified cover.

Welded wire fabric shall be accurately bent and tied in place.

Miscellaneous accessories to be cast into the concrete or for forming holes and recesses shall be carefully located and rigidly held in place by bolts, clamps, or other effective means. If paper tubes are used for vertical dowel holes, or other vertical holes which require grouting, they shall be removed before transportation to the construction site."

80327

REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2012

Revised: November 2, 2012

Revise Article 669.01 of the Standard Specifications to read:

“669.01 Description. This work shall consist of the transportation and proper disposal of contaminated soil and water. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.”

Revise Article 669.08 of the Standard Specifications to read:

“669.08 Contaminated Soil and/or Groundwater Monitoring. The Contractor shall hire a qualified environmental firm to monitor the area containing the regulated substances. The affected area shall be monitored with a photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID). Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. No excavated soils can be taken to a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation with detectable PID or FID meter readings that are above background. The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily. All testing shall be done by a qualified engineer/technician. Such testing and monitoring shall be included in the work. The Contractor shall identify the exact limits of removal of non-special waste, special waste, or hazardous waste. All limits shall be approved by the Engineer prior to excavation. The Contractor shall take all necessary precautions.

Based upon the land use history of the subject property and/or PID or FID readings indicating contamination, a soil or groundwater sample shall be taken from the same location and submitted to an approved laboratory. Soil or groundwater samples shall be analyzed for the contaminants of concern, including pH, based on the property's land use history or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605. The analytical results shall serve to document the level of soil contamination. Soil and groundwater samples may be required at the discretion of the Engineer to verify the level of soil and groundwater contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, location and elevation, and any other observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 and "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective."

Replace the first two paragraphs of Article 669.09 of the Standard Specifications with the following:

"669.09 Contaminated Soil and/or Groundwater Management and Disposal. The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
- (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. Such soil excavated for storm sewers can be placed back into the excavated trench as backfill, when suitable, unless trench backfill is specified. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
 - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
 - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

- (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
- (5) When the Engineer determines soil cannot be managed according to Articles 669.09(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC but the pH of the soil is less than 6.25 or greater than 9.0, the excavated soil can be utilized within the construction limits or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation.
- (c) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste.

All groundwater encountered within lateral trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10^{-7} cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer."

Revise Article 669.14 of the Standard Specifications to read:

"669.14 Final Environmental Construction Report. At the end of the project, the Contractor will prepare and submit three copies of the Environmental Construction Report on the activities conducted during the life of the project, one copy shall be submitted to the Resident Engineer, one copy shall be submitted to the District's Environmental Studies Unit, and one copy shall be submitted with an electronic copy in Adode.pdf format to the Geologic

and Waste Assessment Unit, Bureau of Design and Environment, IDOT, 2300 South Dirksen Parkway, Springfield, Illinois 62764. The technical report shall include all pertinent information regarding the project including, but not limited to:

- (a) Measures taken to identify, monitor, handle, and dispose of soil or groundwater containing regulated substances, to prevent further migration of regulated substances, and to protect workers,
- (b) Cost of identifying, monitoring, handling, and disposing of soil or groundwater containing regulated substances, the cost of preventing further migration of regulated substances, and the cost for worker protection from the regulated substances. All cost should be in the format of the contract pay items listed in the contract plans (identified by the preliminary environmental site investigation (PESA) site number),
- (c) Plan sheets showing the areas containing the regulated substances,
- (d) Field sampling and testing results used to identify the nature and extent of the regulated substances,
- (e) Waste manifests (identified by the preliminary environmental site investigation (PESA) site number) for special or hazardous waste disposal, and
- (f) Landfill tickets (identified by the preliminary environmental site investigation (PESA) site number) for non-special waste disposal."

Revise the second paragraph of Article 669.16 of the Standard Specifications to read:

"The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL."

80283

REMOVAL AND DISPOSAL OF SURPLUS MATERIALS (BDE)

Effective: November 2, 2012

Revise the first four paragraphs of Article 202.03 of the Standard Specifications to read:

“202.03 Removal and Disposal of Surplus, Unstable, Unsuitable, and Organic Materials. Suitable excavated materials shall not be wasted without permission of the Engineer. The Contractor shall dispose of all surplus, unstable, unsuitable, and organic materials, in such a manner that public or private property will not be damaged or endangered.

Suitable earth, stones and boulders naturally occurring within the right-of-way may be placed in fills or embankments in lifts and compacted according to Section 205. Broken concrete without protruding metal bars, bricks, rock, stone, reclaimed asphalt pavement with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities may be used in embankment or in fill. If used in fills or embankments, these materials shall be placed and compacted to the satisfaction of the Engineer; shall be buried under a minimum of 2 ft (600 mm) of earth cover (except when the materials include only uncontaminated dirt); and shall not create an unsightly appearance or detract from the natural topographic features of an area. Broken concrete without protruding metal bars, bricks, rock, or stone may be used as riprap as approved by the Engineer. If the materials are used for fill in locations within the right-of-way but outside project construction limits, the Contractor must specify to the Engineer, in writing, how the landscape restoration of the fill areas will be accomplished. Placement of fill in such areas shall not commence until the Contractor's landscape restoration plan is approved by the Engineer.

Aside from the materials listed above, all other construction and demolition debris or waste shall be disposed of in a licensed landfill, recycled, reused, or otherwise disposed of as allowed by State or Federal laws and regulations. When the Contractor chooses to dispose of uncontaminated soil at a clean construction and demolition debris (CCDD) facility or at an uncontaminated soil fill operation, it shall be the Contractor's responsibility to have the pH of the material tested to ensure the value is between 6.25 and 9.0, inclusive. A copy of the pH test results shall be provided to the Engineer.

A permit shall be obtained from IEPA and made available to the Engineer prior to open burning of organic materials (i.e., plant refuse resulting from pruning or removal of trees or shrubs) or other construction or demolition debris. Organic materials originating within the right-of-way limits may be chipped or shredded and placed as mulch around landscape plantings within the right-of-way when approved by the Engineer. Chipped or shredded material to be placed as mulch shall not exceed a depth of 6 in. (150 mm).”

80319

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

TRACKING THE USE OF PESTICIDES (BDE)

Effective: August 1, 2012

Add the following paragraph after the first paragraph of Article 107.23 of the Standard Specifications:

"Within 48 hours of the application of pesticides, including but not limited to herbicides, insecticides, algaecides, and fungicides, the Contractor shall complete and return to the Engineer, Operations form "OPER 2720"."

80301

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 two (2). 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, 2013

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Materials.

Add the following to Article 1030.02 of the Standard Specifications.

"(h) Warm Mix Asphalt (WMA) Technologies (Note 3)"

Add the following note to Article 1030.02 of the Standard Specifications.

"Note 3. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, "Warm-Mix Asphalt Technologies"."

Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read:

1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing

by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements.”

Add the following to Article 1102.01(a) of the Standard Specifications.

“(13) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.
- b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes.”

Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

“(e) Warm Mix Technologies.

- (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
- (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification.

Production.

Revise the second paragraph of Article 1030.06(a) of the Standard Specifications to read:

“At the start of mix production for HMA, WMA, and HMA using WMA technologies, QC/QA mixture start-up will be required for the following situations; at the beginning of production of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix.”

Quality Control/Quality Assurance Testing.

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

Parameter	Frequency of Tests		Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
Aggregate Gradation % passing sieves: 1/2 in. (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), No. 30 (600 μm) No. 200 (75 μm) Note 1.	1 washed ignition oven test on the mix per half day of production Note 4.	1 washed ignition oven test on the mix per day of production Note 4.	Illinois Procedure
Asphalt Binder Content by Ignition Oven Note 2.	1 per half day of production	1 per day	Illinois-Modified AASHTO T 308
VMA Note 3.	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	N/A	Illinois-Modified AASHTO R 35
Air Voids Bulk Specific Gravity of Gyratory Sample Note 5.	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)	1 per day	Illinois-Modified AASHTO T 312
Maximum Specific Gravity of Mixture	Day's production ≥ 1200 tons: 1 per half day of production Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per	1 per day	Illinois-Modified AASHTO T 209

Parameter	Frequency of Tests	Frequency of Tests	Test Method See Manual of Test Procedures for Materials
	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	
	day thereafter (first sample of the day)		

Note 1. The No. 8 (2.36 mm) and No. 30 (600 µm) sieves are not required for All Other Mixtures.

Note 2. The Engineer may waive the ignition oven requirement for asphalt binder content if the aggregates to be used are known to have ignition asphalt binder content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the asphalt binder content.

Note 3. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design.

Note 4. The Engineer reserves the right to require additional hot bin gradations for batch

Note 5. The WMA compaction temperature for mixture volumetric testing shall be 270 ± 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.