

If you plan to submit a bid directly to the Department of Transportation

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.

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 124INT) 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.

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.

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status"(BDE 124INT) 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 a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial.

ABOUT AUTHORIZATION TO BID: Firms that have not received an authorization form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. 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 contractor'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 will be placed with the contract number. Addenda and revisions will also be placed on the Addendum/Revision Checklist and each subscription service subscriber will be notified by e-mail of each addendum and revision issued.

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

IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

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

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

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

All proposal documents, including Proposal Guaranty Checks or Proposal Bid Bonds, should be stapled together to prevent loss when bids are processed by IDOT personnel.

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

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	Call
Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of plans and proposals	217/782-7806

ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS

Planholders should verify that they have received and incorporated any addendum and/or revision prior to submitting their bid. Failure by the bidder to include an addendum or revision could result in a bid being rejected as irregular.

RETURN WITH BID

153

Proposal Submitted By
Name
Address
City

Letting March 6, 2009

BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL
(See instructions inside front cover)

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.
(SEE INSTRUCTIONS ON THE INSIDE OF COVER)

**Notice To Bidders,
Specifications,
Proposal, Contract
and Contract Bond**



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 63100
DUPAGE County
Section 06-00095-00-RS (Addison)
Route FAU 2642 (Addison Road)
Project M-9003(37)
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)

INSTRUCTIONS

ABOUT IDOT PROPOSALS: All proposals issued by IDOT are potential bidding proposals. Each proposal contains all Certifications and Affidavits, a Proposal Signature Sheet and a Proposal Bid Bond required for Prime Contractors to submit a bid after written **Authorization to Bid** has been issued by IDOT's Central Bureau of Construction.

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. To request authorization, a potential bidder must complete and submit Part B of the Request for Authorization to Bid/or Not For Bid Status form (BDE 124 INT) and submit an original Affidavit of Availability (BC 57).

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?: When a prospective prime bidder submits a "Request for Proposal Forms and Plans" 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 a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial. If a contractor has requested to bid but has not received a **Proposal Denial and/or Authorization Form**, they should contact the Central Bureau of Construction in advance of the letting date.

WHAT MUST BE INCLUDED WHEN BIDS ARE SUBMITTED?: Bidders need not return the entire proposal when bids are submitted. That portion of the proposal that must be returned includes the following:

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond
2. Other special documentation and/or information that may be required by the contract special provisions

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Prequalification and/or Authorization to Bid	217/782-3413
Preparation and submittal of bids	217/782-7806
Mailing of CD-ROMS	217/782-7806

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. 63100
DUPAGE County
Section 06-00095-00-RS (Addison)
Project M-9003(37)
Route FAU 2642 (Addison Road)
District 1 Construction Funds**

Improvement consists of HMA surface removal, PCC base course patching, HMA surface course, spotcurb and gutter replacement, sidewalks, watermain construction, pavement marking and landscape restoration on Addison Road from IL Route 64 to U.S. Route 20 in the village of Addison.

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

RETURN WITH BID

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

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

8. **CERTIFICATE OF AUTHORITY.** The undersigned bidder, if a business organized under the laws of another State, assures the Department that it will furnish a copy of its certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish the certificate within the time provided for execution of an awarded contract may be cause for cancellation of the award and forfeiture of the proposal guaranty to the State.

STATE JOB # - C-91-425-08
 PPS NBR - 1-20485-0000

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100
 ECMS002 DTGECM03 ECMR003 PAGE 1
 RUN DATE - 01/20/09
 RUN TIME - 183249

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
DUPAGE	043	01	06-00095-00-RS (ADDISON)	M-9003/037/000	FAU 2642

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX001877	SUMP PUMP LINE CONN	EACH	3.000	=			
XX002161	ABAND EX WATER MAIN	EACH	13.000	=			
XX003519	D I WAT MN F 12X6 TEE	EACH	10.000	=			
XX003531	WAT SER CONN 1	EACH	25.000	=			
XX003536	CONN EX W MN NP	EACH	15.000	=			
XX003668	PRECONSTRUCT VID TAP	L SUM	1.000	=			
XX004810	VV TA 6 DIA T1F CL	EACH	1.000	=			
XX004878	MAINT TEMP EROS CON S	L SUM	1.000	=			
XX005101	D I WAT MNF 12X10 TEE	EACH	1.000	=			
XX005221	TOPSOIL F & P P VD	SQ YD	7,861.000	=			
XX005855	WATERMAIN CASING PIPE	FOOT	1,283.000	=			
XX006698	TREE PROTECT & PRESER	EACH	93.000	=			
XX007789	DI WAT MN CUTSLV 8	EACH	11.000	=			
XX007790	DI WAT MN CUTSLV 12	EACH	2.000	=			
XX007791	DI WM BEND 11.25 8"	EACH	4.000	=			

FAU 2642
 06-00095-00-RS (ADDISON)
 DUPAGE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 2
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX007792	DI WM BEND 22.5 8"	EACH	4.000	=			
XX007793	DI WM BEND 11.25 12"	EACH	4.000	=			
XX007794	DI WM BEND 22.5 12"	EACH	4.000	=			
X0301335	WATER MAIN REMOV 8	FOOT	145.000	=			
X0322256	TEMP INFO SIGNING	SQ FT	418.000	=			
X0323172	DI WM BEND 45 8"	EACH	18.000	=			
X0323173	DI WM BEND 45 12"	EACH	4.000	=			
X0323186	DI WAT MN TEE, 8 X 6	EACH	1.000	=			
X0323189	DI WAT MN TEE, 12 X 8	EACH	9.000	=			
X0323190	DI WAT MN TEE, 12X12	EACH	1.000	=			
X0323973	SED CONT SILT FENCE	FOOT	500.000	=			
X0323974	SED CONT SILT FN MAIN	FOOT	500.000	=			
X0326012	DI WAT MN RED 12X10	EACH	1.000	=			
X0326014	DI WAT MN CUTSLV 10	EACH	2.000	=			
X0712400	TEMP PAVEMENT	SQ YD	402.000	=			

FAU 2642
 06-00095-00-RS (ADDISON)
 DUPAGE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 3
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
X4021000	TEMP ACCESS- PRIV ENT	EACH	7.000				
X4022000	TEMP ACCESS- COM ENT	EACH	22.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0018500	DRAINAGE STR CLEANED	EACH	5.000				
Z0019600	DUST CONTROL WATERING	UNIT	5.000				
Z0076600	TRAINEES	HOOR	2,000.000	0.80		1,600.00	
20100110	TREE REMOV 6-15	UNIT	120.000				
20100210	TREE REMOV OVER 15	UNIT	60.000				
20101200	TREE ROOT PRUNING	EACH	93.000				
20101300	TREE PRUN 1-10	EACH	26.000				
20101350	TREE PRUN OVER 10	EACH	67.000				
20200100	EARTH EXCAVATION	CU YD	1,285.000				
20201200	REM & DISP UNS MATL	CU YD	50.000				
20400800	FURNISHED EXCAV	CU YD	435.000				
20700420	POROUS GRAN EMB SUBGR	CU YD	50.000				

FAU 2642
 06-00095-00-RS (ADDISON)
 DUPLICATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 4
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
20800150	TRENCH BACKFILL	CU YD	4,006.000	=			
21300010	EXPLOR TRENCH SPL	FOOT	100.000	X			
25000110	SEEDING CL 1A	ACRE	1.740	X			
25000400	NITROGEN FERT NUTR	POUND	157.000	X			
25000500	PHOSPHORUS FERT NUTR	POUND	157.000	X			
25000600	POTASSIUM FERT NUTR	POUND	157.000	X			
25100401	EXCELSIOR BLANKET SPL	SQ YD	7,861.000	X			
28000510	INLET FILTERS	EACH	89.000	X			
40600100	BIT MATLS PR CT	GALLON	6,337.000	X			
40600400	MIX CR JTS FLANGEWYS	TON	20.000	X			
40600535	LEV BIND HM N70	TON	20.000	X			
40600895	CONSTRUC TEST STRIP	EACH	1.000	X			
40600982	HMA SURF REM BUTT JT	SQ YD	700.000	X			
40601005	HMA REPL OVER PATCH	TON	3,563.000	X			
40603340	HMA SC "D" N70	TON	5,706.000	X			

FAU 2642
 06-00095-00-RS (ADDISON)
 DUPAGE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 5
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
42001300	PROTECTIVE COAT	SQ YD	9,183.000				
42300200	PCC DRIVEWAY PAVT 6	SQ YD	241.000				
42300400	PCC DRIVEWAY PAVT 8	SQ YD	1,370.000				
42400200	PC CONC SIDEWALK 5	SQ FT	51,727.000				
42400800	DETECTABLE WARNINGS	SQ FT	1,418.000				
44000100	PAVEMENT REM	SQ YD	402.000				
44000157	HMA SURF REM 2	SQ YD	50,642.000				
44000200	DRIVE PAVEMENT REM	SQ YD	1,950.000				
44000500	COMB CURB GUTTER REM	FOOT	8,402.000				
44000600	SIDEWALK REM	SQ FT	21,134.000				
44002220	HMA RM OV PATCH 5	SQ YD	12,725.000				
44200966	CL B PATCH T1 10	SQ YD	1,266.000				
44200970	CL B PATCH T2 10	SQ YD	7,597.000				
44200974	CL B PATCH T3 10	SQ YD	2,532.000				
44200976	CL B PATCH T4 10	SQ YD	1,266.000				

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
44200988	CL B PATCH T4 11	SQ YD	64.000	=		
44300200	STRIP REF CR CON TR	FOOT	33,576.000	=		
550A0050	STORM SEW CL A 1 12	FOOT	650.000	=		
55039700	SS CLEANED	FOOT	100.000	=		
55100500	STORM SEWER REM 12	FOOT	32.000	=		
56103000	D I WATER MAIN 6	FOOT	38.000	=		
56103100	D I WATER MAIN 8	FOOT	733.000	=		
56103200	D I WATER MAIN 10	FOOT	116.000	=		
56103300	D I WATER MAIN 12	FOOT	4,454.000	=		
56105000	WATER VALVES 8	EACH	10.000	=		
56105100	WATER VALVES 10	EACH	1.000	=		
56105200	WATER VALVES 12	EACH	7.000	=		
56400500	FIRE HYDNITS TO BE REM	EACH	11.000	=		
56400820	FIRE HYD W/AUX V & VB	EACH	11.000	=		
60200805	CB TA 4 DIA T8G	EACH	3.000	=		

FAU 2642
 06-00095-00-RS (ADDISON)
 DUPAGE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 7
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
60207605	CB TC 18G	EACH	4.000 X	=		
60209510	CB TC W/SPL F&G	EACH	1.000 X	=		
60214400	RD CB 4 DIA 18G	EACH	2.000 X	=		
60218400	MAN TA 4 DIA T1F CL	EACH	1.000 X	=		
60236200	INLETS TA 18G	EACH	3.000 X	=		
60249500	VALVE BOXES 8	EACH	9.000 X	=		
60249700	VALVE BOXES 12	EACH	7.000 X	=		
60250200	CB ADJUST	EACH	6.000 X	=		
60252800	CB RECONST	EACH	2.000 X	=		
60255500	MAN ADJUST	EACH	12.000 X	=		
60257900	MAN RECONST	EACH	2.000 X	=		
60260100	INLETS ADJUST	EACH	70.000 X	=		
60262700	INLETS RECONST	EACH	2.000 X	=		
60265700	VV ADJUST	EACH	4.000 X	=		
60266600	VALVE BOX ADJ	EACH	1.000 X	=		

FAU 2642
 06-00095-00-RS (ADDISON)
 DUPAGE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 8
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE
				DOLLARS	CENTS	
60266910	VALVE BOX REMOVED	EACH	1.000	=		
60300310	FR & LIDS ADJUST SPL	EACH	44.000	=		
60404300	FR & GRATES T3	EACH	67.000	=		
60405700	FR & GRATES SPEC	EACH	4.000	=		
60406000	FR & LIDS T1 OL	EACH	5.000	=		
60406100	FR & LIDS T1 CL	EACH	60.000	=		
60500060	REMOV INLETS	EACH	3.000	=		
60500405	FILL VALVE VLTS	EACH	16.000	=		
60600605	CONC CURB TB	FOOT	826.000	=		
60601306	CONC CURB TM SPL	FOOT	1,087.000	=		
60603800	COMB CC&G TB6.12	FOOT	200.000	=		
60604400	COMB CC&G TB6.18	FOOT	5,845.000	=		
60624600	CORRUGATED MED	SQ FT	137.000	=		
66900200	NON SPL WASTE DISPOSL	CU YD	25.000	=		
66900450	SPL WASTE PLNS/REPORT	L SUM	1.000	=		

FAU 2642
 06-00095-00-RS (ADDISON)
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 9
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	CTS
				DOLLARS	CENTS		
66900530	SOIL DISPOSAL ANALY	EACH	1.000	=			
67100100	MOBILIZATION	L SUM	1.000	=			
70101700	TRAF CONT & PROT	L SUM	1.000	=			
70106800	CHANGEABLE MESSAGE SN	CAL MO	6.000	=			
70300100	SHORT-TERM PAVT MKING	FOOT	2,623.000	=			
72400710	RELOC SIGN PANEL T1	SQ FT	20.000	=			
72800100	TELES STL SIN SUPPORT	FOOT	50.000	=			
73100110	BASE TEL SIN SUPP, SP	EACH	1.000	=			
78000100	THPL PVT MK LTR & SYM	SQ FT	1,033.000	=			
78000200	THPL PVT MK LINE 4	FOOT	21,911.000	=			
78000400	THPL PVT MK LINE 6	FOOT	1,869.000	=			
78000600	THPL PVT MK LINE 12	FOOT	542.000	=			
78000650	THPL PVT MK LINE 24	FOOT	468.000	=			
78100100	RAISED REFL PAVT MKR	EACH	666.000	=			
78300105	PAVT MARKING REMOVAL	FOOT	300.000	=			

FAU 2642
 06-00095-00-RS (ADDISON)
 DUPAGE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 63100

ECMS002 DTGECM03 ECMR003 PAGE 10
 RUN DATE - 01/20/09
 RUN TIME - 183249

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
78300200	RAISED REF PVT MK REM	EACH	666.000		=		
88600100	DET LOOP T1	FOOT	795.000		=		
				TOTAL \$			

NOTE:

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

RETURN WITH BID

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

I. GENERAL

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

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. By execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances has 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 termination of the contract and the suspension or debarment of the bidder.

II. ASSURANCES

A. 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. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous assurance, and the surety providing the performance bond shall be responsible for the completion of the contract.

B. Felons

1. The Illinois Procurement Code provides:

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

2. The bidder assures the Department that the award and execution of the contract would not cause a violation of Section 50-10.

C. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

The current salary of the Governor is \$171,000.00. Sixty percent of the salary is \$102,600.00.

RETURN WITH BID

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

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

E. Inducements

1. The Illinois Procurement Code provides:

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

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

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

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

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

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

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

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

H. Confidentiality

1. The Illinois Procurement Code provides:

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

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

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

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

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

III. CERTIFICATIONS

A. 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. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous certification, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

- (b) Businesses. No business shall be barred from contracting with any unit of State or local government 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, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

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

- (d) Certification. Every bid submitted to and contract executed by the State shall contain a certification by the contractor that the contractor is not barred from being awarded a contract or subcontract under this Section. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

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

C. Educational Loan

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

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

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

D. Bid-Rigging/Bid Rotating

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

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

RETURN WITH BID

(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.

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

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

E. International Anti-Boycott

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

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

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

F. Drug Free Workplace

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

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

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

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

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

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

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

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

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

RETURN WITH BID

G. Debt Delinquency

1. The Illinois Procurement Code provides:

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

The contractor or bidder certifies that it, or any affiliate, is not barred from being awarded a contract under 30 ILCS 500. Section 50-11 prohibits a person from entering into a contract with a State agency 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 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 contractor further acknowledges that the contracting State agency may declare the contract void if this certification is false or if the contractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

H. Sarbanes-Oxley Act of 2002

1. The Illinois Procurement Code, Section 50-60(c), provides:

The contractor 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 for a period of five years prior to the date of the bid or contract. The contractor acknowledges that the contracting agency shall declare the contract void if this certification is false.

I. Addenda

The contractor or bidder certifies that all relevant addenda have been incorporated in to this contract. Failure to do so may cause the bid to be declared unacceptable.

J. Section 42 of the Environmental Protection Act

The contractor certifies in accordance with 30 ILCS 500/50-12 that the bidder or contractor is not barred from being awarded a contract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency 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 contractor acknowledges that the contracting agency may declare the contract void if this certification is false.

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

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

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.

L. Executive Order Number 1 (2007) Regarding Lobbying on Government Procurements

The bidder hereby warrants and certifies that they have complied and will comply with the requirements set forth in this Order. The requirements of this warrant and certification are a material part of the contract, and the contractor shall require this warrant and certification provision to be included in all approved subcontracts.

RETURN WITH BID

M. Disclosure of Business Operations in Iran

Public Act 95-0616 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, offer or, 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 Act.

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

Check the appropriate statement:

Company has no business operations in Iran to disclose.

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

N. Registration with the State Board of Elections.

Public Act 95-0971, amending the Illinois Procurement Code, 30 ILCS 500, adding new sections 20-160 and 50-37, and Executive Order 3 (2008) establish new requirements affecting contributions that contractors, consultants, vendors and bidders, including affiliated persons and entities, may make to state officeholders, declared candidates for state offices and political organizations established to benefit such officeholders and candidates. These provisions do not apply to federal-aid contracts.

By submission of a bid, the bidder acknowledges and agrees that it has read and understands the requirements of PA 95-0971 and Executive Order 3 (2008), including but not limited to, all reporting requirements and all restrictions on soliciting and making contributions to state officeholders, declared candidates for state offices and covered political organizations that promote the candidacy of an officeholder or declared candidate for office. In addition, the bidder makes the following certifications:

- (1) As to Executive Order 3 (2008), the bidder certifies that no contribution will be made that would violate the order, and that the bidder will report all contributions as required by the order.
- (2) As to PA 95-0971, the bidder shall check either of the following certifications that apply:

The bidder is not required to register as a business entity with the State Board of Elections.

The bidder has registered as a business entity with the State Board of Elections, and acknowledges a continuing duty to update the registration as required the Act. **A copy of the time-stamped certificate of registration is enclosed with the bid. The Department will not award this contract without the submission of a certificate of registration.**

In accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, this certification shall be part of the contract. Compliance with PA 95-0971 and Executive Order 3 (2008) is a material part of the contract and any breach shall be cause to void the contract under Section 50-60 of the Illinois Procurement Code.

TO BE RETURNED 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 Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous disclosure, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than \$10,000 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.

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 400 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.

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

2. Disclosure Forms. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. Subject individuals should be covered each by one form. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies. **The forms must be included with each bid or incorporated by reference.**

C. Disclosure Form Instructions

Form A: For bidders that have previously submitted the information requested in Form A

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may check the following certification statement indicating that the information previously submitted by the bidder is, as of the date of submission, current and accurate. Before checking this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder checks the Certification, the Bidder should proceed to Form B instructions.

CERTIFICATION STATEMENT

I have determined that the Form A disclosure information previously submitted is current and accurate, and all forms are hereby incorporated by reference in this bid. Any necessary additional forms or amendments to previously submitted forms are attached to this bid.

(Bidding Company)



Signature of Authorized Representative

Date

Form A: For bidders who have NOT previously submitted the information requested in Form A

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 400 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 the second page of 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 \$102,600.00? YES ___ NO ___
3. Does anyone in your organization receive more than \$102,600.00 of the bidding entity's or parent entity's distributive income? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not 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 \$102,600.00? 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 on page 2 of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

Form B: 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.

D. Bidders Submitting More Than One Bid

Bidders submitting multiple bids may submit one set of forms consisting of all required Form A disclosures and one Form B for use with all bids. Please indicate in the space provided below the bid item that contains the original disclosure forms and the bid items which incorporate the forms by reference.

- The bid submitted for letting item _____ contains the Form A disclosures or Certification Statement and the Form B disclosures. The following letting items incorporate the said forms by reference:

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Financial Information & Potential Conflicts of Interest Disclosure

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Code (30 ILCS 500). Vendors desiring to enter into a contract with the State of Illinois must disclose the financial information and potential conflict of interest information as specified in this Disclosure Form. This information shall become part of the publicly available contract file. This Form A must be completed for bids in excess of \$10,000, 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.

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 \$102,600.00 (60% of the Governor's salary as of 7/1/07). (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 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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) provide the name the State agency for which you are employed and your annual salary.

RETURN WITH BID/OFFER

- 3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$102,600.00, (60% of the Governor's salary as of 7/1/07) 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 the 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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) 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 2 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 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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) 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 \$102,600.00, (60% of the salary of the Governor as of 7/1/07) 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 the 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 \$102,600.00, (60% of the Governor's salary as of 7/1/07) 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 2 times the salary of the Governor? Yes ___ No ___

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

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

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United 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/OFFER

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

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

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

APPLICABLE STATEMENT

This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page.

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

NOT APPLICABLE STATEMENT

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

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

_____ Date _____
Signature of Authorized Representative

RETURN WITH BID/OFFER

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**Form B
Other Contracts &
Procurement Related Information
Disclosure**

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

Disclosure of the information contained in this Form is required by the Section 50-35 of the Illinois Procurement Act (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for bids in excess of \$10,000, and for all open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

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

RETURN WITH BID

SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

RETURN WITH BID

**Contract No. 63100
DUPAGE County
Section 06-00095-00-RS (Addison)
Project M-9003(37)
Route FAU 2642 (Addison 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. 63100
DUPAGE County
Section 06-0095-00-RS (Addison)
Project M-9003(37)
Route FAU 2642 (Addison 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 _____

(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE SECOND PARTY SHOULD SIGN BELOW) Attest _____
Signature _____
Business Address _____

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

Attest _____
Signature _____
Business Address _____

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



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 Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of 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

(Company Name) (Company Name)

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

Notary Certification for Principal and Surety

STATE OF ILLINOIS,

County of _____

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

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

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

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

My commission expires _____

Notary Public

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



Electronic Bid Bond ID# _____ Company / Bidder Name _____ Signature and Title _____

PROPOSAL ENVELOPE



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

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

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

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

**Contract No. 63100
DUPAGE County
Section 06-00095-00-RS (Addison)
Project M-9003(37)
Route FAU 2642 (Addison Road)
District 1 Construction Funds**



Illinois Department of Transportation



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., March 6, 2009. 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. 63100
DUPAGE County
Section 06-00095-00-RS (Addison)
Project M-9003(37)
Route FAU 2642 (Addison Road)
District 1 Construction Funds**

Improvement consists of HMA surface removal, PCC base course patching, HMA surface course, spotcurb and gutter replacement, sidewalks, watermain construction, pavement marking and landscape restoration on Addison Road from IL Route 64 to U.S. Route 20 in the village of Addison.

- 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

Milton R. Sees, Secretary

BD 351 (Rev. 01/2003)

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2009

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-07) (Revised 1-1-09)

SUPPLEMENTAL SPECIFICATIONS

<u>Std. Spec. Sec.</u>	<u>Page No.</u>
201 Clearing, Tree Removal and Protection	1
205 Embankment	2
251 Mulch	3
253 Planting Woody Plants	4
280 Temporary Erosion Control	6
443 Reflective Crack Control Treatment	7
502 Excavation for Structures	10
503 Concrete Structures	11
504 Precast Concrete Structures	12
505 Steel Structures	13
540 Box Culverts	14
581 Waterproofing Membrane System	15
633 Removing and Reerecting Guardrail and Terminals	16
669 Removal and Disposal of Regulated Substances	17
672 Sealing Abandoned Water Wells	18
701 Work Zone Traffic Control and Protection	19
733 Overhead Sign Structures	20
783 Pavement Marking and Marker Removal	21
801 Electrical Requirements	22
805 Electrical Service Installation – Traffic Signals	23
836 Pole Foundation	24
838 Breakaway Devices	25
862 Uninterruptable Power Supply	26
873 Electric Cable	28
878 Traffic Signal Concrete Foundation	30
1004 Coarse Aggregates	31
1008 Structural Steel Coatings	32
1010 Finely Divided Materials	33
1020 Portland Cement Concrete	34
1022 Concrete Curing Materials	43
1024 Nonshrink Grout	44
1042 Precast Concrete Products	45
1062 Reflective Crack Control System	47
1069 Pole and Tower	49
1074 Control Equipment	52
1076 Wire and Cable	57
1081 Materials for Planting	58
1083 Elastomeric Bearings	60
1094 Overhead Sign Structures	61
1101 General Equipment	62
1102 Hot-Mix Asphalt Equipment	63
1106 Work Zone Traffic Control Devices	64

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	<input checked="" type="checkbox"/> Additional State Requirements For Federal-Aid Construction Contracts (Eff. 2-1-69) (Rev. 1-1-07)	65
2	<input checked="" type="checkbox"/> Subletting of Contracts (Federal-Aid Contracts) (Eff. 1-1-88) (Rev. 5-1-93)	67
3	<input checked="" type="checkbox"/> EEO (Eff. 7-21-78) (Rev. 11-18-80)	68
4	<input type="checkbox"/> Specific Equal Employment Opportunity Responsibilities Non Federal-Aid Contracts (Eff. 3-20-69) (Rev. 1-1-94)	78
5	<input type="checkbox"/> Required Provisions - State Contracts (Eff. 4-1-65) (Rev. 1-1-07)	83
6	<input type="checkbox"/> Reserved	88
7	<input type="checkbox"/> Reserved	89
8	<input type="checkbox"/> Haul Road Stream Crossings, Other Temporary Stream Crossings, and In-Stream Work Pads (Eff. 1-2-92) (Rev. 1-1-98)	90
9	<input type="checkbox"/> Construction Layout Stakes Except for Bridges (Eff. 1-1-99) (Rev. 1-1-07)	91
10	<input checked="" type="checkbox"/> Construction Layout Stakes (Eff. 5-1-93) (Rev. 1-1-07)	94
11	<input type="checkbox"/> Use of Geotextile Fabric for Railroad Crossing (Eff. 1-1-95) (Rev. 1-1-07)	97
12	<input type="checkbox"/> Subsealing of Concrete Pavements (Eff. 11-1-84) (Rev. 1-1-07)	99
13	<input type="checkbox"/> Hot-Mix Asphalt Surface Correction (Eff. 11-1-87) (Rev. 1-1-09)	103
14	<input type="checkbox"/> Pavement and Shoulder Resurfacing (Eff. 2-1-00) (Rev. 1-1-09)	105
15	<input type="checkbox"/> PCC Partial Depth Hot-Mix Asphalt Patching (Eff. 1-1-98) (Rev. 1-1-07)	106
16	<input checked="" type="checkbox"/> Patching with Hot-Mix Asphalt Overlay Removal (Eff. 10-1-95) (Rev. 1-1-07)	108
17	<input type="checkbox"/> Polymer Concrete (Eff. 8-1-95) (Rev. 1-1-08)	109
18	<input type="checkbox"/> PVC Pipeliner (Eff. 4-1-04) (Rev. 1-1-07)	111
19	<input type="checkbox"/> Pipe Underdrains (Eff. 9-9-87) (Rev. 1-1-07)	112
20	<input type="checkbox"/> Guardrail and Barrier Wall Delineation (Eff. 12-15-93) (Rev. 1-1-97)	113
21	<input type="checkbox"/> Bicycle Racks (Eff. 4-1-94) (Rev. 1-1-07)	117
22	<input type="checkbox"/> Temporary Modular Glare Screen System (Eff. 1-1-00) (Rev. 1-1-07)	119
23	<input type="checkbox"/> Temporary Portable Bridge Traffic Signals (Eff. 8-1-03) (Rev. 1-1-07)	121
24	<input type="checkbox"/> Work Zone Public Information Signs (Eff. 9-1-02) (Rev. 1-1-07)	123
25	<input type="checkbox"/> Night Time Inspection of Roadway Lighting (Eff. 5-1-96)	124
26	<input type="checkbox"/> English Substitution of Metric Bolts (Eff. 7-1-96)	125
27	<input type="checkbox"/> English Substitution of Metric Reinforcement Bars (Eff. 4-1-96) (Rev. 1-1-03)	126
28	<input type="checkbox"/> Calcium Chloride Accelerator for Portland Cement Concrete (Eff. 1-1-01)	127
29	<input type="checkbox"/> Reserved	128
30	<input type="checkbox"/> Quality Control of Concrete Mixtures at the Plant (Eff. 8-1-00) (Rev. 1-1-09)	129
31	<input checked="" type="checkbox"/> Quality Control/Quality Assurance of Concrete Mixtures (Eff. 4-1-92) (Rev. 1-1-09)	137
32	<input type="checkbox"/> Asbestos Bearing Pad Removal (Eff. 11-1-03)	149
33	<input type="checkbox"/> Asbestos Hot-Mix Asphalt Surface Removal (Eff. 6-1-89) (Rev. 1-1-09)	150
LRS 1	<input type="checkbox"/> Reserved	152
LRS 2	<input checked="" type="checkbox"/> Furnished Excavation (Eff. 1-1-99) (Rev. 1-1-07)	153
LRS 3	<input checked="" type="checkbox"/> Work Zone Traffic Control (Eff. 1-1-99) (Rev. 1-1-07)	154
LRS 4	<input checked="" type="checkbox"/> Flaggers in Work Zones (Eff. 1-1-99) (Rev. 1-1-07)	155
LRS 5	<input type="checkbox"/> Contract Claims (Eff. 1-1-02) (Rev. 1-1-07)	156
LRS 6	<input type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals (Eff. 1-1-02)	157
LRS 7	<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals (Eff. 1-1-02) (Rev. 1-1-03)	163
LRS 8	<input type="checkbox"/> Failure to Complete the Work on Time (Eff. 1-1-99)	169
LRS 9	<input type="checkbox"/> Bituminous Surface Treatments (Eff. 1-1-99)	170
LRS 10	<input type="checkbox"/> Reflective Sheeting Type C (Eff. 1-1-99) (Rev. 1-1-02)	171
LRS 11	<input type="checkbox"/> Employment Practices (Eff. 1-1-99)	172
LRS 12	<input type="checkbox"/> Wages of Employees on Public Works (Eff. 1-1-99) (Rev. 4-1-06)	174
LRS 13	<input type="checkbox"/> Selection of Labor (Eff. 1-1-99)	175
LRS 14	<input type="checkbox"/> Paving Brick and Concrete Paver Pavements and Sidewalks (Eff. 1-1-04) (Rev. 1-1-09)	176
LRS 15	<input type="checkbox"/> Partial Payments (Eff. 1-1-07)	179

INDEX

<u>TOPIC</u>	<u>PAGE</u>
Special Provisions	
Applicable State of Illinois Standard Specifications	1
Definitions	1
Location of Project	1
Description of Project	2
General Conditions	2
Construction Layout Stakes	3
Construction Safety and Health Standards	3
Keeping Roads Open to Traffic	4
Final Sign Placement on Construction Projects	4
Concrete Breakers	4
Status of Utilities to be Adjusted	5
Protection of Existing Drainage Facilities During Construction	5
Legal Regulations and Responsibility to Public	6
Maintenance of Roadways	6
Responsibility for Vandalism	6
Construction Debris	7
Fine Aggregate for Hot-Mix Asphalt (HMA) (District One)	7
Temperature Control for Concrete Placement (District One)	7
Backfilling Storm Sewer Under Roadway	7
Use of RAP (Dist 1)	8
Hot Mix Asphalt – Density Testing of Longitudinal Joints (D-1	15
Special Provisions for Pay Items	
Abandon Existing Water Main	16
Aggregate Surface Course for Temporary Access	17
Base for Telescoping Sign Support, Special	18
Bituminous Materials (Prime Coat)	19
Catch Basins, Type C, Type 3 Grate or Special Frame and Grate	20
Cleaning Existing Drainage Structures	20
Concrete Curb, Type M (Special)	21
Connection to Existing Water Mains (Non Pressure)	21
Curb Ramps for Sidewalks	22
Detectable Warnings	22
Drill and Grout Dowel Bars and Tie Bars	23
Driveway Pavement Removal	23
Ductile Iron Water Main 6", 8", 10" and 12"	24
Ductile Iron Water Main Fittings	27
Dust Control Watering	28
Earth Excavation	29

INDEX (CONTINUED)

<u>TOPIC</u>	<u>PAGE</u>
Special Provisions for Pay Items (Continued)	
Excelsior Blanket, Special	30
Exploration Trench, Special	31
Filling Valve Vaults	32
Fire Hydrants to be Removed	32
Fire Hydrant with Auxiliary Valve and Valve Box	33
Frames and Grates, Special	35
Frames and Lids to be Adjusted (Special)	35
Furnished Excavation	36
Hot-Mix Asphalt Surface Course, Mix "D", N70	36
Maintenance of Temporary Erosion Control Systems	37
Pavement Patching at Curb and Gutter Removal	37
Porous Granular Embankment, Subgrade	38
Portland Cement Concrete Driveway Pavement, 6 Inch and 8 Inch	39
Portland Cement Concrete Sidewalk 5 Inch	40
Preconstruction Video Taping	41
Protective Coat	41
Raised Reflective Pavement Marker	41
Removing or Filling Existing Structures	42
Restricted Depth Manholes and Restricted Depth Catch Basins	43
Sawing Asphalt or Concrete for Removal Items	43
Sediment Control, Silt Fence	43
Seeding, Class 1A	45
Short Term Pavement Marking	46
Sump Pump Line Connection	46
Supplemental Watering	46
Temporary Information Signing	46
Temporary Pavement	48
Topsoil Furnish & Place (Pulverized), Variable Depth	49
Traffic Control Plan	50
Tree Protection and Preservation	51
Valve Vaults to be Removed or Filled	52
Valve Boxes	53
Valve Boxes to be Removed	54
Water Main Casing Pipe	54
Water Main Removal, 8"	55
Water Service Connection	55
Water Valves	56
<i>Electronic Submission of Payroll Records</i>	58

INDEX LOCAL ROADS AND STREETS SPECIAL PROVISIONS

LR #	Pg #	Special Provision Title	Effective	Revised
LR SD 12		<input type="checkbox"/> Slab Movement Detection Device	Nov. 11, 1984	Jan. 1, 2007
LR SD 13		<input type="checkbox"/> Required Cold Milled Surface Texture	Nov. 1, 1987	Jan. 1, 2007
LR 102		<input type="checkbox"/> Protests on Local Lettings	Jan. 1, 2007	
LR 105	153	<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 107-3		<input type="checkbox"/> Disadvantaged Business Enterprise Participation	Jan. 1, 2007	Nov. 1, 2008
LR 107-4	156	<input checked="" type="checkbox"/> Insurance	Feb. 1, 2007	Aug. 1, 2007
LR 107-5		<input type="checkbox"/> Substance Abuse Prevention Program	Jan. 1, 2008	Jan. 8, 2008
LR 108		<input type="checkbox"/> Combination Bids	Jan. 1, 1994	Mar. 1, 2005
LR 212		<input type="checkbox"/> Shaping Roadway	Aug. 1, 1969	Jan. 1, 2002
LR 355-1		<input type="checkbox"/> Asphalt Stabilized Base Course, Road Mix or Traveling Plant Mix	Oct. 1, 1973	Jan. 1, 2007
LR 355-2		<input type="checkbox"/> Asphalt Stabilized Base Course, Plant Mix	Feb. 2, 1963	Jan. 1, 2007
LR 400-1		<input type="checkbox"/> Bituminous Treated Earth Surface	Jan. 1, 2008	
LR 400-2		<input type="checkbox"/> Bituminous Surface Mixture (Class B)	Jan. 1, 2008	
LR 400-3		<input type="checkbox"/> Pavement Rehabilitation by the Heat-Scarify-Overlay Method	Jan. 1, 2008	
LR 402		<input type="checkbox"/> Salt Stabilized Surface Course	Feb. 20, 1963	Jan. 1, 2007
LR 403-2		<input type="checkbox"/> Bituminous Hot Mix Sand Seal Coat	Aug. 1, 1969	Jan. 1, 2007
LR 406		<input type="checkbox"/> Filling HMA Core Holes with Non-shrink Grout	Jan. 1, 2008	
LR 420		<input type="checkbox"/> PCC Pavement (Special)	May 12, 1964	Jan. 2, 2007
LR 442		<input type="checkbox"/> Bituminous Patching Mixtures for Maintenance Use	Jan. 1, 2004	Jun. 1, 2007
LR 451		<input type="checkbox"/> Crack Filling Bituminous Pavement with Fiber-Asphalt	Oct. 1, 1991	Jan. 1, 2007
LR 503-1		<input type="checkbox"/> Furnishing Class SI Concrete	Oct. 1, 1973	Jan. 1, 2002
LR 503-2		<input type="checkbox"/> Furnishing Class SI Concrete (Short Load)	Jan. 1, 1989	Jan. 1, 2002
LR 542		<input type="checkbox"/> Pipe Culverts, Type _____ (Furnished)	Sep. 1, 1964	Jan. 1, 2007
LR 663		<input type="checkbox"/> Calcium Chloride Applied	Jun. 1, 1958	Jan. 1, 2007
LR 702		<input type="checkbox"/> Construction and Maintenance Signs	Jan. 1, 2004	Jun. 1, 2007
LR 1004		<input type="checkbox"/> Coarse Aggregate for Bituminous Surface Treatment	Jan. 1, 2002	Jan. 1, 2007
LR 1013		<input type="checkbox"/> Rock Salt (Sodium Chloride)	Aug. 1, 1969	Jan. 1, 2002
LR 1030		<input type="checkbox"/> Growth Curve	Mar. 1, 2008	
LR 1032-1		<input type="checkbox"/> Penetrating Emulsions	Jan. 1, 2007	Feb. 1, 2007
LR 1032-2		<input type="checkbox"/> Multigrade Cold Mix Asphalt	Jan. 1, 2007	Feb. 1, 2007
LR 1102		<input type="checkbox"/> Road Mix or Traveling Plant Mix Equipment	Jan. 1, 2007	

BDE SPECIAL PROVISIONS
For the January 16 and March 6, 2009 Lettings

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

File Name	Pg#		Special Provision Title	Effective	Revised
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
* 80186	157	X	Alkali-Silica Reaction for Cast-in-Place Concrete	Aug. 1, 2007	Jan. 1, 2009
* 80213	160	X	Alkali-Silica Reaction for Precast and Precast Prestressed Concrete	Jan. 1, 2009	
80207	163	X	Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders	Nov. 1, 2008	
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173	164	X	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Jan. 2, 2007
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	Jan. 1, 2007
50481			Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	Jan. 1, 2007
50491			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	Jan. 1, 2007
50531			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	Jan. 1, 2007
80166	167	X	Cement	Jan. 1, 2007	Nov. 1, 2007
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80193			Concrete Barrier	Jan. 1, 2008	
* 80214			Concrete Gutter, Type A	Jan. 1, 2009	
* 80215			Concrete Joint Sealer	Jan. 1, 2009	
80177			Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
80029	170	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Nov. 1, 2008
80178	178	X	Dowel Bars	April 1, 2007	Jan. 1, 2008
80179			Engineer's Field Office Type A	April 1, 2007	Aug. 1, 2008
80205			Engineer's Field Office Type B	Aug. 1, 2008	
80175			Epoxy Pavement Markings	Jan. 1, 2007	
80189	179	X	Equipment Rental Rates	Aug. 2, 2007	Jan. 2, 2008
80169			High Tension Cable Median Barrier	Jan. 1, 2007	
80194			HMA – Hauling on Partially Completed Full-Depth Pavement	Jan. 1, 2008	
80181	181	X	Hot-Mix Asphalt – Field Voids in the Mineral Aggregate	April 1, 2007	April 1, 2008
80201	183	X	Hot-Mix Asphalt – Plant Test Frequency	April 1, 2008	
80202	185	X	Hot-Mix Asphalt – Transportation	April 1, 2008	
80136			Hot-Mix Asphalt Mixture IL-4.75	Nov. 1, 2004	Jan. 1, 2008
80195			Hot-Mix Asphalt Mixture IL-9.5L	Jan. 1, 2008	
80109			Impact Attenuators	Nov. 1, 2003	Nov. 1, 2008
80110			Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2007
* 80196			Mast Arm Assembly and Pole	Jan. 1, 2008	Jan. 1, 2009
* 80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
80203			Metal Hardware Cast into Concrete (NOTE: This special provision was previously named "Steel Inserts and Brackets Cast into Concrete".)	April 1, 2008	Nov. 1, 2008
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2007
80082	186	X	Multilane Pavement Patching	Nov. 1, 2002	
80180	187	X	National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction (NOTE: This special provision was previously named "Erosion and Sediment Control Deficiency Deduction".)	April 1, 2007	Nov. 1, 2008
80208			Nighttime Work Zone Lighting	Nov. 1, 2008	
80129			Notched Wedge Longitudinal Joint	July 1, 2004	Jan. 1, 2007
80182			Notification of Reduced Width	April 1, 2007	
80069			Organic Zinc-Rich Paint System	Nov. 1, 2001	Jan. 1, 2008
* 80216			Partial Exit Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
80022	188	X	Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80209	190	X	Personal Protective Equipment	Nov. 1, 2008	
80134			Plastic Blockouts for Guardrail	Nov. 1, 2004	Jan. 1, 2007
* 80119			Polyurea Pavement Marking	April 1, 2004	Jan. 1, 2009

<u>File Name</u>	<u>Pg#</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80210			Portland Cement Concrete Inlay or Overlay	Nov. 1, 2008	
80170	191	X	Portland Cement Concrete Plants	Jan. 1, 2007	
* 80217			Post Clips for Extruded Aluminum Signs	Jan. 1, 2009	
80171	193	X	Precast Handling Holes	Jan. 1, 2007	
* 80218			Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	
* 80219			Preventive Maintenance – Cape Seal	Jan. 1, 2009	
* 80220			Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	
* 80221			Preventive Maintenance – Slurry Seal	Jan. 1, 2009	
80211			Prismatic Curb Reflectors	Nov. 1, 2008	
80015			Public Convenience and Safety	Jan. 1, 2000	
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80223			Ramp Closure for Freeway/Expressway	Jan. 1, 2009	
80172			Reclaimed Asphalt Pavement (RAP)	Jan. 1, 2007	Aug. 1, 2007
80183	195	X	Reflective Sheeting on Channelizing Devices	April 1, 2007	Nov. 1, 2008
80151	196	X	Reinforcement Bars	Nov. 1, 2005	Jan. 2, 2008
80206	198	X	Reinforcement Bars – Storage and Protection	Aug. 1, 2008	
* 80224			Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	
80184			Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	April 1, 2007	
* 80131	199	X	Seeding	July 1, 2004	Jan. 1, 2009
* 80152	201	X	Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	Jan. 1, 2009
80132	206	X	Self-Consolidating Concrete for Precast Products	July 1, 2004	Jan. 1, 2007
80212			Sign Panels and Sign Panel Overlays	Nov. 1, 2008	
80197	208	X	Silt Filter Fence	Jan. 1, 2008	
80127	209	X	Steel Cost Adjustment	April 2, 2004	April 1, 2007
80153			Steel Plate Beam Guardrail	Nov. 1, 2005	Aug. 1, 2007
80191			Stone Gradation Testing	Nov. 1, 2007	
80143	213	X	Subcontractor Mobilization Payments	April 2, 2005	
80075			Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
80087	214	X	Temporary Erosion Control	Nov. 1, 2002	Jan. 1, 2008
* 80225			Temporary Raised Pavement Marker	Jan. 1, 2009	
80176	215	X	Thermoplastic Pavement Markings	Jan. 1, 2007	
20338	217	X	Training Special Provisions	Oct. 15, 1975	
80185			Type ZZ Retroreflective Sheeting, Nonreflective Sheeting, and Translucent Overlay Film for Highway Signs	April 1, 2007	
80149			Variable Spaced Tining	Aug. 1, 2005	Jan. 1, 2007
80071	220	X	Working Days	Jan. 1, 2002	
80204			Woven Wire Fence	April 1, 2008	

The following special provisions are in the 2009 Supplemental Specifications and Recurring Special Provisions:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80108	Asbestos Bearing Pad Removal	Check Sheet #32	Nov. 1, 2003	
72541	Asbestos Waterproofing Membrane and Asbestos Hot-Mix Asphalt Surface Removal	Check Sheet #33	June 1, 1989	Jan. 2, 2007
80167	Electrical Service Installation – Traffic Signals	Section 805	Jan. 1, 2007	
80164	Removal and Disposal of Regulated Substances	Section 669	Aug. 1, 2006	Jan. 1, 2007
80161	Traffic Signal Grounding	Sections 873 and 1076	April 1, 2006	Jan. 1, 2007
80162	Uninterruptable Power Supply (UPS)	Sections 801, 862 and 1074	April 1, 2006	Jan. 1, 2007
80163	Water Blaster with Vacuum Recovery	Articles 783.02 and 1101.12	April 1, 2006	Jan. 1, 2007

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:

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

STATE OF ILLINOIS SPECIAL PROVISIONS

The following Special Provisions supplement the specifications listed in the table below, which apply to and govern the proposed improvement designated as MFT Section Number 06-00095-00-RS and in case of conflict with any part or parts of said specifications; the said Special Provisions shall take precedence and govern.

SPECIFICATION	ADOPTED/DATED
Standard Specifications for Road and Bridge Construction	January 1, 2007
Manual on Uniform Traffic Control Devices for Streets and Highways Illinois Supplement	2003 Edition November 2004
Supplemental Specifications , Recurring Special Provisions, and BDE Special Provisions (indicated on the sheets included herein)	Latest Edition
Standard Specifications for Water & Sewer Main Construction In Illinois	May 1996, Fifth Edition
Village Of Addison's Standard Specifications For Design And Construction	Ordinance No. O-05-98

DEFINITIONS

Throughout these Special Provisions the following definitions shall apply:

"Village" – Village of Addison

"Department" - Illinois Department of Transportation

"Engineer" - Resident Engineer

LOCATION OF PROJECT

This improvement includes Addison Road (FAU 2642) from IL Route 64 (North Avenue) to U.S. Route 20 (Lake Street) located in the Village of Addison, DuPage County, Illinois. The total length of improvement is 1.59 miles.

DESCRIPTION OF PROJECT

Improvements include the resurfacing of Addison Road, portland cement concrete base repair/patching, spot combination concrete curb and gutter replacement, water main construction and updated water main lateral crossings as well as pavement marking, landscape restoration, and all incidental and collateral work necessary to complete the project as shown on the plans and as described within the project specifications.

GENERAL CONDITIONS

The Contractor's attention is directed to the following:

1. Should the Contractor desire to obtain water for construction purposes from the local area, the Contractor will be responsible for making arrangements through the Addison Public Works Department. Addison Public Works will instruct the Contractor where a potable water supply from a hydrant near the work site is located. The Village shall meter the potable water used by the Contractor and the Contractor will be charged for the water used at the Village rates. The Contractor is responsible for the transportation of the water to the site where needed. The cost of transporting the water shall be considered incidental to the contract. All aspects of the use of the water by the Contractor are considered incidental to the contract.
2. Working Hours / Working Days - Construction activities may occur between 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:30 a.m. to 5:00 p.m. on Saturdays. Construction activities on Sundays are prohibited. No work will be performed on holidays observed in Illinois. Construction activities are defined as the operation of heavy equipment, to include but not limited to all construction trucks and equipment. This is to include the warming up of any piece of equipment or turning on the engines. Construction activities shall not begin before 7:00 a.m.
3. Inspection and Layout - The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions called for on the plans. The Contractor shall be held responsible for the quality and completeness of his work. The Engineer is the Village's representative to verify quality and completeness. Any construction layout necessary shall be coordinated through the Resident Engineer. The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset at his/her expense when any are damaged, lost, displaced, or removed or otherwise obliterated.

4. Temporary Toilet - The Contractor shall provide a temporary toilet facility for the use of all contractors' personnel employed on the work, and shall maintain same in proper sanitary condition. At completion, the facility shall be removed and the premises left clean. The Engineer shall approve the location of the temporary toilet. The cost of this facility is considered incidental to the contract.

5. Disposal of Waste Excavated Material - The Contractor shall remove from the project site all unsuitable excavated material. This material will be classified as all material that the Engineer deems unsuitable, such as rebar, abandoned wire, etc. The waste excavated material shall not be deposited on public or private property unless the Contractor first obtains the written permission from the property owner or the authorized representative of the appropriate public agency. Provisions of Article 202.03 Standard Specifications shall be adhered to. The removal of unsuitable material from the site will be incidental to this contract and no compensation will be paid. The disposal area location shall be disclosed to the Engineer.

The cost of complying with the above General Conditions shall be considered incidental to the contract unless specifically covered elsewhere in the Special Provisions.

CONSTRUCTION LAYOUT STAKES

In addition to the requirements of the SPECIAL PROVISION FOR CONSTRUCTION LAYOUT STAKES (Illinois Department of Transportation Check Sheet #10), the Contractor shall reestablish, monument, and tie all control points used to complete the work as specified including all PI's, PC's, PT's, and POT's.

The type of monumentation used will be PK nails, iron pipes, RR spikes or as approved by the Engineer.

CONSTRUCTION SAFETY AND HEALTH STANDARDS

It is a condition of this contract and shall be made a condition of each subcontract entered into pursuant to this contract that the Contractor and any Subcontractor shall not require any laborer or mechanic employed in performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to their health or safety, as determined under Federal Construction Safety and Health Standards.

KEEPING ROADS OPEN TO TRAFFIC

All roads shall remain open to traffic unless otherwise shown on the contract plans. The Contractor may close one lane because of construction only between the hours of 9:00 AM and 3:00 PM. The Contractor shall maintain one-way traffic during these restricted hours with the use of signs and flagmen as shown on the Traffic Control Standards. Two lanes of traffic will be maintained between 3:00 PM and 9:00AM and when no construction activities are being carried out. The restricted lane closure time provision may be waived at the Resident Engineer's discretion.

When necessary to close one lane because of construction, the Contractor shall maintain one-way traffic during construction hours with the use of signs and flagmen as shown on the Traffic Control Standards. Two lanes of traffic will be maintained during nights and weekends when no construction activities are being carried on.

FINAL SIGN PLACEMENT ON CONSTRUCTION PROJECTS

All signs removed shall be reinstalled 16 to 18 feet off the edge of pavement where possible. In curb sections this will vary and will be determined by the jurisdictional agency (Village or IDOT) or as directed by the Engineer.

All single sign installations shall be installed with the bottom of the sign a minimum of 5 feet above the edge of pavement in rural districts, and 7 feet above the edge of pavement in business, commercial or residential districts. On installations having two or more signs, the bottom of the lowest sign shall be a minimum of 4 feet above the edge of pavement.

All signs replaced shall be erected using new "Telespar" system metal bases cut 42 inches long from 2 1/4 inch square material. They are to be driven into solid ground using pneumatic driver. This work will not be paid for separately but shall be considered incidental to the contract.

CONCRETE BREAKERS

When removing curb and gutter, pavement or any other structure, the Contractor shall take every precaution necessary to ensure that there will be no damage to underground public or private utilities. Under no circumstances will the use of a frost ball concrete breaker be allowed.

STATUS OF UTILITIES TO BE ADJUSTED

Effective: January 30, 1987

Revised: July 1, 1994

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

<u>Name of Utility</u>	<u>Type</u>	<u>Location</u>	<u>Estimated Dates for Start and Completion of Relocation or Adjustments</u>
SBC	Phone/Cable	Throughout	Conflicts T.B.D.
Brian Migliorese			April 2009 thru Nov. 2009
Nicor Gas	Gas	Throughout	Conflicts T.B.D.
Connie Lane			April 2009 thru Nov. 2009
DuPage Water Comm.	Water	Throughout	Conflicts T.B.D.
Michael Schweizer			April 2009 thru Nov. 2009
ComEd	Electric	Throughout	Conflicts T.B.D.
Joe Stacho			April 2009 thru Nov. 2009
Comcast	Phone/Cable	Throughout	Conflicts T.B.D.
Tony Delvaux			April 2009 thru Nov. 2009
BP Pipelines N. Amer.	Gas	Throughout	Conflicts T.B.D.
David Spall			April 2009 thru Nov. 2009
AT&T Local	Phone/Cable	Throughout	Conflicts T.B.D.
Boby Akhter			April 2009 thru Nov. 2009
Addison Public Works	Water/Sanitary	Throughout	Conflicts T.B.D.
John Chrysogelos			April 2009 thru Nov. 2009

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

PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION

All existing drainage structures are to be kept free of debris resulting from construction operations. All work and material necessary to prevent accumulation of debris in the drainage structures will be considered as incidental to the contract. Any debris in the drainage structures resulting from construction operations shall be removed at the Contractor's own expense, and no extra compensation will be allowed. Should reconstruction or adjustment of a drainage structure be required by the Engineer in the field, the necessary work and payment shall be done in accordance with Section 602 and Article 104.02 respectively of the "Standard Specifications".

During construction, if the Contractor's forces encounter or otherwise become aware of any sewers, underdrains or field drains within the right-of-way other than those shown on the plans, they shall inform the Engineer. The Engineer shall direct the work necessary to maintain or replace the facilities in service, and to protect them from damage during construction if maintained. Existing facilities to be maintained that are damaged because of non-compliance with this provision shall be replaced at the Contractor's own expense. Should the Engineer have directed the replacement of a facility, the necessary work and payment shall be done in accordance with Sections 550 and 601 and Article 104.02 respectively of the "Standard Specifications".

LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

Article 107.27 Insurance. In addition to the requirements of this Article, the policy of insurance shall also include as additional insured the Village of Addison and Civiltech Engineering, Inc. and entities designated by the Village.

When requested in writing by the Village, the Contractor shall provide the Village with a certified copy of the policy of insurance for this project including any declarations and endorsements.

MAINTENANCE OF ROADWAYS

Effective: September 30, 1995

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.

RESPONSIBILITY FOR VANDALISM

The contractor shall be responsible for the defacement of any concrete pours before they have set up. Concrete sidewalk, driveway, or curbing that has been defaced, in the opinion of the

Engineer, shall be removed and replaced by the contractor at his expense.

CONSTRUCTION DEBRIS

Add the following to the third paragraph of Article 202.03 of the Standard Specifications:

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

FINE AGGREGATE FOR HOT-MIX ASPHALT (HMA) (DISTRICT ONE)

Effective: May 1, 2007

Revise Article 1003.03 (c) to read:

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

TEMPERATURE CONTROL FOR CONCRETE PLACEMENT (DISTRICT ONE)

Effective: May 1, 2007

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

BACKFILLING STORM SEWER UNDER ROADWAY

Effective: September 30, 1995

Revised: July 2, 1994

For storm sewer constructed under the roadway, backfilling methods two and three authorized under the provisions of Article 550.07 will not be allowed.

USE OF RAP (DIST 1)

Effective: January 1, 2007

Revised: August 1, 2008

In Article 1030.02(g), delete the last sentence of the first paragraph in (Note 2).

Revise Section 1031 of the Standard Specifications to read:

“SECTION 1031. RECLAIMED ASPHALT PAVEMENT

1031.01 Description. Reclaimed asphalt pavement (RAP) is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction. The contractor can also request that a processed pile be tested by the Department to determine the aggregate quality.

1031.02 Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type and size as listed below (i.e. “Homogenous Surface”).

Prior to milling or removal of an HMA pavement, the Contractor shall request the District to provide verification of the quality of the RAP to clarify appropriate stockpile.

- (a) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent:
1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered “homogenous” with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.
- (b) Conglomerate 5/8. Conglomerate 5/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All

conglomerate 5/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate 5/8 RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

- (c) Conglomerate 3/8. Conglomerate 3/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 3/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 3/8 in (9.5mm) or smaller screen. Conglomerate 3/8 RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (d) Conglomerate Variable Size. Conglomerate variable size RAP shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate variable size RAP shall be processed prior to testing by crushing and screening to where all RAP is separated into various sizes. All the conglomerate variable size RAP shall pass the 3/4 in. (19mm) screen and shall be a minimum of two sizes. Conglomerate variable size RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (e) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low Esal), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an in consistent gradation and/or asphalt binder content. Conglomerate DQ Rap stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (f) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

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

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

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

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

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

- (a) Testing Conglomerate 3/8 and Conglomerate Variable Size. In addition to the requirements above, conglomerate 3/8 and variable size RAP shall be tested for maximum theoretical specific gravity (G_{mm}) at a 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).
- (b) Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	Homogeneous/ Conglomerate	Conglomerate "D" Quality
1 in. (25 mm)		± 5 %
3/4 in. (19mm)		
1/2 in. (12.5mm)	± 8 %	± 15 %
No. 4 (4.75 mm)	± 6 %	± 13 %
No. 8 (2.36 mm)	± 5 %	
No. 16 (1.18 mm)		± 15 %

No. 30 (600 μ m)	$\pm 5.0\%$	
No. 200 (75 μ m)	$\pm 2.0\%$	$\pm 4.0\%$
Asphalt Binder	$\pm 0.4\%$ ^{1/}	$\pm 0.5\%$
G _{mm}	$\pm 0.02\%$ ^{2/}	
G _{mm}	$\pm 0.03\%$ ^{3/}	

- 1/ The tolerance for conglomerate 3/8 shall be $\pm 0.3\%$.
- 2/ Applies only to conglomerate 3/8. When variation of the G_{mm} exceeds the $\pm 0.02\%$ tolerance, a new conglomerate 3/8 stockpile shall be created which will also require an additional mix design.
- 3/ Applies only to conglomerate variable size. When variation of the G_{mm} exceeds the $\pm 0.03\%$ tolerance, a new conglomerate variable size stockpile shall be created which will also require an additional mix design.

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

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

1031.04 Quality Designation of Aggregate in RAP. The quality of the RAP shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (a) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) surface mixtures are designated as containing Class B quality coarse aggregate.
- (b) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder and IL-9.5L surface mixtures are designated as Class D quality coarse aggregate.
- (c) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.

(d) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

1031.05 Use of RAP in HMA. The use of RAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.
- (c) Use in HMA Surface Mixtures (High and Low ESAL). RAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be either homogeneous or conglomerate 3/8 or variable size in which the coarse aggregate is Class B quality or better.
- (d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be homogeneous, conglomerate 5/8, or conglomerate 3/8, conglomerate variable size, in which the coarse aggregate is Class C quality or better.
- (e) Use in Shoulders and Subbase. RAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be homogeneous, conglomerate 5/8, conglomerate 3/8, conglomerate variable size, or conglomerate DQ.
- (f) The use of RAP shall be a contractor's option when constructing HMA in all contracts. When the contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table for a given N Design.

Max Mix Rap Percentage

HMA Mixtures ^{1/3"}		Maximum % Rap	
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
30	30/40 ^{2/}	30	10
50	25/40 ^{2/}	15/25 ^{2/}	10
70	25/30 ^{2/}	10/20 ^{2/}	10

90	10/15 ^{2/}	10/15 ^{2/}	10
105	10/15 ^{2/}	10/15 ^{2/}	10

- 1/ For HMA Shoulder and Stabilized Sub-Base (HMA) N-30, the amount of RAP shall not exceed 50% of the mixture.
- 2/ Value of Max % RAP If 3/8 Rap or conglomerate variable size RAP is utilized.
- 3/ When RAP exceeds 20%, and used in an overlay and AC shall be PG 58-22. When used in full depth HMA, base course, shoulders, or stab subbase the AC shall be PG58-28.

1031.06 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP material meeting the above detailed requirements.

RAP designs shall be submitted for volumetric verification. If additional RAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP stockpile and HMA mix design; and meets all of the requirements herein, the additional RAP stockpiles may be used in the original mix design at the percent previously verified.

1031.07 HMA Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP and either switch to the virgin aggregate design or submit a new RAP design. When producing mixtures containing conglomerate 3/8 or conglomerate variable size RAP, a positive dust control system shall be utilized.

HMA plants utilizing RAP shall be capable of automatically recording and printing the following information.

(a) Drier Drum Plants

- (1) Date, month, year, and time to the nearest minute for each print.

- (2) HMA Mix number assigned by the Department
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton)
- (4) Accumulated dry weight of RAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton)
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP material (per size) as a percent of the total mix to the nearest 0.1 unit.
- (8) Aggregate and RAP moisture compensators in percent as set on the control panel (Required when accumulated or individual aggregate and RAP are printed in wet condition).

(b) Batch Plants

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram)
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) Individual RAP Aggregate weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram)
- (7) Residual asphalt binder of each RAP size material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as

directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Other". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

HOT-MIX ASPHALT – DENSITY TESTING OF LONGITUDINAL JOINTS (D-1)

Effective: January 1, 2007
Revised: February 26, 2008

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). This work shall be according to Section 1030 of the Standard Specifications except as follows.

Definitions:

Density Test Location: The station location used for density testing.

Density Test Site: Individual test site where a single density value is determined.

Density Reading: A single, one minute nuclear density reading.

Density Value: The density determined at a given density test site from the average of two "density readings".

Quality Control / Quality Assurance (QC/QA)

1030.05(d) (3) add the following paragraphs:

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 two inches, from each pavement edge. For Example, on a four inch HMA lift the near edge of the nuclear gauge or core barrel shall be within four inches from the edge of pavement. The remaining 3 density test sites shall be equally spaced between the two edge readings. Documentation shall indicate whether the joint was confined or unconfined.

The joint density value shall be determined using either a correlated nuclear gauge or cores. When using a correlated nuclear gauge, two "density readings" shall be taken at the given density test site. The gauge shall be rotated 180 degrees between "density readings". If the two "density readings" are not within 1.5 lb/cu ft (23 kg/cu m) then one additional "density reading" shall be taken. Additional "density readings" taken at a given site shall not be allowed to replace the original "density readings" unless an error has occurred (i.e. the nuclear gauge was sitting on debris).

ABANDON EXISTING WATER MAIN:

Description. This work shall consist of abandonment of existing water main only after all requirements for testing and disinfection have been satisfied on the new main and all existing services have been connected to the new main. All exposed ends of existing water main to be abandoned at the limits of trench excavation shall be plugged with mortar to the satisfaction of the Engineer or Village.

Provide ductile iron plugs, caps or other fittings and thrust blocking, on ends of portions of existing mains that are to remain in service.

Method of Measurement. The work will be measured for payment in place for each abandoned water main.

Basis of Payment. This work will be paid for at the contract unit price for each ABANDON EXISTING WATER MAIN, regardless of size.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS

Effective: April 1, 2001

Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

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

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

- (a) Private Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). The maximum grade shall be eight percent, except as required to match the existing grade.
- (b) Commercial Entrance. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Road. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface 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.”

BASE FOR TELESCOPING SIGN SUPPORT, SPECIAL

Description: This work shall consist of furnishing and installing a permanent underground base for a 2"x2" Telescoping Steel Sign Support Post. This base will be required when the support signs are to be installed on sidewalks, median islands or other concrete locations.

Materials shall be in accordance with the following;

1. STEEL TUBE. The steel tube shall have an outside dimension of 70mm x 70mm (2.756 inches by 2.756 inches). The length of the square tube shall be a minimum of 300mm (11.91 inches). The wall thickness must be 3.2mm (.125 inches). Two 90° flanges are to be welded on opposing sides of the square tube. The flanges will be located on the center line of the width of the tube, 152mm (6 inches) from the end of the tube. The flange will have a wall thickness of 3.2mm (.125 inches) and a total length of 63.5mm (2.50 inches). The entire tube is to be hot dipped galvanized so that the minimum uniform zinc coating is .053mm (.0021 inches).
2. POLYURETHANE SLEEVE. The polyurethane sleeve will consist of two sleeves. The lower sleeve will have a base which measures 79mm x 79mm (3.07 inches x 3.07 inches) with a minimum thickness of 5mm (.19 inches). The lower sleeve will narrow to 63.5mm (2.5 inches) where the sleeve fits inside the steel tube. The sleeve will have a thickness of .12mm (.47 inches). The overall height of the sleeve will measure 70mm (2.75 inches) with 65mm (2.55

inches) fitting inside the tube. A tapered opening will be 60mm (2.36 inches) deep to allow the square post to easily fit inside the sleeve. The beginning of the taper will measure 55mm (2.16 inches) and narrow to 51.1mm (2.03 inches) and at the end of the 12mm (.47 inch) long taper.

The upper sleeve will have a 52mm x 52mm (2.05 inch x 2.05 inch) opening to allow passage of 2"x2" square tube. The top of the upper sleeve will have flange 24mm (.93 inch) thick which measures 65mm x 65mm (2.55 inches x 2.55 inches) on the outside dimension. The flange tapers to a thickness of 5mm (.19 inches) to create an overall outside dimension of 79mm x 79mm (3.11 inches x 3.11 inches). The upper sleeve will measure 65mm x 65mm (2.55 inches x 2.55 inches) where the sleeve fits inside the galvanized steel tube. The thickness of the sleeve inside the tube will be 14mm (.55 inches). The sleeve has a surface of 70mm (2.75 inches) in length.

The polyurethane has the following general properties:

Shore hardness A	65	ASTM D2240
Tensile strength	22.6 Mpa	
Split tear	22 Kn/m	ASTM D470
Compression set	16%	ASTM D395

The base will be measured for payment in individual units complete in place.

This work will be paid for at the contract unit price each BASE FOR TELESCOPING SIGN SUPPORT, SPECIAL.

BITUMINOUS MATERIALS (PRIME COAT)

Prime coat shall meet the requirements of Article 406.06 (b) of the "Standard Specifications for Road and Bridge Construction" with the following revisions and additions:

Emulsified asphalt shall only be used between the dates of May 15th and September 1st. On or before May 15th and on or after September 1st, RC-70 asphalt shall be used in lieu of emulsified asphalt.

On days between May 15th and September 1st, when the air temperature is in question, the exact type of priming asphalt shall be determined by the Engineer.

Shields, covers or other suitable equipment shall be provided by the Contractor to protect the

motoring public, adjoining pavement, curbs, or structures during the application of prime coat. The Contractor shall be required to present a weight ticket of the truck load prior to applying the prime coat. After application the truck shall then be weighed again in order to determine the net weight of prime coat that has been placed. Both tickets shall be stamped by a certified weighmaster.

The Contractor shall erect (to the Engineer's satisfaction) 36 inch (minimum) FRESH OIL AHEAD signs prior to the prime coat application. Prime coat material shall be SS-1 on existing bituminous surfaces and MC30 on aggregate surfaces (subject to the date and temperature restrictions indicated above). This work shall be paid for at the contract unit price per gallon for BITUMINOUS MATERIALS (PRIME COAT).

CATCH BASINS, TYPE C, TYPE 8 GRATE or SPECIAL FRAME AND GRATE

This work shall be performed in accordance with the requirements of Section 602 of the "Standard Specifications", and Standard Drawing 602011, except as noted herein:

The structure wall thicknesses shall be a minimum of 6-inches.

Basis of Payment. This work will be paid for at the contract unit price each for CATCH BASINS, TYPE C, Type 8 Grate and CATCH BASINS, TYPE C, With Special Frame and Grate.

CLEANING EXISTING DRAINAGE STRUCTURES

Effective: September 30, 1995

Revised: January 1, 2007

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. This work will be paid for in accordance with Article 602.16.

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

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.

CONCRETE CURB, TYPE M (SPECIAL)

CONCRETE CURB, TYPE M (SPECIAL) shall be constructed in accordance with applicable Village of Addison's Standards and Specifications for Design and Construction, Addison Standard 701B- COMBINATION CONCRETE CURB AND GUTTER - TYPE M, and in accordance with the requirements of Section 606 of the IDOT Standard Specifications.

CONCRETE CURB, TYPE M (SPECIAL) will be paid for at the contract unit price per foot.

CONNECTION TO EXISTING WATER MAINS (NON-PRESSURE):

Description. This work shall consist of the connection of the proposed water main to the existing water main at locations shown on the Plans. It shall be performed in accordance with applicable portions of Section 41 of the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition.

The work shall include all necessary equipment necessary to physically make the connection. Any reducers, cutting-in sleeves, or any other fitting near/or as result of the connection, shall be installed and paid for according to the DUCTILE IRON WATER MAIN FITTINGS special provision.

CONSTRUCTION REQUIREMENTS

Proposed water main shall be connected to existing water main after the new main has passed hydrostatic testing and disinfection. Connections shall be accomplished by use of mechanical joint fittings and lengths of pipe to make the most direct vertical and horizontal adjustments necessary to make the connection. This may include cut-ins to the existing main or connections to existing valves or fittings. This work will require water shut-off, which shall be coordinated with the Village's maintenance personnel for date, time and duration of shut-off. The Village Public Works shall be notified a minimum 48 hours prior to the planned water disruption.

New fittings and pipe that need to be put into immediate service shall be flushed and swabbed with 5 percent solution of calcium hypochlorite prior to assembly as approved by the Engineer and/or Village.

Method of Measurement. The work will be measured for payment in place for each non-pressure connection made to an existing water main.

Basis of Payment. This work will be paid for at the contract unit price for each CONNECTION TO EXISTING WATER MAINS (NON-PRESSURE), regardless of size, which includes necessary equipment to physically make the connection, polyethylene wrapping, disinfection, testing, and thrust blocking.

Water main fittings and valves shall be paid for separately as DUCTILE IRON WATER MAIN FITTINGS, of the type and size specified and WATER VALVE, VALVE VAULT, or VALVE BOX of the sizes specified, respectively.

CURB RAMPS FOR SIDEWALKS

Curb ramps for sidewalks shall be constructed in accordance with the Village of Addison's Standards and the IDOT Highway Standard 424001. Ramps will be constructed at all driveway and crosswalk locations or as designated by the Engineer. The Engineer shall determine which type of ramps shall be constructed, and the curb and gutter will be installed accordingly.

The cost of this work will be included in the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK, 5" and per foot for COMBINATION CURB AND GUTTER REMOVAL.

DETECTABLE WARNINGS

This work shall consist of the construction of Detectable Warnings at the locations shown on the plans in accordance with Section 424 of the Standard Specifications except as noted herein.

Detectable warnings shall be a cast-in-place system. Stamped concrete will not be allowed. The color of the detectable warning surface shall be brick red. Detectable warnings shall be cast-in-place systems manufactured by Detectable Warning Systems, Inc (EZ Set Polymer Concrete Panel), Armor Tile (Cast in Place systems), or approved equal.

The detectable warning panels shall be installed according to the manufacturer's recommendations. The panels shall be placed into sidewalk meeting the requirements listed in the special provision "Portland Cement Concrete Sidewalk, 5".

Measurement for detectable warnings shall be per square foot.

Payment for DETECTABLE WARNINGS will be made at the contract unit price per square foot. Payment shall be full compensation for all materials, labor, excavation, portland cement concrete sidewalk, aggregate base, equipment and incidentals to complete the item as shown on the plans and as specified.

DRILL AND GROUT DOWEL BARS AND TIE BARS

Work under this item shall be performed in accordance with sections 442, 420, and 1000 of the Standard Specifications, except as herein modified.

This work shall consist of the materials, furnishing and installing epoxy coated dowel and tie bars in existing Portland Cement Concrete (PCC) bases where new PCC Curbs and Gutters and new PCC Bases are poured against existing PCC Bases at locations shown on the Plans and as designated by the Engineer.

Materials shall meet the requirements of Article 1006.06 of the Standard Specifications for Dowel Rods and Article 1024.01 of the Standard Specifications for Nonshrink Grout or one of the approved chemical adhesives as listed by the Bureau of Materials and Physical Research. Epoxy adhesives shall not be allowed.

Bars shall be located on centers as indicated on the plans and standards. Individual bar locations shall be shifted at least 5-inches away from existing cracks, joints and unsound concrete. Holes for dowel bars shall be drilled with suitable equipment for this purpose to the depth shown and to a diameter large enough to allow grouting around the dowel bar or tie bar. The dowel bars or tie bar shall be secured in the drilled holes with nonshrink grout. The grout shall be allowed to cure before the concrete for new curb and gutters and bases are poured.

This work will be not be paid for separately but instead shall be considered as incidental to cost of CONCRETE CURB AND GUTTER REMOVAL, CONCRETE CURB AND GUTTER, CLASS B PATCHES and PORTLAND CEMENT CONCRETE BASE COURSE of the size and thickness indicated on the plans.

DRIVEWAY PAVEMENT REMOVAL

This work shall be done in accordance with Section 440 of the "Standard Specifications" and

includes all driveway pavement types including aggregate, aggregate hot-mix asphalt surfaced, and/or portland cement concrete.

This work will be measured and paid for at the contract unit price per square yard for DRIVEWAY PAVEMENT REMOVAL.

DUCTILE IRON WATER MAIN 6", 8", 10" and 12"

Description. This work shall consist of furnishing all labor, materials and equipment necessary to install ductile iron water main, of the size and joint type specified to the alignment, grade and locations shown on the Plans.

Water main shall be ductile iron, class 52, bituminous seal coated pipe and cement mortar lining per AWWA C104/ANSI 121.4 (Griffen, Clow, US Pipe or approved equal), with mechanical or rubber gasket push-on joints "Bell-Tile" per ANSI A21.11 (AWWA C111 and AWWA C600). All materials shall be made in the United States.

All mechanical joint fittings which deflect the flow 11-112 degrees or greater shall have a thrust block. Thrust blocks shall be pre-cast concrete blocks of the dimensions shown on the drawings. They shall also be provided with Meg-A-Lug Retaining Glands for the appropriate diameter.

The flanged fittings requiring bases shall have the base flange machined and drilled in accordance with AWWA C110.

Polyethylene encasement shall be wrapped around all ductile iron pipe and fittings. The polyethylene material shall be Class C (black) in conformance with the requirements of ANSI A21.5 and AWWA C-105. The minimum nominal thickness shall be 8 mils (0.0008 inches) and the minus thickness tolerance shall not exceed 1-percent of this nominal thickness. The wrap shall be Griffen, Clow or equal. All material shall be manufactured in the United States.

CONSTRUCTION REQUIREMENTS

Ductile Iron Pipe: The Contractor shall furnish and install water main in accordance with the Plans, the requirements stated herein, and Divisions II and IV of the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition and applicable ordinances of the Village of Addison. The section of the "Standard Specifications for Water and Sewer Main Construction in Illinois" relating to this item are as follows:

DIVISION II EXCAVATION AND CLEAN UP

Section 20 - Excavation and Backfill for Underground Conduits
Section 21 - Restoration of Surfaces
Section 22 - Finishing and Clean Up for Underground Conduits
Section 40 - Pipe for Watermains and Service Connections
Section 41 - Pipe Installation for Watermains

The following requirements are in addition to the above referenced construction standards:

Open Excavation

All trenches located in a street pavement shall include full depth saw cutting of existing pavement prior to excavation of pavement and trench materials. This work is included in the ductile iron water main pay item. All excavations located in a street pavement shall be backfilled by the end of the workday and shall not be left open overnight. Trenches not located in a pavement may be left open only if surrounded by construction fence and barricades with flashing lights.

Granular Bedding

The Contractor shall furnish, install and compact granular bedding around the pipe as shown on the detail in the Plans for entire length of the pipe in accordance with the detail shown on the plans. Bedding material shall meet the gradation of IDOT CA-6. The bedding shall be compacted as indicated on the Plans. The cost of the bedding shall be included in the water main.

Ductile Iron Fittings: The Contractor shall install ductile iron fittings in accordance with the DUCTILE IRON WATER MAIN FITTINGS special provision.

Polyethylene Encasement: The Contractor shall furnish and install polyethylene encasement in accordance with the Plans, the requirements stated herein, the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition and applicable ordinances of the Village of Addison. The polyethylene liner shall prevent contact between the pipe and the surrounding backfill and bedding material but is not intended to be a completely air and water tight enclosure. Overlaps shall be secured by use of polyethylene tape capable of holding polyethylene liner in place until backfilling operations are completed. The encased pipe shall be lowered into the trench using a sling that will not tear the polyethylene liner.

Wrap all water mains, fittings, valves, fire hydrant leaders, fire hydrants, and service lines. Wrap copper service lines to a point 3 feet from the center of the water main. Do not block fire hydrant

weep hole.

Pressure Tests: All piping shall be subject to pressure tests as specified herein. After the pipe has been laid and partially backfilled, the pipe shall be subjected to a hydrostatic pressure equal to 150 psi at the lowest elevation of the pipe section. The duration of each pressure test shall be for a period of two hours, and the pressure shall not drop more than 5 psi over this duration. The basic provisions of AWWA C-600 and C-603 shall apply.

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

Leakage Test: After completion of the pressure test, a leakage test shall be conducted to determine the quantity of water lost by leakage under the specified test pressure. Test pressure is defined as the maximum operating pressure of the section under test and is based on the elevation of the lowest point in the line or section under test corrected to the elevation of the test gauge. Applicable provisions of AWWA C-600 and C-603 shall apply. Duration of each leakage test shall be a minimum of one (1) hour in addition to the pressure test periods. A table of allowable leakage is listed below:

Allowable Leakage for Pipeline per 1,000 ft – gph

Avg. Test Pressure PSI	Pipe Size in Inches					
	6	8	12	14	16	20
200	0.64	0.85	1.28	1.49	1.70	2.12
175	0.60	0.80	1.19	1.39	1.59	1.98
150	0.55	0.74	1.10	1.29	1.47	1.84
125	0.51	0.67	1.01	1.18	1.34	1.68
100	0.45	0.60	0.90	1.05	1.20	1.50
80	0.41	0.54	0.81	0.94	1.08	1.35
60	0.35	0.47	0.70	0.82	0.94	1.14

Disinfection: All water main and piping shall be flushed and satisfactorily disinfected in

accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois." The method of applied chlorine shall be approved by the Engineer and/or Village.

Permanent Markers: The Contractor shall install permanent markers in the concrete curb identifying the points where the curb crosses the service trench. A permanent marker shall be embedded in the vertical or horizontal face of the curb at all crossing points before the concrete hardens. The marker shall be the letter "W" and shall measure 3 inches in height. Materials may be metal, plastic, or other material approved by the Engineer. If service line is installed under an existing curb, the Contractor shall saw cut into the concrete curb a "W" to mark the location of the water service line. This marker shall measure at least 3 inches in height.

Method of Measurement. This work will be measured in lineal feet along the centerline of the pipe, and the measurement shall extend through fittings and valves.

Basis of Payment. This work will be paid for at the contract unit price per lineal foot for DUCTILE IRON WATER MAIN or DUCTILE IRON WATER MAIN RESTRAINED JOINT TYPE, of the pipe sizes, joint type and material specified, regardless of depth, which price shall include all accessories required, including thrust blocks, polyethylene encasement, Meg-A-Lugs, excavation, bedding and initial pipe covering, testing and disinfection, and detectable tape.

Water main fittings shall be paid for separately as DUCTILE IRON WATER MAIN FITTINGS.

DUCTILE IRON WATER MAIN FITTINGS

Description. This work shall consist of furnishing and installing ductile iron water main fittings complete in place to the new water main at locations indicated on the Plans, in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition and applicable ordinances of the Village of Addison.

Fittings shall be cement lined, tar coated ductile iron with mechanical or push joints rated 250 psi per AWWA C110/ANSI 21.10 (Clow, US Pipe or equal). Fittings in vaults shall be mechanical joint. All fittings shall have a bell and/or spigot configuration identical to that of the pipe. All

materials shall be made in the United States. All tees, bends and MJ fittings are to be retained using meg-a-lugs, retaining glands and blocking.

Method of Measurement. The work will be measured for payment as follows:

Reducers will be measured for payment in place for each installed.

Tee's will be measured for payment in place for each installed.

Bend's will be measured for payment in place for each installed.

Abandon existing water main's will be measured for payment in place for each installed.

Cutting-in sleeves will be measured for payment in place for each installed.

Basis of Payment. This work will be paid for at the contract unit price for each DUCTILE IRON WATER MAIN REDUCER; DUCTILE IRON WATER MAIN TEE; DUCTILE IRON WATER MAIN BEND; ABANDON EXISTING WATER MAIN and DUCTILE IRON WATER MAIN CUTTING-IN SLEEVE; of the type and size(s) specified.

DUST CONTROL WATERING

This work shall consist of applying a dust retardant to the project areas at the request of the Engineer.

This work shall be done in accordance with Article 107.36 of the "Standard Specifications" except as modified herein.

The Contractor may use any dust retardant he so chooses as long as the specified dust retardant has been approved by the Engineer. Should the Contractor choose to use dust retardant to aid in the prosecution of his/her work, the product used must be approved by the Engineer. If applied at the discretion of the Contractor, no additional compensation shall be allowed.

The dust retardant shall consist of a non-toxic, non-hazardous, and non-flammable material.

For this pay item, one unit of **DUST CONTROL WATERING** is considered to be 1000 gallons of the approved dust retardant used. The Contractor shall ensure that any piece of equipment used for the applying of the dust retardant shall be equipped with a metering device to account for the quantity of dust retardant used. For each day that dust retardant is applied, the Contractor and the Engineer shall agree on the volume of dust retardant used.

This work shall be paid for at the contract unit price per unit for **DUST CONTROL WATERING**, which price shall include all labor, materials, and equipment necessary to perform the work herein.

EARTH EXCAVATION

This work shall be performed in accordance with Section 202 of the Standard Specifications with the following alterations:

Add the following:

Construction Requirements. The following is an estimated list of items of work for bidding information purposes only, and describes the essential elements of the EARTH EXCAVATION pay item:

ITEM	UNIT	QUANTITY
Profile Changes & Overcut within the Right-of-Way & the Proposed Sidewalk	CU YD	1,285

Proposed Grade Changes are defined as the quantity of excavation required for re-grading to match the proposed grade at the right-of-way or sidewalk. Proposed Sidewalk is defined as the quantity of excavation necessary to place sub-base and sidewalk as further described elsewhere in these contract documents. The above quantities include any required topsoil stripping but do NOT include undercutting of unsuitable sub-grade soils, which is paid for separately under the contract pay item REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL.

For quantity estimation purposes, it has been assumed that all material excavated as EARTH EXCAVATION shall be removed from the job site by the Contractor. All required embankment shall be paid for as FURNISHED EXCAVATION.

The following is an estimated item of work for bidding information purposes only, and describes the essential elements the REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL pay item.

ITEM	UNIT	QUANTITY
Unsuitable Material / Undercuts	CU YD	50

At locations where existing pavement removal and excavation is indicated in the plans, or as otherwise directed by the Engineer, it may be necessary to remove underlying unsuitable soils. It is understood and agreed that the actual need for removal of unsuitable material will be determined in the field at the time of construction by the Engineer. Excavation for the removal of unsuitable soils is to begin at the individual soil boring locations where unsuitable soils are identified (refer to the roadway soils investigation by Midland Standard Engineering & Testing,

dated October 12, 2006 included herein) and will progress outward from the soil boring location until suitable sub-base material is exposed.

The limits of unsuitable material shown in the plans are estimated, and where unstable soils are encountered the soils removed and replaced will be measured for payment. If unstable soils are not encountered, the quantities will be deducted and no additional compensation will be due the Contractor. All unsuitable material shall be removed from the site and disposed of according to Article 202.03. The resulting excavation shall be backfilled with porous granular embankment, special or as specified elsewhere herein.

Basis of Payment. Earth excavation will be paid for at the contract unit price per cubic yard for EARTH EXCAVATION, which price shall include other items of work included under the general heading of earthwork for which no payment item is included in the contract.

EXCELSIOR BLANKET, SPECIAL

In order to prevent erosion, assist in germination of the seeds, and protect the seeds, all areas receiving pulverized topsoil, fertilizer, and seed shall be covered by Excelsior Blanket.

Material. Unless otherwise approved by the Village Engineer, the Excelsior Blankets shall be Curlex Single Net (Curlex I) or Curlex Double Net (Curlex II) Excelsior Blanket. Unless otherwise approved by the Village Engineer, the color of the Excelsior Blanket shall be "QuickGRASS Green". The Excelsior Blanket shall have been machine-produced of a specific cut of Great Lakes Aspen curled wood excelsior with a minimum 90% six-inch long fibers (or greater fiber length). The blanket shall be of consistent thickness, with fibers evenly distributed throughout the entire area of the blanket. The weight of the blanket shall be approximately 0.73 pounds per square yard. The blanket shall be smolder-resistant without the use of chemical additives. If the Curlex I blanket is provided, then the top of each blanket shall be covered with tough photo-degradable or bio-degradable netting. If the Curlex II blanket is provided, then the top and bottom of each blanket shall be covered with tough photo-degradable or bio-degradable netting. The Curlex I or Curlex II blanket shall not contain any weed seed or chemical additive.

Manufacturer's Literature and Samples. If a specified Excelsior Blanket is utilized, then the contractor need not provide any manufacturer's literature or sample of the Excelsior Blanket. If the contractor proposes to provide an Excelsior Blanket other than the specified blankets, then he shall provide to the Village three copies of the manufacturer's literature and a sample of the proposed material. The Village Engineer will compare a sample of the specified materials with the sample of the proposed material to determine if the proposed material meets the Village's requirements. If the Village Engineer determines that the proposed material is not equal to or better than one of the specified materials, then the contractor shall either provide one of the specified materials or shall submit literature and a sample for a different material.

Installation. The contractor shall not place the Excelsior Blanket until the Village Engineer has approved the placement of the pulverized topsoil and the spreading of fertilizer and seed. The Excelsior Blanket shall be staked to the ground with wire staples having legs 6 inches or longer in length. The placement of the staples and the placement of the Excelsior Blanket shall be in accordance with the manufacturer's instructions. If, in the opinion of the Village Engineer, the thickness of the Excelsior Blanket is inadequate in certain locations (to protect the seed and to protect the soil from erosion), then the contractor shall place a second blanket on top of the first blanket.

Method of Measurement. Excelsior Blanket spread over the pulverized topsoil, seed, and fertilizer area marked by straight lines for the placement of pulverized topsoil will be measured for payment in square yards (SY). If placement of a second blanket over the first is necessary because of inadequate thickness of the first blanket, then the second blanket will not be paid for. Unless otherwise approved by the Village Engineer, the area for the Excelsior Blanket will be the same area as for the pulverized topsoil that will be paid for. Excelsior blanket placed outside of the designated limits will not be measured for payment. Any Excelsior Blanket that is placed at a later date (to alleviate problems at settled areas) will not be measured for payment.

Basis of Payment. The furnishing and placing of Excelsior Blanket will be paid for as EXCELSIOR BLANKET, SPECIAL at the contract unit price per square yard (of area that is covered by the Excelsior Blanket). The unit price shall include all necessary materials, equipment, labor, and incidentals to provide and to spread the Excelsior Blanket to the satisfaction of the Village Engineer.

EXPLORATION TRENCH, SPECIAL

This work shall be done in accordance with Section 213 of the Standard Specifications except as modified herein. This item shall consist of excavating a trench at the locations directed by the Engineer for the purpose of locating existing TILE LINES, GAS LINES, and other UTILITIES within the construction limits of the proposed improvement.

The trench shall be deep enough to expose the utility, and the width of the trench shall be sufficient to allow proper investigation to determine if the utility needs to be replaced.

After the trench has been inspected by the Engineer, the excavated material shall be used to backfill the trench. When directed by the Engineer, the exploration trench shall be backfilled with trench backfill meeting the requirements of the Standard Specifications. This shall be paid for at the contract unit price for trench backfill.

An estimated length of exploration trench has been shown in the summary of quantities to establish a unit price only, and payment shall be based on the actual length of trench explored without a change in unit price because of adjustment in plan quantities.

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

FILLING VALVE VAULTS

Description. This work shall consist of removing existing valves and filling existing valve vaults at locations shown on the Plans. This work shall be completed in conformance with Section 605 of the "Standard Specifications for Road and Bridge Construction," latest edition.

CONSTRUCTION REQUIREMENTS

The Contractor shall close the existing gate valve prior to removing. Existing valve vaults shall have rings and case removed and filled in. Cut off valve vaults a minimum of 2 feet below the final grade and fill with granular backfill. Any remaining pipe or appurtenances shall remain and will be buried.

Any valves removed shall remain the property of the Village and shall be delivered to a site designated by the Village.

Method of Measurement. The work will be measured for payment in place for each abandoned valve vault.

Basis of Payment. This work will be paid for at the contract unit price for each FILLING VALVE VAULTS, regardless of size, which includes backfill, salvaging, and delivering removed valves to the Village.

FIRE HYDRANTS TO BE REMOVED

Description. This work shall consist of removing existing fire hydrants, auxiliary valves, and valve boxes at locations shown on the Plans. This work shall be completed in conformance with Sections 564 and 605 of the "Standard Specifications for Road and Bridge Construction," latest edition.

CONSTRUCTION REQUIREMENTS

The Contractor shall close the existing gate valve prior to removing hydrant. The existing fire hydrant with auxiliary valve shall be removed and main shall be plugged at locations as shown on the Plans. The hole left by the removal shall be backfilled to the satisfaction of the Engineer or Village with granular backfill.

Both the hydrant and valve shall remain the property of the Village. The Contractor shall assist the Village in placing the salvaged hydrants and valves removed in an area designated by the Village or Engineer. The Contractor shall assist the Village in the loading and/or transport of all hydrants and valves removed to a location designated by the Village.

Method of Measurement. The work will be measured for payment in place for each fire hydrant removed.

Basis of Payment. This work will be paid for at the contract unit price for each FIRE HYDRANTS TO BE REMOVED, which includes backfill, salvaging, and delivering removed hydrants and valves to the Village.

FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX:

Description. This work shall consist of furnishing all labor, materials and equipment necessary to install fire hydrants with auxiliary valves and boxes at locations shown on the Plans in accordance AWWA Standard C502, the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition and applicable ordinances of the Village of Addison. All hydrants shall be Eddy F-2640 with a breakaway flange (no equals). Hydrants shall be 6" with 5-1/4" main valve opening, two 2-1/2" hose nozzles and one 4-1/2" pumper nozzle with National Standard threading. Hydrant shall have safety stem couplings and safety flange. Hydrants shall open counterclockwise and shall be furnished with a mechanical joint inlet. Hydrants shall have field locking gaskets and Meg-A-Lugs. All hydrants shall be painted yellow (Dura King-457-57 School Bus Yellow Truck-Tractor Implement Enamel). Hydrants shall include an auxiliary valve with box along with a connection to the water main. All materials shall be manufactured in the United States.

All nozzles shall be fitted with cast iron threaded caps securely connected to the fire hydrant with 1/8 inch thick chain. An operating nut on the end of the cap shall be of the same design and proportions as the fire hydrant stem nut. Caps shall be threaded to fit the corresponding nozzles and fitted with suitable gaskets for positive water tightness under pressure tests. After testing, all nozzles and caps shall have their threads greased.

A 6-inch auxiliary valve shall be provided for each hydrant. The auxiliary valve shall be connected directly to the water main with a locking hydrant tee in non-paved areas only. In paved areas, the fire hydrant shall be connected by using ductile iron water main with Meg-A-Lug connections. The auxiliary valve shall be a resilient wedge gate valve. The ends of the gate valve shall consist of flanged or mechanical joints. The valve shall be designed for a minimum pressure of 175 psi. Auxiliary valves shall be provided with a cast iron valve box. Auxiliary valves shall be manufactured by Mueller, Clow, Waterous or approved equal. All fittings shall be installed with field lock gaskets or Meg-A-Lugs.

Cast iron valve boxes with the word "WATER" imprinted in the lid shall be used. All valve boxes shall be an adjustable Bimham & Taylor, Central States Foundry, Tyler, or approved equal. All work shall be completed in accordance with the drawings and the requirements stated herein.

The hydrant and auxiliary valve and box shall be installed in accordance with AWWA C600. The Contractor shall inspect all fire hydrants in the field upon delivery to the job site to insure proper operation before installation. The hydrant shall be set on a concrete block, 12"x12"x8" in size, to ensure a firm bearing for the hydrant base. Additional concrete blocks a minimum of 12 inches thick shall be placed in the back of the hydrant. The concrete blocks shall extend from the hydrant to undisturbed soil. Wood wedges may be used to ensure a solid fit. Care shall be taken to ensure that weep holes are not covered by the concrete blocks. Cast-in-place concrete blocking will not be allowed. A minimum of one (1) cubic yard of washed gravel shall be placed at and around the base of the hydrant to insure proper drainage of the hydrant after use. A layer of filter fabric shall be installed over the gravel drain field before backfilling begins. Fire hydrants shall be set in a vertical position, and staked in place to insure the hydrant stays in a permanent vertical position. All hydrants shall be adjusted to finish grade with the closest edge of the hydrant no closer than 3 feet from the back of curb and no more than 4 feet. Hydrants shall be located a minimum of 6 feet away from the edge of any existing or proposed driveway. Centerline of the pumper nozzle shall be 1824 inches above finish grade. The break flange is be no higher than 3 inches above finish grade.

The base of the hydrant, valve, and pipe shall be wrapped with polyethylene in accordance with the DUCTILE IRON WATER MAIN special provision.

A screw type cast iron valve box shall be set in position during the backfilling so that it will be in vertical alignment to the gate valve operating stem. The lower part of the unit shall be installed on concrete blocks in such a manner as to not rest directly on the body of the gate valve, or on the water main. The upper part of the valve box shall be placed and adjusted to finish grade. CA-6 crushed and compacted stone shall be utilized to backfill all around the operating

nut on all valves and valve boxes to prevent mud from penetrating the valve box.

Method of Measurement. The work will be measured for payment in place for each fire hydrant with auxiliary valve and valve box installed.

Basis of Payment. This work will be paid for at the contract unit price for each FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX, which includes all as described herein, including excavation, backfill, all pipe between the auxiliary valve and hydrant, and up to 4 lineal feet of water main pipe beyond the auxiliary valve.

Water main pipe between the mainline and the auxiliary valve, beyond the 4 feet included in the hydrant installation, shall be paid for separately as DUCTILE IRON WATER MAIN RESTRAINED JOINT TYPE, of the type and size specified in accordance with the DUCTILE IRON WATER MAIN special provision.

The water main tee placed in order to install the hydrant lateral to the mainline shall be paid for separately as DUCTILE IRON WATER MAIN TEE, of the size specified in accordance with the DUCTILE IRON WATER MAIN FITTINGS special provision.

FRAMES AND GRATES, SPECIAL

This work shall consist of adjusting existing structures at locations indicated on the plans within areas of CONCRETE CURB, TYPE M (SPECIAL). This work shall be performed in accordance with the Village of Addison's "Standard Specifications For Design and Construction" with the following clarifications Standard Specifications.

This work shall be measured and paid for at the contract unit price per each for FRAMES AND GRATES (SPECIAL) which shall be a Neenah R-3501-E2 and which price shall include all labor, equipment, and materials necessary to complete the work.

FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)

This work shall consist of adjusting existing structures at locations indicated on the plans. This work shall be performed in accordance with the Bureau of Design Standard for Frames and Lids Adjustment with Milling (BD-8) and Section 602 of the Standard Specifications.

This work shall be measured and paid for at the contract unit price per each for FRAMES AND

LIDS TO BE ADJUSTED (SPECIAL) which price shall include all labor, equipment, and materials necessary to perform said work.

FURNISHED EXCAVATION

All placement of Furnished Excavation shall be in accordance with Sections 204 and 205 of the Standard Specifications with the following exception:

The quantities of Furnished Excavation have been calculated assuming that all material excavated under the pay item Earth Excavation will be removed from the job site. If the Contractor excavates suitable material and places it in areas of the project requiring embankment under the pay item Earth Excavation, as described in Section 202 of the Standard Specifications and as approved by the Engineer, the applicable deduction to the Furnished Excavation quantity shall be made as defined by the BLRS Special Provision "Furnished Excavation", except that a shrinkage factor of 15% shall be used. The Contractor shall not be allowed a change in the unit prices for Earth Excavation or Furnished Excavation based on these changes to the quantities.

The volumes of Furnished Excavation shown on the plans are the compacted volumes. The volumes shown on the plans have not been adjusted to account for shrinkage due to compaction.

Basis of Payment. Furnished excavation will be paid for at the contract unit price per cubic yard for FURNISHED EXCAVATION.

HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70

Article 406.05 Preparation, Priming and Leveling of Brick, Concrete, HMA or Aggregate Bases. The placement of bituminous materials for prime shall be in accordance with Section 406 of the Standard Specifications with the following revisions and additions:

1. No prime coat material shall be placed between 6:00 A.M. and 9:00 A.M. or between 2:00 P.M. and 6:00 P.M.
2. A maximum of one lane in each direction shall be primed at a time. Sufficient time shall be allowed for the prime to cure before the adjacent lane is primed.
3. Lanes closed for the placement of prime are to be closed using Highway Standard 701406. Cones shall be required along the lane being primed at a maximum of 150 foot (50 meter) center-to-center spacing to delineate the lane closure.
4. Prime shall not be placed more than 72 hours prior to the start of paving.

5. If traffic cannot be kept off fresh prime with the above procedures, the Engineer may require the prime be placed in conjunction with the paving operation.

Basis of Payment. The cost of this work will be included in the contract unit price per ton for HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70.

MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS

The temporary erosion control systems installed by the Contractor shall be properly maintained as directed by the Engineer to control siltation at all times during the life of the contract. MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS includes cleaning of the inlet filters which shall consist of inspecting and cleaning (includes removal and proper disposal of debris and silt that has accumulated in the filter fabric bag) by vactoring, removing and dumping or any other method approved by the Engineer and street sweeping maintenance activities to remove sediment build-up and runoff of coarse materials. The sediment shall be removed as directed by the Engineer during the contract period and disposed of according to Article 202.03.

Any additional materials and work required by the Engineer will be measured and paid for as specified. Work performed under this item is to be submitted by the Contractor to the resident Engineer on a force account basis in accordance with 109.04 (b) of the Standard Specifications. The Resident engineer may use any, all or none of this item. If the Contractor fails to maintain the temporary erosion control systems as directed by the Engineer, the Engineer may at the expiration of a period of 48 hours, after having given the Contractor written notice, proceed to maintain the systems as deemed necessary, and the cost thereof will be deducted from any compensation due, or which may become due the Contractor under this contract.

Maintenance of the silt fence shall be paid for separately as SEDIMENT CONTROL, SILT FENCE.

MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS will be bid at the contract unit price lump sum.

PAVEMENT PATCHING AT CURB AND GUTTER REMOVAL

This work shall consist of the construction of curb and gutter in accordance with applicable portions of IDOT Standard Specifications For Road and Bridge Construction and the Village of Addison's Standard Specifications For Curb and Gutter construction with the following clarifications.

When existing curb and gutter is removed and replaced, any damage to the street shall be repaired with P.C. Concrete and a two (2) inch Bituminous Concrete Surface overlay.

P.C. Concrete shall be used to fill any void space between the new curb and gutter and the existing pavement. The concrete shall be a minimum of ten (10) inches in depth, stopping a minimum of two (2) inches from the finished surface, and shall be poured separately from the curb.

The cost of this work will be included in the contract unit price per foot for COMBINATION CURB AND GUTTER REMOVAL and per foot for COMBINATION CONCRETE CURB AND GUTTER.

POROUS GRANULAR EMBANKMENT, SUBGRADE

Effective: September 30, 1995

Revised: January 1, 2007

This work consists of furnishing, placing, and compacting porous granular material to the lines and grades shown on the plans or as directed by the Engineer in accordance with applicable portions of Section 207. The material shall be used as a bridging layer over soft, pumpy, loose soil and for placing under water and shall conform with Article 1004.04 except the gradation shall be as follows:

1. Crushed Stone, Crushed Blast Furnace Slag, and Crushed Concrete

<u>Sieve Size</u>	<u>Percent Passing</u>
*6 in. (150 mm)	97 ± 3
*4 in. (100 mm)	90 ± 10
2 in. (50 mm)	45 ± 25
No. 200 (75 µm)	5 ± 5

2. Gravel, Crushed Gravel and Pit Run Gravel

<u>Sieve Size</u>	<u>Percent Passing</u>
*6 in. (150 mm)	97 ± 3
*4 in. (100 mm)	90 ± 10
2 in. (50 mm)	55 ± 25
No. 4 (4.75 mm)	30 ± 20
No. 200 (75 µm)	5 ± 5

*For undercut greater than 19 inches (450 mm) the percent passing the 6 inch (150 mm) sieve may be 90 ± 10 and the 4 inch (100 mm) sieve requirements eliminated.

The porous granular material shall be placed in one lift when the total thickness to be placed is 2 feet (600 mm) or less or as directed by the Engineer. Each lift of the porous granular material shall be rolled with a vibratory roller meeting the requirements of Article 1101.01(g) to obtain the desired

keying or interlock and compaction. The Engineer shall verify that adequate keying has been obtained.

A 3 inch (75 mm) nominal thickness top lift of capping aggregate having a gradation of CA 6 will be required when Aggregate Subgrade is not specified in the contract and Porous Granular Embankment, Subgrade will be used under the pavement and shoulders. Capping aggregate will not be required when embankment meeting the requirements of Section 207 or granular subbase is placed on top of the porous granular material.

Construction equipment not necessary for the completion of the replacement material will not be allowed on the undercut areas until completion of the recommended thickness of the porous granular embankment subgrade.

Full depth subgrade undercut should occur at limits determined by the Engineer. A transition slope to the full depth of undercut shall be made outside of the undercut limits at a taper of 1 foot (300 mm) longitudinal per 1 inch (25 mm) depth below the proposed subgrade or bottom of the proposed aggregate subgrade when included in the contract.

Method of Measurement. This work will be measured for payment in accordance with Article 207.04. When specified on the contract, the theoretical elevation of the bottom of the aggregate subgrade shall be used to determine the upper limit of Porous Granular Embankment, Subgrade. The volume will be computed by the method of average end areas.

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard (cubic meter) for POROUS GRANULAR EMBANKMENT, SUBGRADE which price shall include the capping aggregate, when required.

The Porous Granular Embankment, Subgrade shall be used as field conditions warrant at the time of construction. No adjustment in unit price will be allowed for an increase or decrease in quantities from the estimated quantities shown on the plans.

PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH AND 8 INCH

This work shall be done in accordance with Section 423 of the Standard Specifications and the Details provided in the Plans, except as modified herein.

423.01 Description. Add the following sentences to this Article:

"This item shall include the construction of a 4-inch thick Aggregate Base Course, Type B in accordance with Section 351 of the Standard Specifications. Replacement shall be constructed to match the existing pavement removed for thickness, reinforcing, etc. However, the minimum concrete thickness shall be 6-inches for residential driveways and 8-inches for industrial / commercial driveways and shall include a 6"x 6" No. 6 wire mesh fabric.

423.03 Basis of Payment. Revise this Article to read:

"423.03 Basis of Payment. This work shall be paid for at the contract unit price per square yard for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT , 6 INCH OR 8 INCH and as specified in the contract plans.

PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH

This work shall be done in accordance with Section 424 of the Standard Specifications and the Detail provided in the Plans, except as modified herein.

424.01 Description. Add the following sentence to this Article:

"The concrete sidewalk shall be constructed a minimum 5-inches thick and shall include the installation of a minimum 3 inches of Aggregate Base Course, Type B, in accordance with Section 351 of the Standard Specifications. This work shall also include three No. 5 (5/9") reinforcing bars, 10 feet in length, at all new trench crossing locations.

At locations where the sidewalk crosses driveways, the thickness of concrete shall be increased to 6-inches or 8-inches respective of the driveway being crossed.

424.06 Placing and Finishing. Revise the third sentence in the second paragraph of this Article to read:

"No slab shall be longer than 5 feet and the sidewalk shall be constructed to the width shown on the Plans unless directed otherwise by the Engineer."

424.07 Expansion Joints. Revise the first sentence in Article 424.07 (b) to read:

"Transverse expansion joints ¾-inch thick shall be placed at intervals of not more than 50 feet in the sidewalk."

424.12 Basis of Payment. Revise the first paragraph of this Article to read:

"424.12 Basis of Payment. This work shall be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, which price shall include all required expansion joints and reinforcement, special texturing, and variable height edge treatment at sidewalk ramps and thickening sidewalk or adding wire fabric at driveway crossings."

PRECONSTRUCTION VIDEO TAPING

This work shall be paid for at the Contract lump sum price for PRECONSTRUCTION VIDEO TAPING on streets within the project limits. This Contract unit price shall be payment in full for all materials, labor, and equipment required for: videotaping between right-of-way lines; two passes minimum, narrative to include address information, providing one copy of the videotapes (DVD format) to the Owner, and other related work required. Videotaping shall be performed at a traversing speed not to exceed 50 feet per minute. The videotapes shall include an audio track noting the condition of existing facilities and site objects and be of suitable photographic clarity to serve as a basis for establishing whether visible damage occurred during construction operations.

PROTECTIVE COAT

This work shall conform to the requirements of Articles 420.21 and 1023.01 of the "Standard Specifications", except that the protective coat shall be applied in all cases regardless of the calendar date limitations contained in Article 420.21. The protective coating shall be applied to the exposed surfaces of the Portland cement concrete pavement, concrete sidewalk, and concrete curb and gutter. Portland cement concrete curing shall be limited to methods specified in Article 1020.13 (a) [1], [2] and [3].

PROTECTIVE COAT will be paid for at the contract unit price per square yard.

RAISED REFLECTIVE PAVEMENT MARKER

This work shall be done in accordance with Section 781 of the "Standard Specifications" and the following:

Sawcutting the pavement for the installation of raised pavement markers shall be done by means of dry cutting the pavement. The Contractor shall maintain the pavement and the surrounding

area in clean, dry condition and shall vacuum the dust and milling from the pavement surface.

The method of cutting the pavement may be altered by the Contractor provided the pavement surface and the surrounding area is cleaned to the satisfaction of the Engineer. Alternate methods of cutting the pavement shall be approved by the Engineer. All costs for cleaning the pavement, regardless of the method, shall be incidental to the unit price per each for RAISED REFLECTIVE PAVEMENT MARKER.

REMOVING OR FILLING EXISTING STRUCTURES

This item shall consist of the removal and satisfactory disposal or filling of existing drainage structures at the locations specified on the contract plans in accordance with applicable portions of Section 605. This work shall include the removal of any concrete encased existing storm structures that were done as part of improvements to the existing storm structures.

The Contractor shall be required to verify that all sewer inlet or outlet pipes have been accounted for on the contract plans, and that the removal of the respective structure will not disrupt existing subsurface drainage systems. The existing inlet and outlet pipe will be maintained and reconnected to the new structure then backfilled with TRENCH BACKFILL meeting the approval of the Engineer. Care should be taken not to damage these pipes. Any pipe damaged will be replaced at the Contractors expense.

Existing storm sewer pipe shall be exposed prior to removal to determine if pipe is damaged. If determined by engineer, the sewer pipe is in poor condition the contractor shall remove and dispose of concrete sewer pipe and replace with same size reinforced concrete pipe as specified in plans. Reinforced concrete sewer pipe replacement shall be paid for at the contract unit price per lineal foot for storm sewer Type 1 of the size removed.

The salvage castings shall be re-used on site or stored at a convenient location on the jobsite prior to delivery to the respective Village or Department depending on the ownership of the castings. The Contractor shall be responsible for determining the ownership of the castings.

This work shall be paid for at the contract unit price per each for REMOVING or FILLING MANHOLES, CATCH BASINS, or INLETS and shall include all materials, labor, and equipment required.

RESTRICTED DEPTH MANHOLES AND RESTRICTED DEPTH CATCH BASINS

This work shall be in conformance with Section 602 of the "Standard Specifications" and Standard Drawings 602001 (Catch Basin Type A), or 602401 (Manhole Type A), except that a reinforced concrete slab as per Standard 602601 will be used in lieu of the cone section. In addition, a 24-inch sump will be provided on the Catch Basin.

For structures having Type 8 grates, a 24-inch inside diameter by 4-inch (minimum) high riser shall be installed on the flat slab to provide earth cover over the slab for vegetation.

This work will be paid for at contract unit price per each for RESTRICTED DEPTH MANHOLES or RESTRICTED DEPTH CATCH BASINS, of the diameter and with the frame and lid or grate specified.

SAWING ASPHALT OR CONCRETE FOR REMOVAL ITEMS

The work shall consist of sawing joints in the existing roadway, hot-mix asphalt surface, curb and gutter and sidewalk in order to separate those portions to be removed from those which will remain in place. This work shall be performed at the locations specified on the plans and/or as otherwise designated by the Engineer. In areas of full-depth removal, the saw cuts shall also be full-depth.

The Contractor will be required to saw vertical cuts so as to form clean vertical joints. Should the Contractor deface any edge, a new sawed joint shall be provided and any additional work, including removal and replacement, will be done at the Contractor's expense.

It is the Contractor's responsibility to determine the thickness of the existing pavement and whether or not it contains reinforcement.

The work as described shall include all materials, labor, & equipment required, and shall be incidental to the removal of the item being saw-cut.

SEDIMENT CONTROL, SILT FENCE

This Special Provision revises Section 280 and Section 1080 of the Standard Specifications for Road and Bridge Construction to eliminate the use of Perimeter Erosion Barrier and create two new items, one for Sediment Control, Silt Fence, and another for Sediment Control, Silt Fence

Maintenance.

280.02 Materials. Revise Article 280.02 (f) to read:

“(f) Silt Fence.....Article 1080.02”

1080.02 Geotextile Fabric. Add the following to Article 1080.02:

“Sediment Control, Silt Fence fabric shall conform to the specifications of AASHTO M288-00 for Temporary Silt Fence, < 50% elongation, unsupported. This fabric shall be 90 cm (36 in) in width.

Certification. The manufacturer shall furnish a certification with each shipment of silt fence material, stating the amount of product furnished, and that the material complies with these requirements.

Sediment Control, Silt Fence support posts shall be of 5x5 cm (2x2 in) nominal hardwood, a minimum of 1.2 m (48 in) long.”

280.04 Temporary Erosion Control Systems. Delete Article 280.04 (b) and replace with:

“(b) Sediment Control, Silt Fence. This silt fence shall consist of a continuous silt fence adjacent to an area of construction to intercept sheet flow of water borne silt and sediment, and prevent it from leaving the area of construction.

The silt fence shall be supported on hardwood posts spaced on a maximum of 2.4 m (8 ft) centers. The bottom of the fabric shall be installed in a backfilled and compacted trench a minimum of 150 mm (6 in) deep and securely attached to the hardwood post by a method approved by the Engineer. The minimum height above ground for all silt fence shall be 760 mm (30 in).”

280.05 Maintenance. Add the following to Article 280.05:

“Sediment Control, Silt Fence Maintenance shall consist of maintaining silt fence that has fallen down or become ineffective as a result of natural forces. This work shall include the removal of sediment buildup from behind the silt fence when the sediment has reached a level of half the above ground height of the fence, or as directed by the Engineer.

Silt fence damaged by the Contractor’s operations or negligence shall be repaired at the Contractor’s expense, or as directed by the Engineer.”

280.06 Method of Measurement. Revise Article 280.06 (c) to read:

“(c) Sediment Control, Silt Fence. This work will be measured for payment in meters (feet) in place and removed. Silt fence designated not to be removed, by either the plans or the Engineer, will be measured for payment by this item also.

Sediment Control, Silt Fence Maintenance. This work will be measured for payment, each incident, in meters (feet) of silt fence cleaned, reerected, or otherwise maintained.”

280.07 Basis of Payment. Revise Article 280.07 (c) to read:

“(c) Sediment Control, Silt Fence. This work will be paid for at the contract unit price per meter (feet) for SEDIMENT CONTROL, SILT FENCE.

Sediment Control, Silt Fence Maintenance. This work will be paid for at the contract unit price per meter (feet) for SEDIMENT CONTROL, SILT FENCE MAINTENANCE.”

SEEDING, CLASS 1A

This work shall consist of preparing the seed bed and placing the seed and other materials required in seeding operations on the shoulders, slopes, and other areas as described by the contract plans.

Within two hours after seeding has been placed, water shall be applied at a rate of 3 gal/sq yd. Additional water shall be applied every other day at a rate of 1.5 gal/sq yd for a total of 15 additional watering. During periods exceeding 90° F or subnormal rainfall, the schedule of additional watering may be altered with the approval of the Engineer.

All watering described shall be done with a spray application. An open end hose will not be acceptable. The method of watering shall meet the approval of the Engineer.

The work as described shall include all materials, labor & equipment required, and shall be incidental to the area seeded. This work shall be paid for at the contract unit price per acre for SEEDING, CLASS 1A.

SHORT TERM PAVEMENT MARKING

This work shall conform to the requirements of Section 703 of the Standard Specifications. This work shall consist of removing, to the satisfaction of the Engineer, the SHORT TERM PAVEMENT MARKING and shall be included in the cost of the installation of the respective item.

SUMP PUMP LINE CONNECTION:

A quantity of 3 of this item has been included in the contract for the purpose of establishing a contract unit price should the need for this item become apparent.

This work shall consist of connecting the existing sump pump line or roof downspout to the 4-inch pipe drain which connects to the storm sewer or drainage structure. This work shall be constructed in accordance with the Village Of Addison's Standard Specifications fore Design and Construction and the detail provided in the Plans, and shall include excavation and backfilling with granular trench backfill, all necessary pipe, fittings, connectors, transition couplings, bends, saddles, and tees to connect the 4-inch pipe drain to the existing sump pump line or roof downspout, and a cast iron clean-out plug with an adaptor.

This work shall be paid for at the contract unit price each for SUMP PUMP LINE CONNECTION.

SUPPLEMENTAL WATERING

This work shall conform to Section 201 of the "Standard Specifications" and shall be applied at the rate of two (2) gallons per square yard, and only when directed by the Engineer. This work shall be measured and paid for as specified under Articles 201.10 and 201.11 of the "Standard Specifications."

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 5/9 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 0.09 inch (2 mm) thick.

GENERAL CONSTRUCTION REQUIRMENTS

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.

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.

TEMPORARY PAVEMENT

Effective: March 1, 2003

Revised: April 10, 2008

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

The contractor shall use either Portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, 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 Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both Portland cement concrete and HMA are shown in the plans.

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

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

Method of Measurement. Temporary pavement will be measured in place and the area computed in square yards (square meters).

Basis of payment. This work will be paid for at the contract unit price per square yard (square meter) for TEMPORARY PAVEMENT.

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

TOPSOIL FURNISH & PLACE (PULVERIZED), VARIABLE DEPTH

Description. This work shall be performed in accordance with Section 211 of the IDOT Standard Specifications and the plan detail.

This work shall comply with Section 211 of the "Standard Specification" and the "Illinois State Agency Historic Resources Preservation Act" (Public Act 96-707, effective January 1, 1990). Under this Act:

1. The Contractor shall complete an Environmental Survey Request Form for Borrow/Waste/Use Areas (Form BDE 2299 11/06 included herein), along with all required attachments, and submit them to the Engineer at the earliest possible date.
2. The Engineer shall submit the Environmental Survey Request to the Illinois Department of Transportation for review and approval. Any costs incurred associated with said review and approval will be borne by the Contractor.
3. The Contractor shall not begin work on any Topsoil/Use areas until the Environmental Survey Request has been approved.

The Contractor shall collect one representative soil sample from the proposed growing surface which shall be analyzed by an agricultural laboratory approved by the Engineer. The Contractor shall submit the proposed laboratory name and address to the Engineer at the pre-construction conference. The soils analysis shall include (but is not limited to) the recommended application rates of nitrogen phosphorus and potassium fertilizer nutrients. The cost of the soil analysis will not be paid for, but will be included in the cost TOPSOIL FURNISH & PLACE (PULVERIZED), VARIABLE DEPTH.

Existing sidewalks, curbs, structures, trees and other plant materials that are to remain in place shall

be protected from damage. Any damage caused by the Contractor shall be replaced at the Contractor's expense.

Excavation and grading around tree roots and plant materials shall be done by hand.

Additional material required to bring the area to grade will not be paid for separately but considered incidental to TOPSOIL FURNISH & PLACE (PULVERIZED), VARIABLE DEPTH. Additional material must meet the approval of the Engineer.

The surface of the topsoil shall be free from clods, stones, sticks and debris and shall conform to the lines, grades and the minimum thickness shown on the plans. Compaction of the entire surface shall be made to the satisfaction of the Engineer.

All material "tracked" down the street shall be removed each day. All sidewalks, driveways, and pavements shall be left in a broom-cleaned condition.

Method of Measurement. Topsoil shall be measured in place in square yards regardless of depth.

Basis of Payment. This work shall be paid for at the unit price per square yard for TOPSOIL FURNISH & PLACE (PULVERIZED), VARIABLE DEPTH which price shall include all labor, equipment and materials necessary to perform the work.

TRAFFIC CONTROL PLAN

Effective: September 30, 1995

Revised: January 1, 2007

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

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

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

STANDARDS:

701301-03, 701306-02, 701501-05, 701701-06, 701901-01, 780001-02, 781001-03, TC-10, TC-11, TC-13, TC-16, TC-18, TC-22 and TC-26.

DETAILS:

- a.) Traffic Control and Protection For Side Roads
- b.) Raised Reflective Pavement Markers (Snow Plow Resistant)
- c.) District One Typical Pavement Markings
- d.) Pavement Marking Letters and Symbols For Traffic Staging
- e.) Signing for Flagging Operations At Work Zone Openings
- f.) Arterial Road Informational Sign
- g.) Driveway Entrance Signing

SPECIAL PROVISIONS:

No. 62 - Reflective Sheeting on Channelizing Devices

BASIS OF PAYMENT: This work will be paid for at the contract unit price lump sum for TRAFFIC CONTROL AND PROTECTION.

TREE PROTECTION AND PRESERVATION

1. The Contractor shall erect a temporary fence around all trees within the construction area to establish a "tree protection zone" before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored, or vehicles driven or parked within the "tree protection zone" at any time during the course of construction.
2. The exact location and establishment of the "tree protection zone" fence shall be approved by the Village Arborist prior to setting the fence. The fence shall be 49 inches high, plastic poly-type or any other type of highly visible barrier in an open-weave type pattern with large openings. The type, color and pattern of the fence shall be approved by the Engineer prior to erection. This fence shall be properly maintained in an upright manner and shall remain up until final restoration, unless the Engineer directs removal otherwise. Tree fence shall be supported using T-Post style fence posts with a maximum of 9' spacing. T-posts must be at least six feet in length, two feet of which must be set in the ground. The fence shall be attached to posts and secured with a minimum of three nylon locking ties per post. **Utilizing re-bar as a**

fence post will not be permitted.

3. The fence shall be installed 19" behind and parallel to the curb and between the curb and sidewalk unless otherwise directed by the Engineer. Fence shall be erected on a minimum of three sides with the fourth sidewalk side being optional. Fence shall be installed at the drip-line of the tree or as listed in the following guidelines:
 - a. Establish the diameter of the tree at a point four and a half feet above the ground, (referred to as diameter breast height or DBH)
 - i.. Trees with diameters 10 inches and under require root zone protection a minimum of five feet in all directions from the center of the tree.
 - ii. Trees 10 to 19 inches in diameter shall have a minimum root zone protection of 10 feet in all directions from the center of the tree.
 - iii. Trees greater than 19 inches in diameter shall have a minimum root zone protection of 15 feet in all directions from the center of the tree.
4. Parking or maneuvering of machinery, stockpiling of materials or any other use will not be allowed upon unpaved areas within 3 m (10 ft) of the root protection zone of trees or plants designated to be protected.
5. Construction area is defined as all areas within 20 feet each side of water or sewer main location.
6. All work within the "tree protection zone" shall have the Engineer's prior approval. All slopes and other areas not re-graded should be avoided so that unnecessary damage is not done to the existing turf, tree root system or ground cover.
7. The grade within the "tree protection zone" shall not be changed unless approved by the Engineer prior to making said changes or performing the work.

Tree Protection and Preservation will be paid for at the contract unit price per each for TREE PROTECTION AND PRESERVATION, which price shall include furnishing, installing, maintaining, and removal.

VALVE VAULTS TO BE REMOVED OR FILLED

1. Add the following sentences to Article 605.01:

"This work shall also consist of all work necessary to remove or fill existing valve vaults so

designated on the Drawings. The terms "fill" and "abandon" shall be interchangeable and shall consist of removing the upper portion of an existing structure, filling unused pipes, sealing pipe connections, and filling the remainder of the structure with materials as specified."

2. Articles 605.03 and 605.04 shall apply with the following modifications:

The Contractor shall make his own investigation to determine the existence, nature and location of all sewers and appurtenances thereto within the limits of the improvement. The Contractor shall be held responsible for any damage to existing sewers. All pavement will be sawed to a full depth prior to any casting replacement/adjustment, structure removal, or filling operation. Connecting pipes shall be cut one joint from the existing structure to be removed/filled. Structures in private paved areas, parkways and other grassed areas shall be removed a minimum of 2-feet below final grade and structures in public streets shall be removed a minimum of 6-feet below final grade. Pipes connected to these structures shown to be abandoned and shall be filled with CLSM materials in accordance with Article 550.05. Remaining portions of existing structures may be filled with Case (A.) trench backfill material in accordance with Section 209 or may be filled with CLSM material in accordance with Article 550.05, at Contractor's option. Structures shall be pumped out and cleaned of all mud and debris before the fill material is placed. The remainder of the excavation shall be backfilled in accordance with Section 209.

VALVE BOXES

Description. This work shall include furnishing and installing valve boxes at the locations shown on the plans in accordance with the applicable portions of Section 561 of the Standard Specifications and Section 44 of the Water and Sewer Specifications, the Village of Addison's "Standard Specifications For Water Main Construction" or as directed by the Engineer.

Valve boxes shall be screw type made of cast iron with "Water" imprinted on the lid.

Basis of Payment. This work will be paid for at the contract unit price each for VALVE BOXES of the size specified which price shall include all labor, equipment, and materials necessary to perform said work.

VALVE BOXES TO BE REMOVED

This work shall be done in accordance with Article 605 of the "Standard Specifications" and Village of Addison's "Standard Specifications For Water Main Construction" and includes all work required to complete the work. Work shall include completely removing the valve box to a depth of three feet below proposed elevations.

The excavation left behind may be filled with Case (A.) trench backfill material in accordance with Section 209 or may be filled with CLSM material in accordance with Article 550.05, at Contractor's option. Structures shall be pumped out and cleaned of all mud and debris before the fill material is placed. The remainder of the excavation shall be backfilled in accordance with Section 209.

This work will be paid for at the contract unit price per each for VALVE BOXES TO BE REMOVED, which price shall include all labor, equipment and materials necessary to perform said work.

WATER MAIN CASING PIPE:

This work shall consist of installing a polyvinyl chloride water main quality casing pipe (ASTM 0-2241) PVC SDR-26 class 160 psi with ASTM 0-3139 joints and gaskets at locations indicated on the plans or at the direction of the Engineer. The Contractor shall seal the ends of the casing pipe with concrete masonry and mortar. Mortar shall conform to ASTM C270, Type M, with Type II Portland cement and Type S lime. The Casing pipe shall be used when the proposed water main is to be placed beneath a non water main quality sewer or as required by the Water and Sewer Main Specifications.

Manufactured cascade spacers with polyethylene adjustable runners, or cradles shall be used to support the pipe in the casing. A minimum of three supports shall be used per pipe, or per manufacturer's recommendation. Water main installed within casing pipes shall have field locking gaskets restrained joint construction the entire length of the casing pipe for future removal if necessary. This work will not be paid for separately but included in this item.

This work shall be paid for at the contract unit price per foot for WATER MAIN CASING PIPE, of the diameter specified, which price shall include any spacers, cradles, sealing of casing ends, trench backfill, and all labor, materials, and equipment necessary to complete this work.

WATER MAIN REMOVAL 8"

This work shall include complete removal of the existing 8" water main as directed by the engineer. All water shut downs shall be coordinated with the Addison Public Works Department. The excavation left behind may be filled with Case I trench backfill material in accordance with Section 208 or may be filled with CLSM material in accordance with Article 550.05, at Contractor's option. The remainder of the excavation shall be backfilled in accordance with Section 208.

This work will be paid for at the contract unit price per lineal foot for WATER MAIN REMOVAL, 8", which price shall include all labor, equipment and materials necessary to perform said work.

WATER SERVICE CONNECTION

Description. This work shall consist of furnishing all labor, materials and equipment necessary to install water services including service pipe, service tabs, corporation stops, curb stops and curb boxes at locations shown on the Plans or as determined in the field. All material shall be manufactured in the United States.

Curb stops shall be installed for each water service. Curb stops shall be fabricated of brass and shall be provided with outlets suitable for flared joint copper connections. Curb stops shall be of the round-way type, Ford or Mueller Ori-Seal.

A cast iron curb box, of the Buffalo type with an arch-type saddle, Mueller shall be furnished and installed over the curb stop. Curb boxes, also known as Buffalo boxes or B-boxes, shall be size 95E with the top section having a 2-1/2" shaft size. The lid of a curb box shall contain the word "WATER".

Service taps up to and including 1 inch in size shall be made using a corporation stop. Service taps over 1 inch in diameter, up to and including 2 inches in size, shall be made with a stainless steel tapping sleeve and a corporation stop. Service taps larger than 2 inches shall use a stainless steel tapping sleeve and a tapping valve. Service taps 4 inches and larger shall be made with a valve and vault.

All tapping sleeves shall be full circle stainless steel (Rockwell 662, 663 or approved equal by engineer) and used at the tap. All nuts and bolts used with the tapping sleeve shall also be stainless steel.

Copper water service pipe shall be Type "K" or greater copper tube, soft temper, for underground

service, conforming to ASTM B-88 and B-251. The pipe shall be marked with the manufacturer's name or trademark and a mark indicative of the type of pipe.

CONSTRUCTION REQUIREMENTS

The Contractor shall furnish and install curb stops in accordance with the Plans, the "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition and applicable ordinances of the Village of Addison. Curb stops shall be set on a flat concrete block (12"x12"x1"), at least 5 feet 6 inches below finished surface grade.

Curb boxes shall be installed approximately 7 feet from the property line on the right-of-way, and shall not be located in any sidewalk or driveway. The Contractor shall record the location of the new curb boxes from the nearest newly installed fire hydrant. Curb boxes shall be held in a truly vertical position and staked into place to ensure permanent vertical alignment of the curb box. The location of the curb box shall be marked with a 2"x4" 8 foot long board, extending 3 feet above the ground surface until the final stages of the project.

Copper water service pipe shall be installed a minimum of 5'6" deep, and shall connect between the new corporation stop and the new curb stop as shown on the Plans. No water service couplings shall be made under paved areas.

Where indicated on the Plans, new Type K copper water service tubing of the appropriate size shall be pushed into position. The Contractor may employ auguring, hydraulic pushing or other industry-recognized techniques to accomplish this work upon approval of the Village.

Open cut service pipe under pavement, curb and gutter or sidewalk shall be thoroughly backfilled in accordance with the Section 208 of the IDOT Standard Specifications for TRENCH BACKFILL and shall be included in the cost of this work.

Method of Measurement. The work will be measured for payment in place for each water service connection.

Basis of Payment. This work will be paid for at the contract unit price for each WATER SERVICE CONNECTION of the size indicated complete in place, which includes all water service pipe, tapping sleeves, corporations stops, curb stops, curb boxes, excavation, and backfill.

WATER VALVES

This work shall include furnishing and installing water valves at the locations shown on the plans or as directed by the Engineer. This work shall be performed in accordance with the applicable

Addison Road Resurfacing and Water Main Improvements
Section No. 06-00095-00-RS
Job No.: C-91-425-08
Project No. M-9003(037)
Contract No.: 63100

portions of Section 561 of the Standard Specifications and Section 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition and the Village of Addison's "Standard Specifications for Water Main Construction".

All valves are to be manufactured using stainless steel nuts and bolts at the packing gland and at the bonnet.

This work will be paid for at the contract unit price per each for WATER VALVE of the size specified, which price shall include all labor, material, and equipment required to complete the work as specified herein.

ELECTRONIC SUBMISSION OF PAYROLL RECORDS

Effective: November 2, 2007

In addition to the hard copy submittal of payroll records required elsewhere in this contract, the Contractor and each subcontractor shall submit payroll records electronically to the Department each week from the start to the completion of their respective work. The electronic submittals shall be made using LCPtracker™ software. The software is web-based and can be accessed via the following website: <http://www.lcptracker.com/>.

List of District One Traffic Signal Specifications

Specification	Page No.
SECTION 720 SIGNING	1
MAST ARM SIGN PANELS	1
 SECTION 800 ELECTRICAL	 1
INSPECTION OF ELECTRICAL SYSTEMS	1
DAMAGE TO TRAFFIC SIGNAL SYSTEM	1
RESTORATION OF WORK AREA	2
SUBMITTALS	2
MAINTENANCE AND RESPONSIBILITY	3
TRAFFIC SIGNAL INSPECTION (TURN-ON)	4
LOCATING UNDERGROUND FACILITIES	6
ELECTRIC SERVICE INSTALLATION	6
GROUNDING OF TRAFFIC SIGNAL SYSTEMS	8
HANDHOLES	9
FIBER OPTIC TRACER CABLE	10
GROUNDING CABLE	10
RAILROAD INTERCONNECT CABLE	11
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	11
TRAFFIC ACTUATED CONTROLLER	12
MASTER CONTROLLER	13
FIBER OPTIC CABLE	14
CONCRETE FOUNDATIONS	15
DETECTOR LOOP	16
EMERGENCY VEHICLE PRIORITY SYSTEM	18
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	18
OPTIMIZE TRAFFIC SIGNAL SYSTEM	20
TEMPORARY TRAFFIC SIGNAL TIMINGS	22
TEMPORARY TRAFFIC SIGNAL INSTALLATION	23
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	28
TRAFFIC SIGNAL PAINTING	29
 SECTION 1000 MATERIALS	 31
PEDESTRIAN PUSH-BUTTON	31
CONTROLLER CABINET AND PERIPHERAL EQUIPMENT	31
RAILROAD, FULL-ACTUATED CONTROLLER AND CABINETS	32
ELECTRIC CABLE	32
MAST ARM ASSEMBLY AND POLE	32
TRAFFIC SIGNAL POST	33
SIGNAL HEADS	33
SIGNAL HEAD, BACKPLATE	33
INDUCTIVE LOOP DETECTOR	33
ILLUMINATED SIGN, LIGHT EMITTING DIODE	33
GROUNDING EXISTING HANDHOLE FRAME AND COVER	35
UNIT DUCT	35
UNINTERRUPTIBLE POWER SUPPLY (UPS)	35
SIGNAL HEAD, LIGHT EMITTING DIODE	40
PEDESTRIAN COUNTDOWN SIGNAL HEAD, LIGHT EMITTING DIODE	44

TRAFFIC SIGNAL SPECIFICATIONS

Effective: May 22, 2002

Revised: January 1, 2007

These Traffic Signal Special Provisions and the "District One Standard Traffic Signal Design Details" supplement the requirements of the State of Illinois "Standard Specifications for Road and Bridge Construction." The intent of these Special Provisions is to prescribe the materials and construction methods commonly used for traffic signal installations. All material furnished shall be new. The locations and the details of all installations shall be as indicated on the Plans or as directed by the Engineer. The work to be done under this contract consists of furnishing and installing all traffic signal work as specified in the Plans and as specified herein in a manner acceptable and approved by the Engineer.

SECTION 720 SIGNING

MAST ARM SIGN PANELS.

Add the following to Section 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 the District Sign Shops. Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware are acceptable based upon the Department's approval.

DIVISION 800 ELECTRICAL

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 District One. The Department reserves the right to request any controller and cabinet to be tested at the equipment supplier facilities prior to field installation, at no extra cost to this contract. 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 District One facility, prior to field installation. The vendor shall provide the technical equipment and assistance as required by the Engineer to fully test this equipment.

DAMAGE TO TRAFFIC SIGNAL SYSTEM.

Add the following to 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 with new equipment provided by the Contractor at no additional cost to the Contract and or owner of the traffic signal system, all as approved by 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.

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 items such as foundation, conduit, handhole, trench and backfill, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

SUBMITTALS.

Revise Article 801.05 of the Standard Specifications to read:

The Contractor shall provide:

- a. All material approval requests shall be submitted at the preconstruction meeting, including major traffic signal items listed in the table in Article 801.05..
- b. All material or equipment which are similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.
- c. Seven (7) copies of a letter from the Traffic Signal Contractor on company letterhead listing the contract number or permit number, project location/limits, pay item description, pay code number, manufacturer's name and model numbers of the proposed equipment and stating that the proposed equipment meets all contract requirements. The letter will be reviewed by the Traffic Design Engineer to determine whether the equipment to be used is approvable.
- d. Seven (7) copies of shop drawings for mast arm poles and assemblies, including combination mast arm poles, are required. A minimum of two (2) copies of all other material catalog cuts are required. Submittals for equipment and materials shall be complete. Partial or incomplete submittals will be returned without review.
- e. Certain non-standard mast arm poles and assemblies will require additional review from IDOT's Central Office. Examples include ornamental/decorative and non-standard length mast arm pole assemblies. The Contractor shall account for the additional review time in his schedule.
- f. The contract number or permit number, project location/limits and corresponding pay code number must be on each sheet of the letter, material catalog cuts and mast arm poles and assemblies drawings.
- g. 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.
- h. 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-Noted', 'Disapproved', or 'Information Only'. 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

Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.

- i. All submitted items reviewed and marked 'APPROVED AS NOTED', or 'DISAPPROVED' 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.
- j. Exceptions, Deviations and Substitutions. In general, 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.

MAINTENANCE AND RESPONSIBILITY.

Revise Article 801.11 of the Standard Specifications to read:

- a) Existing traffic signal installations and/or any electrical facilities at all or various locations 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 they are 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 item "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," shall become the full responsibility of the Contractor. The Contractor shall supply the engineer and the Department's Electrical Maintenance Contractor a 24-hour emergency contact name and telephone number.
- b) When the project has a pay item for "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," the Contractor must notify both the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. This notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will 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 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.
- c) Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops do not require maintenance transfer, but 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 Area Traffic Signal Maintenance and Operations Engineer

at (847) 705-4424 and the Department's Electrical Maintenance Contractor, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. See additional requirements in these specifications under Inductive Loop Detector.

- 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 essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shutdown the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather 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 Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical 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 District's Electrical Maintenance Contractor may inspect any signaling device on the Department's highway system at any time without notification.

TRAFFIC SIGNAL INSPECTION (TURN-ON).

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

It is the intent to have all electric work completed and equipment field tested by the vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines work is not complete and 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. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected.

When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specifications, 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 Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Department's facsimile number is (847) 705-4089. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Preemption (EVP) is included in the project. The Contractor must notify the SCAT Consultant of the turn-on schedule, as well as stage changes and phase changes during construction.

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. The Contractor shall be responsible to provide a police officer to direct traffic at the time of testing.

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 and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the 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 assume the maintenance upon successful completion of this inspection.

The District requires the following from the Contractor at traffic signal turn-ons.

1. One set of signal plans of record with field revisions marked in red ink.
2. Notification from the Contractor and the equipment vendor of satisfactory field testing.
3. A knowledgeable representative of the controller equipment supplier shall be required at the traffic signal turn-on. The representative shall be knowledgeable of the cabinet design and controller functions.
4. A copy of the approved material letter.
5. One (1) copy of the operation and service manuals of the signal controller and associated control equipment.
6. Five (5) copies 11" x 17" (280 mm X 430 mm) of the cabinet wiring diagrams.
7. The controller manufacturer shall supply a printed form, not to exceed 11" x 17" (280 mm X 430 mm) for recording the traffic signal controller's timings; backup timings; coordination splits, offsets, and cycles; TBC Time of Day, Week and Year Programs; Traffic Responsive Program, Detector Phase Assignment, Type and Detector Switching; and any other functions programmable from the keyboard. The form shall include a location, date, manufacturer's name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.

Acceptance of the traffic signal equipment by the Department shall be based upon inspection results at the traffic signal "turn on." If approved, traffic signal acceptance shall be verbal at the "turn on" inspection followed by written correspondence from the Engineer. The Contractor shall be responsible for all traffic signal equipment and associated maintenance thereof until Departmental acceptance is granted.

All equipment and/or parts to keep the traffic signal installation operating shall be furnished by the Contractor. No spare traffic signal equipment is available from the Department.

All punch list work shall be completed within two (2) weeks after the final inspection. The Contractor shall notify the Electrical Maintenance Contractor to inspect all punch list work. Failure to meet these time constraints shall result in liquidated damage charges of \$500 per month per incident.

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 shall be subject to removal and disposal at the Contractor's expense.

LOCATING UNDERGROUND FACILITIES.

Revise Section 803 to the Standard Specifications to read:

If this Contract requires the services of an Electrical Contractor, the Contractor shall be responsible at his/her own expense for locating existing IDOT electrical facilities prior to performing any work. If this Contract does not require the services of an Electrical Contractor, the Contractor may request one free locate for existing IDOT electrical facilities from the District One Electrical Maintenance Contractor prior to the start of any work. Additional requests may be at the expense of the Contractor. The location of underground traffic facilities does not relieve the Contractor of their responsibility to repair any facilities damaged during construction at their expense.

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 the local Counties or Municipalities may need to be contacted, in the City of Chicago contact D.I.G.G.E.R. at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123.

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 "District One 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. The service agreement and sketch shall be submitted for signature to the Traffic Program's engineer.

Materials.

- a. General. The completed control panel shall be constructed in accordance with UL Std. 508A, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.
- b. Enclosures.
 1. Pole Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080-inch (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded

and ground smooth. 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. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14-inches (350 mm) high, 9-inches (225 mm) wide and 8-inches (200 mm) in depth 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 UL 50, NEMA Type 3R unfinished single door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125-inch (3.175 mm) thick, the top 0.250-inch (6.350 mm) thick and the bottom 0.500-inch (12.70 mm) thick. Seams shall be continuous welded and ground smooth. 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 (1.91 mm) thick hinge bolted to the cabinet with stainless steel carriage bolts and nylocks nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40-inches (1000 mm) high, 16-inches (400 mm) wide and 15-inches (375 mm) in depth 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 <math>< 5n</math> 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 circuit breakers 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 marketing representative 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 (3.0m) in length, and 3/4 inch (20mm) 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.

Basis of Payment.

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 (20mm) grounding conduit, ground rod, and pole mount assembly. Any charges 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.

General.

All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. See IDOT District One Traffic Signal detail plan sheets for additional information.

The grounding electrode system shall include a ground rod installed with each traffic signal controller concrete foundation and all mast arm and post concrete foundations. An additional ground rod will be required at locations where measured resistance exceeds 25 ohms. Ground rods are included in the applicable foundation pay item and will not be paid for separately.

Testing shall be according to Article 801.13 (a) (4) and (5).

- (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 801.04 of the Standard Specifications.
1. Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
 2. Equipment grounding conductors shall be bonded, using a 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. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A 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, except 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.
 4. Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.
- (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, listed pressure connectors, listed clamps or other approved listed means.

HANDHOLES.

Add the following to Section 814 of the Standard Specifications:

All handholes shall be concrete, poured in place, with inside dimensions of 21-1/2 inches (549mm) minimum. Frames and lid openings shall match this dimension. The cover of the handhole frame shall be labeled "Traffic Signals" with legible raised letters.

For grounding purposes the handhole frame shall have provisions for a 7/16 inch (15.875mm) diameter stainless bolt cast into the frame. The covers shall have a stainless steel threaded stint extended from the eye hook assembly for the purpose of attaching the grounding conductor to the handhole cover.

The minimum wall thickness for heavy duty hand holes shall be 12 inches (300mm).

All conduits shall enter the handhole at a depth of 30 inches (760mm) except for the conduits for detector loops when the handhole is less than 5 feet (1.52 m) from the detector loop. All

conduit ends should be sealed with a waterproof sealant to prevent the entrance of contaminants into the handhole.

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 1/2 inch (12.7 mm) diameter with two 90 degree bends and extend into the handhole at least 6 inches (150 mm). Hooks shall be placed a minimum of 12 inches (300 mm) below the lid or lower if additional space is required.

FIBER OPTIC TRACER CABLE.

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

Add the following to Article 817.03 of the Standard Specifications:

In order to trace the fiber optic cable after installation, the tracer cable shall be installed in the same conduit as the fiber optic cable in locations shown on the plans. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. The tracer cable will be allowed to be spliced at the handholes only. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. 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. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. The splice shall be covered with WCSMW 30/100 heat shrink tube, minimum length 4 inches (100 mm) and with a minimum 1 inch (25 mm) coverage over the XLP insulation, underwater grade.

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment.

The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per foot (meter), which price shall include all associated labor and material for installation.

GROUNDING CABLE.

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

Add to Article 817.02 (b) of the Standard Specifications:

Unless otherwise noted on the Plans, traffic signal grounding conductor shall be one conductor, #6 gauge copper, with a green color coded XLP jacket.

The traffic signal grounding conductor shall be bonded, using a Listed grounding connector (Burndy type KC/K2C, as applicable, or approved equal), to all proposed and existing traffic signal mast arm poles and traffic/pedestrian signal posts, including push button posts. The grounding conductor shall be bonded to all proposed 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.

Grounding cable shall be measured in place for payment in foot (meter). Payment shall be at the contract unit price for ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6, 1C, which price includes all associated labor and material including grounding clamps, splicing, exothermic welds, grounding connectors, and other hardware.

RAILROAD INTERCONNECT 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:

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

Add the following to Article 817.05 of the Standard Specifications:

Basis of Payment.

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

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

Revise Section 850 of the Standard Specifications to read:

The energy charges for the operation of the traffic signal installation shall be paid for by others. 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 on staff electricians with IMSA Level II certification to provide signal maintenance.

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

The maintenance shall be according to District One revised Article 801.11 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 emergency vehicle pre-emption equipment. 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 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 stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. The Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations 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 stop signs which may be damaged or stolen.

The Contractor shall provide the Engineer with a 24 hour telephone number for the maintenance of the traffic signal installation and for emergency calls by the Engineer.

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

The Contractor shall respond to all emergency calls from the Department 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 contract. 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 State's Electrical Maintenance Contractor perform the maintenance work required. The State's Electrical 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 Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

Basis of Payment.

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

TRAFFIC ACTUATED CONTROLLER.

Add the following to Article 857.02 of the Standard Specifications:

Controllers shall be NEMA TS2 Type 1, Econolite ASC/2S-1000 or Eagle/Siemens M41 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved closed loop equipment manufacturers will be allowed. The controller shall be the most recent model and software version supplied by the manufacturer at

the time of the approval. The traffic signal controller shall provide features to inhibit simultaneous display of a circular yellow ball and a yellow arrow display. Individual load switches shall be provided for each vehicle, pedestrian, and right turn over lap phase. The controller shall prevent phases from being skipped during program changes and after all preemption events.

MASTER CONTROLLER.

Revise Articles 860.02 - Materials and 860.03 - Installation of the Standard Specifications to read:

Only controllers supplied by one of the District approved closed loop equipment manufacturers will be allowed. Only NEMA TS 2 Type 1 Eagle/Siemens and Econolite closed loop systems shall be supplied. The latest model and software version of master controller shall be supplied.

Functional requirements in addition to those in Section 863 of the Standard Specification include:

The system commands shall consist of, as a minimum, six (6) cycle lengths, five (5) offsets, three (3) splits, and four (4) special functions. The system commands shall also include commands for free or coordinated operation.

Traffic Responsive operation shall consist of the real time acquisition of system detector data, data validation, and the scaling of acquired volumes and occupancies in a deterministic fashion so as to cause the selection and implementation of the most suitable traffic plan.

Upon request by the Engineer, each master shall be delivered with up to three (3) complete sets of the latest edition of registered remote monitoring software with full manufacture's support. Each set shall consist of software on CD, DVD, or other suitable media approved by the Engineer, and a bound set of manuals containing loading and operating instruction. One copy of the software and support data shall be delivered to the Agency in charge of system operation, if other than IDOT. One of these two sets will be provided to the Agency Signal Maintenance Contractor for use in monitoring the system.

The approved manufacturer of equipment shall loan the District one master controller and two intersection controllers of the most recent models and the newest software version to be used for instructional purposes in addition to the equipment to be supplied for the Contract.

The Contractor shall arrange to install a standard voice-grade dial-up telephone line to the master controller. This shall be accomplished through the following process utilizing District One staff. This telephone line may be coupled with a DSL line and a phone filter to isolate the dial-up line. An E911 address is required.

The cabinet shall be provided with an Outdoor Network Interface for termination of the telephone service. It shall be mounted to the inside of the cabinet in a location suitable to provide access for termination of the telephone service at a later date.

Full duplex communication between the master and its local controllers is recommended, but at this time not required. The data rate shall be 1200 baud minimum and shall be capable of speeds to 38,400 or above as technology allows. The controller, when installed in an Ethernet topology, may operate non-serial communications.

The cabinet shall be equipped with a 9600 baud, auto dial/auto answer modem. It shall be a US robotics 33.6K baud rate or equal.

As soon as practical or within one week after the contract has been awarded, the Contractor shall contact (via phone) the Administrative Support Manager in the District One Business Services Section at (847) 705-4011 to request a phone line installation.

A follow-up fax transmittal to the Administrative Support Manager (847-705-4712) with all required information pertaining to the phone installation is required from the Contractor as soon as possible or within one week after the initial request has been made. A copy of this fax transmittal must also be faxed by the Contractor to the Traffic Signal Systems Engineer at (847) 705-4089. The required information to be supplied on the fax shall include (but not limited to): A street address for the new traffic signal controller (or nearby address); a nearby existing telephone number; what type of telephone service is needed; the name and number of the Contractor's employee for the telephone company to contact regarding site work and questions.

The usual time frame for the activation of the phone line is 4-6 weeks after the Business Services Section has received the Contractor supplied fax. It is, therefore, imperative that the phone line conduit and pull-string be installed by the Contractor in anticipation of this time frame. On jobs which include roadway widening in which the conduit cannot be installed until this widening is completed, the Contractor will be allowed to delay the phone line installation request to the Business Services Section until a point in time that is 4-6 weeks prior to the anticipated completion of the traffic signal work. The contractor shall provide the Administrative Support Manager with an expected installation date considering the 4-6 week processing time.

The telephone line shall be installed and activated one month before the system final inspection.

All costs associated with the telephone line installation and activation (not including the Contract specified conduit installation between the point of telephone service and the traffic signal controller cabinet) shall be paid for by the District One Business Services Section (i.e., this will be an IDOT phone number not a Contractor phone number).

FIBER OPTIC CABLE.

Add the following to Articles 871.01, 872.02, 871.04, and 871.05 of the Standard Specifications:

This work shall consist of furnishing and installing Fiber Optical cable in conduit with all accessories and connectors according to Section 871 of the Standard Specifications. The cable shall be of the type, size, and the number of fiber specified.

The control cabinet distribution enclosure shall be CSC FTWO12KST-W/O 12 Port Fiber Wall Enclosure or an approved equivalent. The fiber optic cable shall provide six fibers per tube for the amount of fibers called for in the Fiber Optic Cable pay item in the Contract. A minimum of six multimode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled "spare." Fibers not attached to the distribution enclosure shall be capped and sealed. A minimum of 13.0 feet (4m) of extra cable length shall be provided for the controller cabinet. The controller cabinet extra cable length 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 for FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F, per foot (meter) for the cable in place, including distribution enclosure and all connectors.

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 "District One Standard Traffic Signal Design Details." All Type "A" foundations shall be a minimum depth of 48 inches (1.22 m).

Concrete Foundations, Type "C" for Traffic Signal Cabinets with Uninterruptible Power Supply (UPS) cabinet installations shall be a minimum of 48 inches (1.22 m) long and 31 inches (790 mm) wide. All Type "C" foundations shall be a minimum depth of 48 inches (1.22 m). An integral concrete pad to support the UPS cabinet shall be constructed a minimum of 20 inches (510 mm) long and a minimum depth of 10 inches (250 mm). The concrete apron in front of the Type IV or V cabinet shall be 36 in. x 48 in. x 5 in. (910 mm X 1220 mm X 130 mm). The concrete apron in front of the UPS cabinet shall be 36 in. x 31 in. x 5 in. (910 mm X 790 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

Concrete Foundations, Type "D" for Traffic Signal Cabinets shall be a minimum of 48 inches (1.22 m) long and 31 inches (790 mm) wide. All Type "D" foundations shall be a minimum depth of 48 inches (1.22 m). The concrete apron shall be 36 in. x 48 in. x 5 in. (910 mm X 1220 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

Concrete Foundations, Type "E" for Mast Arm and Combination Mast Arm Poles shall meet the following requirements:

Table 1
DESIGN TABLE FOR MAST ARM FOUNDATIONS

MAST ARM LENGTH	FOUNDATION DEPTH*	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF NO. 15 (NO. 5) BARS
Less than 9.1m (30')	10'-0" (3.0m)	30" (750mm)	24" (600mm)	8
Greater than or equal to 9.1m (30') and less than 12.2m (40')	13'-6" (4.1m)	30" (750mm)	24" (600mm)	8
	11'-0" (3.4m)	36" (900mm)	30" (750mm)	12
Greater than or equal to 12.2m (40') and less than 15.2m (50')	13'-0" (4.0m)	36" (900mm)	30" (750mm)	12
Greater than or equal to 15.2m (50') and up to 16.8m (55')	15'-0" (4.6m)	36" (900mm)	30" (750mm)	12

Foundation depths specified are for sites which have cohesive soils (clayey, silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive strength of $(Q_u) > 1.0$ tsf (100kPa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.

Concrete Foundations, Type "E" for Combination Mast Arm Poles shall be 36 inch (900 mm) diameter, regardless of mast arm length. Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation.

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 Contractor shall have the proposed loop locations marked and contact the Area Traffic Signal Maintenance and Operations Engineer (847) 705-4424 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the Portland cement concrete surface, using the same notification process as above.

Loop detectors shall be installed according to the requirements of the "District One 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 when possible in order to minimize the length of the saw-cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plan.

The detector loop cable insulation shall be labeled with the cable specifications.

Each loop detector lead-in wire shall be labeled in the handhole using a Panduit 250W175C water proof tag, or an approved equal, secured to each wire with nylon ties.

Resistance to ground shall be a minimum of 100 mega-ohms under any conditions of weather or moisture. Inductance shall be more than 50 and less than 700 microhenries. Quality readings shall be more than 5.

- (a) Type I. All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement, curb and handhole shall be cut with a 1/4 inch (6.3 mm) deep x 4 inches (100 mm) saw cut to mark location of each loop lead-in.

Loop sealant shall be a two-component thixotropic chemically cured polyurethane either Chemque Q-Seal 295, Percol Elastic Cement A/C Grade or an approved equal. The sealant shall be installed 1/8 inch (3 mm) below the pavement surface, if installed above the surface the overlap shall be removed immediately.

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 price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be included in detector loop quantities.

- (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 using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall be extended to a temporary enclosure near the proposed handhole location with ends capped and sealed against moisture and other contaminants.

Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. Non-metallic coilable duct, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to 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 (17.2 mm) outside diameter (minimum), 3/8 inch (9.5 mm) inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kPa) 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 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. The preformed loops shall be constructed to allow a minimum of 6.5 feet of extra cable in the handhole.

Basis of Payment.

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

EMERGENCY VEHICLE PRIORITY SYSTEM.

Revise Section 887 of the Standard Specifications to read:

It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle pre-emption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency.

All new installations shall be equipped with Confirmation Beacons as shown on the "District One Standard Traffic Signal Design Details." The Confirmation Beacon shall consist of a 6 watt Par 38 LED flood lamp with a 30 degree light spread, maximum 6 watt energy consumption at 120V, and a 2,000 hour warranty for each direction of pre-emption. 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. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signaled by a flashing indication at the rate specified by Section 4D-11 of the "Manual on Uniform Traffic Control Devices." The stopped pre-empted movements shall be signaled by a continuous indication.

All light operated systems shall include security and transit preemption software and operate at a uniform rate of 14.035 Hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District.

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. The preemption 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.

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) 705-4424 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.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. 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 IDOT 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.
2. The following deliverables shall be provided for LEVEL I Re-Optimization.
 - a. Consultant shall furnish to IDOT a cover letter describing the extent of the re-optimization work performed.
 - b. Consultant shall furnish an updated intersection graphic display for the subject intersection to IDOT and to IDOT's Traffic Signal Maintenance Contractor.

(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. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.
 - c. 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.
2. The following deliverables shall be provided for LEVEL II Re-Optimization.
- a. Consultant shall furnish to IDOT 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
 - b. Consultant shall furnish to IDOT 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
 - (3) Traffic counts conducted at the subject intersection
 - (4) New or updated intersection graphic display file for the subject intersection
 - (5) The CD shall be labeled with the IDOT system number and master location, as well as the submittal date and the consultant logo. 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.

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) 705-4424 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.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. 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.
2. 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.
3. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.
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 IDOT 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 IDOT one (1) copy of a SCAT Report for the optimized system. The SCAT Report shall include the following elements:

<p>Cover Page in color showing a System Map</p> <p>Figures</p> <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. <p>Table of Contents</p>

<p>Tab 1: Final Report</p> <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
<p>Tab 2. Turning Movement Counts</p> <ol style="list-style-type: none"> 1. Turning Movement Counts (Showing turning movement counts in the intersection diagram for each period, including truck percentage)
<p>Tab 3. Synchro Analysis</p> <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
<p>Tab 4: Speed and Delay Studies</p> <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.
<p>Tab 5: Electronic Files</p> <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.

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.

TEMPORARY TRAFFIC SIGNAL TIMINGS

Description.

This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the duration of the temporary signalized condition.

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 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 TIMINGS, which price shall be payment in full for performing all work described herein per intersection. When the temporary traffic signal installation is turned on, 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.

TEMPORARY TRAFFIC SIGNAL INSTALLATION.

Revise Section 890 of the Standard Specifications to read:

General.

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 Controller and Cabinet" specification). A representative of the approved control equipment vendor shall be present at the temporary traffic signal turn-on inspection.

Construction Requirements.

(a) Controllers.

1. Only controllers supplied by one of the District approved closed loop equipment manufacturers will be approved for use at temporary signal locations. All controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software approved by IDOT District 1, installed in NEMA TS1 or TS2 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 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.

2. All control equipment for the temporary traffic signal(s) shall be furnished by the Contractor unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be the same manufacturer brand and model number with current software installed.
- (b) Cabinets. 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 (100 mm) diameter holes to run the electric cables through. The 4 inch (100 mm) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.
 - (c) Grounding. Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 807 of the Standard Specifications and shall meet the requirements of the District 1 Traffic Signal Specifications for "Grounding of Traffic Signal Systems".
 - (d) Traffic Signal Heads. All traffic signal sections and pedestrian signal sections shall be 12 inches (300 mm). 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 Engineer. The Contractor shall furnish enough extra cable length 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.
 - (e) Interconnect.
 1. Temporary traffic signal interconnect shall be provided using fiber optic cable or wireless interconnect technology as specified in the plans. The Contractor may request, in writing, to substitute the fiber optic temporary interconnect indicated in the contract documents with a wireless interconnect. The Contractor must provide assurances that the radio device will operate properly at all times and during all construction staging. If approved for use by the Engineer, the Contractor shall submit marked-up traffic signal plans indicating locations of radios and antennas and installation details. If wireless interconnect is used, and in the opinion of the engineer, it is not viable, or if it fails during testing or operations, the Contractor shall be responsible for installing all necessary poles, fiber optic cable, and other infrastructure for providing temporary fiber optic interconnect at no cost to the contract.
 2. The existing system interconnect and phone lines are to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. All labor and equipment required to install and maintain the existing interconnect as part of the Temporary Traffic Signal Installation shall be included in the item Temporary Traffic Signal Installation. When shown in the plans, temporary traffic signal interconnect equipment shall be furnished and installed. The temporary traffic signal

interconnect shall maintain interconnect communications throughout the entire signal system for the duration of the project.

3. Temporary wireless interconnect, complete. The radio interconnect system shall be compatible with Eagle or Econolite controller closed loop systems. This item shall include all materials, labor and testing to provide the completely operational closed loop system as shown on the plans. The radio interconnect system shall include the following components:
 - a. Rack or Shelf Mounted RS-232 Frequency Hopping Spread Spectrum (FHSS) Radio
 - b. Software for Radio Configuration (Configure Frequency and Hopping Patterns)
 - c. Antennas (Omni Directional or Yagi Directional)
 - d. Antenna Cables, LMR400, Low Loss. Max. 100-ft from controller cabinet to antenna
 - e. Brackets, Mounting Hardware, and Accessories Required for Installation
 - f. RS232 Data Cable for Connection from the radio to the local or master controller
 - g. All other components required for a fully functional radio interconnect system

All controller cabinet modifications and other modifications to existing equipment that are required for the installation of the radio interconnect system components shall be included in this item.

The radio interconnect system may operate at 900Mhz (902-928) or 2.4 Ghz depending on the results of a site survey. The telemetry shall have an acceptable rate of transmission errors, time outs, etc. comparable to that of a hardwire system.

The proposed master controller and telemetry module shall be configured for use with the radio interconnect at a minimum rate of 9600 baud.

The radio interconnect system shall include all other components required for a complete and fully functional telemetry system and shall be installed in accordance to the manufacturers recommendations.

The following radio equipment is currently approved for use in Region One/District One: Encon Model 5100 and Intuicom Communicator II.

- (f) Emergency Vehicle Pre-Emption. All emergency vehicle preemption 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 preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 hz \pm 0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District. All labor and material required to install and

maintain the Emergency Vehicle Preemption installation shall be included in the item Temporary Traffic Signal Installation.

- (g) Vehicle Detection. 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 Video Vehicle Detection System as shown on the plans or as directed by the Engineer. The microwave vehicle sensor or video vehicle detection system shall be approved by IDOT before furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the microwave vehicle sensor or video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the microwave vehicle sensor or 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 microwave vehicle sensor or 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.
- (h) Signs. 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 assembly and pole(s) and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost.
- (i) Energy Charges. The electrical utility energy charges for the operation of the traffic signal installation shall be paid for by others if the installation replaces an existing signal. Otherwise charges shall be paid for under 109.05 of the Standard Specifications.
- (j) Maintenance. Maintenance shall meet the requirements of the Traffic Specifications and District Specifications for "Maintenance of Existing Traffic Signal Installation." Maintenance of temporary signals and of the existing signals shall be included to 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 the Contract or any portion thereof. Maintenance responsibility of the existing signals shall be included to the item Temporary Traffic Signal Installation(s). 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 request that the Resident Engineer contact the Bureau of Traffic (847) 705-4424 for an inspection of the installation(s).
- (k) Temporary Traffic Signals for Bridge Projects. Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, District 1 Traffic Signal Specifications 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 (5.5m), on temporary wood poles (Class 5 or better) of 45 feet (13.7 m), 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. Microwave vehicle sensors or video vehicle detection may be used in place of the detector loops as approved by the Engineer.

(l) Temporary Portable Traffic Signal for Bridge Projects.

1. Unless otherwise directed by the Engineer, temporary portable traffic signals shall be restricted to use on roadways of less than 8000 ADT that have limited access to electric utility service, shall not be installed on projects where the estimated need exceeds ten (10) weeks, and shall not be in operation during the period of November through March. The Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract if the bridge project or Engineer requires temporary traffic signals to remain in operation into any part of period of November through March. If, in the opinion of the engineer, the reliability and safety of the temporary portable traffic signal is not similar to that of a temporary span wire traffic signal installation, the Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract.
2. The controller and LED signal displays shall meet the above requirements for "Temporary Traffic Signal Installation".
3. Work shall be according to Article 701.18(b) of the Standard Specifications except as noted herein.
4. General.
 - a. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of 12 days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.
 - b. All signal heads located over the travel lane shall be mounted at a minimum height of 17 feet (5m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 feet (2.5m) from the bottom of the signal back plate to the top of the adjacent travel lane surface.
 - c. The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.
 - d. As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with microwave sensors or other approved methods of vehicle detection and traffic actuation.

- e. All portable traffic signal units shall be interconnected using hardwire communication cable. Radio communication equipment may be used only with the approval of the Engineer. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.
- f. The temporary portable bridge traffic signal system shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV of the Manual on Uniform Traffic Control Devices (MUTCD). The signal system shall be designed to continuously operate over an ambient temperature range between -30 °F (-34 °C) and 120 °F (48 °C). When not being utilized to inform and direct traffic, portable signals shall be treated as nonoperating equipment according to Article 701.11.
- g. Basis of Payment. This work will be paid for according to Article 701.20(c).

Basis of Payment.

This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION, TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION, or TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNAL INSTALLATION. The price of which shall include all costs for the modifications required for traffic staging, changes in signal phasing as required in the Contract plans, microwave vehicle sensors, video vehicle detection system, any maintenance or adjustment to the microwave vehicle sensors/video vehicle detection system, all material required, the installation and complete removal of the temporary traffic signal.

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 is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor's expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the State's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the State, including model and serial numbers, where applicable. He shall also provide a copy of the Contract plan or special provision showing the quantities and type of equipment. 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. If equipment is not returned with these requirements, it will be rejected by the State's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time he takes maintenance of the signal installation until the acceptance of a receipt drawn by the State's Electrical Maintenance Contractor indicating the items have been returned in good condition.

The Contractor shall safely store and arrange for pick up of all equipment to be returned to agencies other than the State. The Contractor shall package the equipment and provide all necessary documentation as stated above.

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

TRAFFIC SIGNAL PAINTING.

Description.

This work shall include surface preparation, powder type painted finish application and packaging of new galvanized steel traffic signal mast arm poles and posts assemblies. All work associated with applying the painted finish shall be performed at the manufacturing facility for the pole assembly or post or at a painting facility approved by the Engineer. Traffic signal mast arm shrouds and post bases shall also be painted the same color as the pole assemblies and posts.

Surface Preparation.

All weld flux and other contaminates shall be mechanically removed. The traffic mast arms and post assemblies shall be degreased, cleaned, and air dried to assure all moisture is removed.

Painted Finish.

All galvanized exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a dry film thickness of 2.0 mils. Prior to application, the surface shall be mechanically etched by brush blasting (Ref. SSPC-SP7) and the zinc coated substrate preheated to 450 degrees F for a minimum one (1) hour. The coating shall be electrostatically applied and cured by elevating the zinc-coated substrate temperature to a minimum of 400 degrees F.

The finish paint color shall be one of the manufacturer's standard colors and shall be as selected by the local agency responsible for paint costs. The Contractor shall confirm, in writing, the color selection with the local responsible agency and provide a copy of the approval to the Engineer and a copy of the approval shall be included in the material catalog submittal.

Traffic signal heads, pedestrian signal heads and controller cabinets are not included in this pay item.

Any damage to the finish after leaving the manufacturer's facility shall be repaired to the satisfaction of the Engineer using a method approvable by the Engineer and manufacturer. If while at the manufacturer's facility the finish is damaged, the finish shall be re-applied.

Warranty.

The Contractor shall furnish in writing to the Engineer, the paint manufacturer's standard warranty and certification that the paint system has been properly applied.

Packaging.

Prior to shipping, the poles and posts shall be wrapped in ultraviolet-inhibiting plastic foam or rubberized foam.

Basis of Payment.

This work shall be paid for at the contract unit price each for PAINT NEW MAST ARM POLE, UNDER 40 FEET (12.19 METER); PAINT NEW MAST ARM POLE, 40 FEET (12.19 METER) AND OVER; PAINT NEW COMBINATION MAST ARM POLE, UNDER 40 FEET (12.19 METER); PAINT NEW COMBINATION MAST ARM POLE, 40 FEET (12.19 METER) AND OVER; or TRAFFIC SIGNAL POST of any height, which shall be payment in full for painting and packaging the traffic signal mast arm poles and posts described above including all shrouds, bases and appurtenances.

DIVISION 1000 MATERIALS

PEDESTRIAN PUSH-BUTTON.

Revise Article 1074.02 of the Standard Specifications to read:

- (a) General. Push-button assemblies shall be ADA compliant, highly vandal resistant, be pressure activated with minimal movement and cannot be stuck in a closed or constant call position. A red LED and audible tone shall be provided for confirmation of an actuation call.
- (b) Housing. The push-button housing shall be solid 6061 aluminum and powder coated yellow, unless otherwise noted on the plans.
- (c) Actuator. The actuator shall be stainless steel with a solid state electronic Piezo switch rated for a minimum of 20 million cycles with no moving plunger or moving electrical contacts. The operating voltage shall be 12-24 V AC/DC.
- (d) Pedestrian Station. Stations shall be designed to be mounted directly to a post, mast arm pole or wood pole. The station shall be aluminum and accept a 3-inch round push button assembly and 5 X 7 $\frac{3}{4}$ -inch R10-3b or R10-3d sign. A larger station will be necessary to accommodate the sign, R10-3e, for a count-down pedestrian signal.

CONTROLLER CABINET AND PERIPHERAL EQUIPMENT.

Add the following to Article 1074.03 of the Standard Specifications:

- (a) 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.
- (b)(5) Cabinets – Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.
- (b)(6) Controller Harness – Provide a TS2 Type 2 "A" wired harness in addition to the TS2 Type 1 harness.
- (b)(7) Surge Protection – EDCO Model 1210 IRS with failure indicator.
- (b)(8) BIU – Containment screw required.
- (b)(9) Transfer Relays – Solid state or mechanical flash relays are acceptable.
- (b)(10) Switch Guards – All switches shall be guarded.
- (b)(11) Heating – Two (2) porcelain light receptacles with cage protection controlled by both a wall switch and a thermostat or a thermostatically controlled 150 watt strip heater.
- (b)(12) Plan & Wiring Diagrams – 12" x 16" (3.05mm x 4.06mm) moisture sealed container attached to door.
- (b)(13) Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channels (16) of vehicular operation.
- (b)(14) Field Wiring Labels – All field wiring shall be labeled.
- (b)(15) Field Wiring Termination – Approved channel lugs required.
- (b)(16) Power Panel – Provide a nonconductive shield.
- (b)(17) Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.

- (b) (18) Police Door – Provide wiring and termination for plug in manual phase advance switch.
- (b) (19) Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or equivalent.

RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET.

Add the following to Article 857.02 of the Standard Specifications:

Controller shall comply with Article 1073.01 as amended in these Traffic Signal Special Provisions.

Controller Cabinet and Peripheral Equipment shall comply with Article 1074.03 as amended in these Traffic Signal Special Provisions.

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.

Railroad interconnected controllers and cabinets shall be assembled only by an approved traffic signal equipment supplier. The equipment shall be tested and approved in the equipment supplier's District One facility prior to field installation.

ELECTRIC CABLE.

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

MAST ARM ASSEMBLY AND POLE.

Add the following to Article 1077.03 (a) of the Standard Specifications:

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer. All poles shall be galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

This work shall consist of furnishing and installing a galvanized steel or extruded aluminum shroud for protection of the mast arm pole base plate similar to the dimensions detailed in the "District One Standard Traffic Signal Design Details." The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall allow air to circulate throughout the mast arm but not allow infestation of insects or other animals. The shroud shall be constructed, installed and designed not to be hazardous to probing fingers and feet. All mounting hardware shall be stainless steel. The shroud shall not be paid for separately but shall be included in the cost of the mast arm assembly and pole.

TRAFFIC SIGNAL POST.

Add the following to Article 1077.01 (b) of the Standard Specifications:

All posts and bases shall be steel and hot dipped galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization.

SIGNAL HEADS.

Add the following to Section 1078 of the Standard Specifications to read:

All signal and pedestrian heads shall provide 12" (300 mm) displays with glossy yellow or black polycarbonate housings. All head housings shall be the same color (yellow or black) at the intersection. For new signalized intersections and existing signalized intersections where all signal and/or pedestrian heads are being replaced, the proposed head housings shall be black. Where only selected heads are being replaced, the proposed head housing color (yellow or black) shall match existing head housings. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion 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. Post top mounting collars are required on all posts, and shall be constructed of the same material as the brackets.

Pedestrian signal heads shall be furnished with the international symbolic "Walking Person" and "Upraised Palm" lenses. Egg crate sun shields are not permitted.

Signal heads shall be positioned according to the "District One Standard Traffic Signal Design Details."

SIGNAL HEAD, BACKPLATE.

Delete 1st sentence of Article 1078.03 of the Standard Specifications and add "All backplates shall be aluminum and louvered".

INDUCTIVE LOOP DETECTOR.

Add the following to Article 1079.01 of the Standard Specifications:

Contracts requiring new cabinets shall provide for card mounted detector amplifiers. Loop amplifiers shall provide LCD displays with loop frequency, inductance, and change of inductance readings.

ILLUMINATED SIGN, LIGHT EMITTING DIODE.

Revise Sections 891 of the Standard Specifications to read:

Description.

This work shall consist of furnishing and installing an illuminated sign with light emitting diodes.

General.

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.

(a) Display.

1. The LED blank out sign shall provide the correct symbol and color for "NO LEFT TURN" OR "NO RIGHT TURN" indicated in accordance with the requirements of the "Manual on Uniform Traffic Control Devices". The message shall be formed by rows of LEDs.
2. The message shall be clearly legible. The message shall be highly visible, anywhere and under any lighting conditions, within a 15 degree cone centered about the optic axis.

The sign face shall be 24 inches (600 mm) by 24 inches (600 mm). The sign face shall be completely illegible when not illuminated. No symbol shall be seen under any ambient light condition when not illuminated.

3. All LEDs shall be T-1 3/4 (5mm) and have an expected lamplife of 100,000 hours. Operating wavelengths will be Red-626nm, Amber-590nm, and Bluish/Green-505nm. Transformers shall be rated for the line voltage with Class A insulation and weatherproofing. The sign shall be designed for operation over a range of temperatures from -35F to +165 F (-37C to +75C).
4. The LED module shall include the message plate, high intensity LEDs and LED drive electronics. Door panels shall be flat black and electrical connections shall be made via barrier-type terminal strip. All fasteners and hardware shall be corrosion resistant stainless steel.

(b) Housing.

1. The housing shall be constructed of extruded aluminum. All corners and seams shall be heli-arc welded to provide a weatherproof seal around the entire case. Hinges shall be continuous full-length stainless steel. Signs shall have stainless steel hardware and provide tool free access to the interior of the sign. Doors shall be 0.125-inch thick extruded aluminum with a 3/16-inch x 1-inch neoprene gasket and sun hood. The sign face shall have a polycarbonate, matte clear, lexan face plate. Drainage shall be provided by four drain holes at the corners of the housing. The finish on the sign housing shall include two coats of exterior enamel applied after the surface is acid-etched and primed with zinc-chromate primer.
2. Mounting hardware shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and brackets specified herein.

Basis of Payment.

This work shall be paid for at the unit price each for ILLUMINATED SIGN, L.E.D.

GROUNDING EXISTING HANDHOLE FRAME AND COVER.

Description.

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 "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 (Burdny 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 contaminants. 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.

The grounding cable shall be paid for separately.

Method of Measurement.

Units measured for payment will be counted on a per handhole basis, regardless of the type of handhole and its location.

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 the handhole complete.

UNIT DUCT.

All installations of Unit Duct shall be included in the contract and not paid for separately. Polyethylene unit duct shall be used for detector loop raceways to the handholes. On temporary traffic signal installations with detector loops, polyethylene unit duct 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. Unit duct shall meet the requirements of NEC Article 343.

UNINTERRUPTIBLE POWER SUPPLY (UPS).

Description.

This work shall consist of furnishing and installing an uninterruptible power supply (UPS).

The UPS shall have the power capacity to provide normal operation of a signalized intersection that utilizes all LED type signal head optics, for a minimum of six hours.

The UPS shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate manually operated non-electronic bypass switch, and all necessary hardware and interconnect wiring according to the plans. The UPS shall provide reliable emergency power to the traffic signals in the event of a power failure or interruption. The transfer from utility power to battery power and *visa versa* shall not interfere with the normal operation of traffic controller, conflict monitor/malfunction management unit, or any other peripheral devices within the traffic controller assembly.

The UPS shall be designed for outdoor applications, and shall meet the environmental requirements of, "NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies", except as modified herein.

Materials.

The UPS shall be line interactive 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/VA active output capacity, with 90 percent minimum inverter efficiency).

The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 65 milliseconds.

The UPS shall have a minimum of three (3) sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans. Contact closures shall be energized whenever the unit:

- Switches to battery power. Contact shall be labeled or marked "On Batt".
- Has been connected to battery power for two (2) hours. Contact shall be labeled or marked "Timer".
- Has an inverter/charger failure. Contact shall be labeled or marked "UPS Fail".

Operating temperature for the inverter/charger, power transfer relay, and manual bypass switch shall be -35 to 165 °F (-37 to +74 °C).

Both the power transfer relay and manual bypass switch shall be rated at 240 VAC/30 amps, minimum.

The UPS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 1.4 – 2.2 mV/°F (2.5 - 4.0 mV/°C) per cell. The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 6.5 ft (2 m) of wire.

Batteries shall not be recharged when battery temperature exceeds $122\text{ }^{\circ}\text{F} \pm 5\text{ }^{\circ}\text{F}$ ($50\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$).

The UPS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 85 VAC to $135\text{ VAC} (\pm 2\text{ VAC})$.

When utilizing battery power, the UPS output voltage shall be between 110 and 125 VAC , pure sine wave output, 3 percent THD, $60\text{ Hz} \pm 3\text{ Hz}$. The UPS shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

When the utility line power has been restored at above $90\text{ VAC} \pm 2\text{ VAC}$ for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

When the utility line power has been restored at below $130\text{ VAC} \pm 2\text{ VAC}$ for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

The UPS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.

In the event of inverter/charger failure, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. In the event of an UPS fault condition, the UPS shall always revert back to utility line power.

Recharge time for the battery, from "protective low-cutoff" to 80 percent or more of full battery charge capacity, shall not exceed twenty hours.

The manual bypass switch shall be wired to provide power to the UPS when the switch is set to manual bypass.

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

As the battery reserve capacity reaches 50 percent, the intersection shall automatically be placed in all-red flash. The UPS shall allow the controller to automatically resume normal operation after the power has been restored. The UPS shall log an alarm in the controller for each time it is activated.

A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the UPS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the UPS is in operation. The light shall be a minimum 1 in. (25 mm) diameter, be viewable from the driving lanes, and able to be seen from 200 ft (60 m) away.

All 24 volt and 48 volt systems shall include an external or internal component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries.

Mounting/Configuration.

The inverter/charger unit shall be rack or shelf -mounted.

All interconnect wiring provided between the power transfer relay, manual bypass switch, and cabinet terminal service block shall be at least 6.5 ft (2 m) of #10 AWG wire.

Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be 6.5 ft (2 m) of #18 AWG wire.

Battery Cabinet.

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.

The door shall open to the entire cabinet, 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.

The manually bypass switch shall be installed inside the traffic signal cabinet.

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.

A minimum of three shelves shall be provided. Each shelf shall support a load of 132 lb (60 kg) minimum.

The battery cabinet housing shall have the following nominal outside dimensions: a width of 25 in. (785 mm), a depth of 16 in. (440 mm), and a height of 41 to 48 in. (1.1 to 1.3 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).

The battery cabinet shall be ventilated through the use of louvered vents, filters, and one thermostatically controlled fan. The cabinet fan shall not be energized when the traffic signals are on UPS power.

The battery cabinet shall have provisions for an external generator connection.

The UPS with battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. A warning sticker shall be placed on the outside of the cabinet indicating that there is an uninterruptible power supply inside the cabinet.

Maintenance, Displays, Controls, and Diagnostics.

The UPS shall include a display and/or meter to indicate current battery charge status and conditions.

The UPS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.

The UPS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.

The UPS hardware and batteries shall be easily replaced without requiring any special tools or devices.

The UPS shall include a resettable front-panel event counter display to indicate the number of times the UPS was activated. The total number of hours the unit has operated on battery power shall be available from the controller unit or UPS unit.

The UPS shall be equipped with an RS-232 port.

The UPS shall include tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.

The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate (Hubbell model HBL4716C or approved equal). Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

The manufacturer shall include two sets of equipment lists, operation and maintenance manuals, board-level schematic and wiring diagrams of the UPS, and battery data sheets. The manufacturer shall include any software needed to monitor, diagnose, and operate the UPS. The manufacturer shall include any required cables to connect the UPS to a laptop computer.

Battery System.

Individual batteries shall be 12 V type, 65 amp-hour minimum capacity at 20 hours, and shall be easily replaced and commercially available off the shelf.

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.

All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic leadcalcium 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.

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.

The batteries shall be provided with appropriate interconnect wiring and corrosion resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.

Batteries shall indicate maximum recharge data and recharging cycles.

Battery interconnect wiring shall be via a modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. The harness shall be equipped with mating power-pole style connectors for the batteries and a single, insulated plug-in style connection to the inverter/charger unit. The harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.

Battery terminals shall be covered and insulated so as to prevent accidental shorting.

Warranty.

The warranty for an uninterruptible 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.

Installation.

When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four (4) stainless steel bolts. The UPS cabinet shall be completely enclosed with the bottom and back constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

Basis of Payment.

This work will be paid for at the contract unit price per each for UNINTERRUPTIBLE POWER SUPPLY.

SIGNAL HEAD, LIGHT EMITTING DIODE.

Description.

This work shall consist of furnishing and installing a traffic signal head or pedestrian signal head with light emitting diodes (LED) of the type specified in the plan or retrofitting an existing traffic signal head with a traffic signal module or pedestrian signal module with LEDs as specified in the plans.

General.

LED signal heads (All Face and Section Quantities), (All Mounting Types) shall conform fully to the requirements of Sections 880 and 881 and Articles 1078.01 and 1078.02 of the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2007, and amended herein:

1. The LED signal modules shall be replaced or repaired if an LED signal module fails to function as intended due to workmanship or material defects within the first 60 months from the date of delivery. LED signal modules which exhibit luminous intensities less than the minimum values specified in Table 1 of the ITE Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement (June 27, 2005) [VTSCH] or show signs of entrance of moisture or contaminants within the first 60 months of the date of delivery shall be replaced or repaired. The manufacturer's written warranty for the LED signal modules shall be dated, signed by an Officer of the company and included in the product submittal to the State.
2. Each module shall consist of an assembly that utilizes LEDs as the light source in lieu of an incandescent lamp for use in traffic signal sections.

(a) Physical and Mechanical Requirements

1. Modules can be manufactured under this specification for the following faces:
 - a. 12 inch (300 mm) circular, multi-section
 - b. 12 inch (300 mm) arrow, multi-section
 - c. 12 inch (300 mm) pedestrian, 2 sections
2. The maximum weight of a module shall be 4 lbs. (1.8 kg).
3. Each module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.
4. Material used for the lens and signal module construction shall conform to ASTM specifications for the materials.
5. The lens of the 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. Polymeric lens shall provide a surface coating or chemical surface treatment applied to provide abrasion resistance. The lens of the module shall be integral to the unit, convex with a smooth outer surface and made of plastic. The lens shall have a textured surface to reduce glare.
6. The use of tinting or other materials to enhance ON/OFF contrasts shall not affect chromaticity and shall be uniform across the face of the lens.

7. Each module shall have a symbol of the type of module (i.e. circle, arrow, etc.) in the color of the module. The symbol shall be 1 inch (25.4 mm) in diameter. Additionally, the color shall be written out in 1/2 inch (12.7mm) letters next to the symbol.

(b) Photometric Requirements

1. The minimum initial luminous intensity values for the modules shall conform to the values in Table 1 of the VTCSH (2005) for circular signal indications, and as stated in Table 3 of these specifications for arrow and pedestrian indications at 25°C.
2. The modules shall meet or exceed the illumination values stated in Article 1078.01(3)c of the "Standard Specifications for Road and Bridge Construction," Adopted January 1, 2007 for circular signal indications, and Table 3 of these specifications for arrow and pedestrian indications, throughout the useful life based on normal use in a traffic signal operation over the operating temperature range.
3. The measured chromaticity coordinates of the modules shall conform to the chromaticity requirements of Section 4.2 of the VTCSH (2005).
4. The LEDs utilized in the modules shall be AlInGaP technology for red, yellow, Portland orange (pedestrian) and white (pedestrian) indications, and GaN for green indications, and shall be the ultra bright type rated for 100,000 hours of continuous operation from -40°C to +74°C.

(c) Electrical

1. Maximum power consumption for LED modules is per Table 2.
2. LED modules will have EPA Energy Star compliance ratings, if applicable to that shape, size and color.
3. Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
4. The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).
5. When a current of 20 mA AC (or less) is applied to the unit, the voltage read across the two leads shall be 15 VAC or less.
6. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
7. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

(d) Retrofit Traffic Signal Module

1. The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.

2. Retrofit modules can be manufactured under this specification for the following faces:
 - a. 12 inch (300 mm) circular, multi-section
 - b. 12 inch (300 mm) arrow, multi-section
 - c. 12 inch (300 mm) pedestrian, 2 sections
 3. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.
 4. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).
 5. Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.
 6. Electrical conductors for modules, including Retrofit modules, shall be 39.4 inches (1m) in length, with quick disconnect terminals attached.
 7. The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.
- (e) The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.
1. The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) for arrow indications.
 2. 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.
- (f) The following specification requirement applies to the 12 inch (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.
1. The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.
- (g) The following specification requirements apply to the 12 inch (300 mm) Pedestrian module only. All general specifications apply unless specifically superseded in this section.
1. Each pedestrian signal LED module shall provide the ability to actuate the solid upraised hand and the solid walking person on one 12 inch (300mm) section.
 2. Two (2) pedestrian sections shall be installed. The top section shall be wired to illuminate only the upraised hand and the bottom section shall be the walking man.
 3. "Egg Crate" type sun shields are not permitted. All figures must be a minimum of 9 inches (225mm) in height and easily identified from a distance of 120-feet (36.6m).

Basis of Payment.

This item shall be paid for at the contract unit price each for SIGNAL HEAD, LED, of the type specified, which price shall be payment in full for furnishing the equipment described above including signal head, LED(s) modules, all mounting hardware, and installing them in satisfactory operating condition.

The type specified will indicate the number of signal faces, the number of signal sections, and the method of mounting.

Pedestrian head(s) shall be paid for at the contract unit price each for PEDESTRIAN SIGNAL HEAD, LED, of the type specified and of the particular kind of material when specified.

The type specified will indicate the number of faces and the method of mounting.

When installed in an existing signal head, this item shall be paid for at the contract unit price each for SIGNAL HEAD, LED of the type specified, 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.

The type specified will indicate the number of signal faces, the number of signal sections, and the method of mounting.

When installed in an existing signal head, this item shall be paid for at the contract unit price each for PEDESTRIAN SIGNAL HEAD, LED, of the type specified, 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.

The type specified will indicate the number of faces and the method of mounting.

TABLES

Table 2 Maximum Power Consumption (in Watts)

	Red		Yellow		Green	
	25°C	74°C	25°C	74°C	25°C	74°C
12 inch (300 mm) circular	11	17	22	25	15	15
12 inch (300 mm) arrow	9	12	10	12	11	11
Pedestrian Indication	Hand-Portland Orange		Person-White			
	6.2		6.3			

Table 3 Minimum Initial & Maintained Intensities for Arrow and Pedestrian Indications (in cd/m²)

	Red	Yellow	Green
Arrow Indication	5,500	11,000	11,000

PEDESTRIAN COUNTDOWN SIGNAL HEAD, LIGHT EMITTING DIODE.

Description.

This work shall consist of furnishing and installing a pedestrian countdown signal head, with light emitting diodes (LED) of the type specified in the plan.

Pedestrian Countdown Signal Head, Light Emitting Diode, shall conform fully to the SIGNAL HEAD, LIGHT EMITTING DIODE specification, with the following modifications:

(a) Application.

1. Pedestrian Countdown Signal Heads, shall not be used at signalized intersections where traffic signals and railroad warning devices are interconnected.

2. All pedestrian signals at an intersection shall be the same type and have the same display. No mixing of countdown and other types of pedestrian traffic signals will be permitted.

(b) General.

1. The module shall operate in one mode: Clearance Cycle Countdown Mode Only. The countdown module shall display actual controller programmed clearance cycle and shall start counting when the flashing clearance signal turns on and shall countdown to "0" and turn off when the steady Upraised Hand (symbolizing Don't Walk) signal turns on. Module shall not have user accessible switches or controls for modification of cycle.
2. At power on, the module shall enter a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark.
3. The module shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The counting unit will go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.
4. The module shall allow for consecutive cycles without displaying the steady Upraised Hand.
5. The module shall recognize preemption events and temporarily modify the crossing cycle accordingly.
6. If the controller preempts during the Walking Person (symbolizing Walk), the countdown will follow the controller's directions and will adjust from Walking Person to flashing Upraised Hand. It will start to count down during the flashing Upraised Hand.
7. If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.
8. The next cycle, following the preemption event, shall use the correct, initially programmed values.
9. If the controller output displays Upraised Hand steady condition and the unit has not arrived to zero or if both the Upraised Hand and Walking Person are dark for some reason, the unit suspends any timing and the digits will go dark.
10. The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.
11. The countdown numerals shall be two (2) "7 segment" digits forming the time display utilizing two rows of LEDs.
12. The LED module shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, "Pedestrian Traffic Control Signal Indications - Part 2: LED Pedestrian Traffic Signal Modules," or applicable successor ITE specifications, except as modified herein.

13. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
14. In the event of a power outage, light output from the LED modules shall cease instantaneously.
15. The LEDs utilized in the modules shall be AlInGaP technology for Portland Orange (Countdown Numerals and Upraised Hand) and GaN technology for Lunar White (Walking Person) indications.
16. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

(c) Pedestrian Countdown Signal Heads.

1. Pedestrian Countdown Signal Heads shall be 16 inch (406mm) x 18 inch (457mm), for single units with the housings glossy black polycarbonate. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion 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.
2. Each pedestrian signal LED module shall be fully MUTCD compliant and shall consist of double overlay message combining full LED symbols of an Upraised Hand and a Walking Person. "Egg Crate" type sun shields are not permitted. Numerals shall measure 9 inches (229mm) in height and easily identified from a distance of 120 feet (36.6m).

(d) Electrical.

1. Maximum power consumption for LED modules is 29 watts.
2. The measured chromaticity shall remain unchanged over the input line voltage range listed of 80 VAC to 135 VAC.

Basis of Payment.

This item shall be paid for at the contract unit price each for PEDESTRIAN COUNTDOWN SIGNAL HEAD, LED, of the type specified, which 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. The type specified will indicate the number of faces and the method of mounting.

SECTION 400

WATERMAIN SYSTEM

STANDARD SPECIFICATIONS FOR WATER MAIN CONSTRUCTION

SECTION 400 - GENERAL:

The standards and requirements found in this section are for materials and construction of a water distribution system within the Village of Addison.

SECTION 400.1 - SPECIFICATIONS:

These specifications cover the installation of water mains, service connections, fire hydrants, valve vaults, and all appurtenances normally used for the construction of a water distribution system. Water mains shall be installed in accordance with the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois, IDOT's Standard Specifications for Road and Bridge Construction, and applicable ordinances of the Village of Addison. In case of a conflict, the Village of Addison's Standard Specifications for Water Main Construction and other applicable ordinances of the Village of Addison shall take precedence and shall govern.

SECTION 400.2 - REGULATIONS AND PERMITS:

- Additional regulations and requirements governing the construction of water mains in the Village of Addison are:
- A. Any restrictions, policies, and instructions that may be adopted or issued from time to time by the Village of Addison.
 - B. All water main extensions shall be designed in accordance with the requirements of the Illinois Environmental Protection Agency. No construction of a water main shall be performed unless a permit has been issued from said agency.
 - C. No unauthorized person shall uncover, make any connections with or openings into, use, alter, or disturb any public water main or appurtenance thereof without first obtaining a written permit from the Village of Addison.
 - D. All work shall be available for inspection by the Village of Addison at all times.
 - E. Only Village of Addison Water Department personnel shall turn on or off valves which affect the flow of water in the Village's water system.
 - F. At no time shall a contractor use water from a fire hydrant which is connected to the Village's water system.

SECTION 401 - PIPE MATERIALS:

All water main pipe and water service lines shall conform to the latest applicable ASTM, ANSI, AWWA, or other nationally accepted standards. Only the following water main pipe is approved for use in the Village of Addison:

- A. Ductile iron pipe (DIP) conforming to ANSI A21.51 (AWWA C-151), thickness Class 52 per ANSI A21.50 (AWWA C-150), bituminous seal coated and cement lined per ANSI A21.4 (AWWA C-104), with mechanical or rubber gasket push-on joints "Bell-Tite" or approved equal per ANSI A21.11 (AWWA C111 and AWWA C600).
- B. Alternate pipe materials and jacking pipe shall be individually approved by the Director of Public Works before starting the work.

All pipe shall be suitable for use in a water distribution system.

SECTION 401.1 - PIPE FITTINGS:

All fittings shall be ductile iron with mechanical or push type joints conforming to ANSI A21.10 (AWWA C-110), lined and coated to match the pipe requirements. Fittings shall be manufactured in the USA, and furnished by the pipe supplier or approved equal and have a bell and/or spigot configuration identical to that of the pipe.

SECTION 401.2 - MINIMUM SIZE:

Minimum size of any public water main shall be eight (8) inches in diameter, except where the main serves a cul-de-sac (450 feet or less in length) and is a minor branch main, then the size can be reduced to six (6) inches upon the approval of the Director of Public Works.

SECTION 402 - PROTECTION OF THE WATER DISTRIBUTION SYSTEM:

Water mains and water service lines shall be protected from sanitary sewer, combined sewer, sanitary sewer service connections, and storm sewers in accordance with the applicable regulations of the Illinois Environmental Protection Agency and as follows:

A. HORIZONTAL SEPARATION:

- 1 Whenever possible, a water main should be laid at least ten (10) feet horizontally from any existing or proposed drain or sewer line.
- 2 Should local conditions prevail which would prevent a lateral separation of ten (10) feet, a water main may be laid closer than ten (10) feet to a storm or sanitary sewer, provided that the water main invert is at least eighteen (18) inches above the crown of the sewer, and the water main is laid either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
- 3 If it is impossible to obtain proper horizontal separation as stipulated in paragraph 1 or 2 above, the sewer should be constructed of slip-on or mechanical joint ductile iron pipe, and be pressure tested to assure water tightness before backfilling.

B. VERTICAL SEPARATION:

1. Whenever water mains must cross house sewers, storm drains or sanitary sewers, the water main should be laid at such an elevation that the bottom of the water main is eighteen (18) inches above the top of the drain or sewer. This vertical separation should be maintained for the portion of the water main located within ten (10) feet horizontally of any sewer or drain crossed, such ten (10) feet to be measured as the normal distance from the water main to the drain or sewer.
2. Where such conditions exist that the minimum vertical separation as set forth in Paragraph 1 above cannot be maintained, or where it is necessary for the water main to pass under a sewer or drain, the sewer or drain shall be laid with ductile iron pipe, and the pipe should extend on each side of the crossing until the normal distance from the water main to the sewer or drain lines is at least ten (10) feet. In making such crossing it is preferable to center a length of ductile iron pipe over the water main to be crossed, so that the joints will be equal distance from the water main and as remote there from as possible. Where a water main must cross under a sewer, a vertical separation of eighteen (18) inches between the bottom of the sewer and the top of the water main shall be maintained, along with means to support the sewer lines to prevent their settling and damaging the water main.

- C. WATER SERVICE LINES: The horizontal and vertical separation between water service lines and all sanitary sewers, storm sewers or any drain should be the same as for water mains; except that, when minimum horizontal and vertical separation cannot be maintained, copper or ductile iron shall be used for water service lines.

Whenever a water main and sanitary sewer or storm sewer cross, pipe elevations shall be shown on the plan sheet.

SECTION 402.1 - SEPARATION OF SERVICES:

A water service should be located at least ten (10) feet horizontally from a any sanitary sewer service, and should be separated by undisturbed or compacted earth.

A water service may be located closer than ten (10) feet to a sanitary sewer service when:

- A. The bottom of the water service pipe is a minimum of eighteen (18) inches above the top of the sanitary sewer service at its highest point; and
- B. The water service is placed on a solid shelf, excavated to one side of the sanitary sewer service.

When it is impossible to meet any of the conditions listed above, the sanitary sewer service shall be constructed of ductile iron pipe or polyvinyl chloride pressure rated pipe

with push-on joints, equivalent to watermain quality pipe.

When a water service crosses under a sanitary sewer, sanitary service, storm sewer or drain, the water service shall be encased in watermain quality pipe.

SECTION 402.2 - WATER MAIN RELOCATION:

When an existing water main, and a proposed sewer cross, a minimum vertical separation of eighteen (18) inches shall be maintained between them. Water mains shall be relocated to comply with the minimum separation.

It is preferred that a water main be relocated over a sewer line. Water mains shall only be raised a maximum of eighteen (18) inches when using mechanical joint offset fittings. The top of the water main shall remain five (5) feet, six (6) inches or greater below finished grade.

When a water main can not be relocated over a sewer, it shall be relocated under the sewer, and the sewer constructed of pressure rated pipe such as; Class 52 DIP, SDR 26PR pipe, or RCP with "O"-ring joints. Pressure rated pipe shall extend from manhole to manhole over the water main. In place of using pressure rated pipe, the sewer may be encased in a bituminous coated steel casing pipe. The casing pipe shall extend a minimum of ten (10) feet on either side of the water main.

Meg-a-lug retainer glands and thrust blocks shall be used at all fittings and joints when relocating a water main.

SECTION 403 - CONSTRUCTION AND SURVEY STAKES:

(See Section 1211)

SECTION 404 - QUALITY OF MATERIALS:

It is the intent of this specification that only first-class materials shall be used throughout the project, and that they shall be incorporated in such a manner as to produce a completed job that is workmanlike and acceptable in every detail. Therefore, all water main, water main parts, fittings and valves shall be manufactured in the USA.

SECTION 404.1 - DEFECTIVE MATERIALS:

All materials not conforming to the requirements of these specifications shall be considered as defective and shall be removed from the project. If in place, they shall be removed by the contractor at his expense and replaced with acceptable materials. No defective material shall be used. The contractor shall carefully inspect all materials and reject any material with detectable defects before installation. The Village reserves the right to make such an inspection and to order the rejection of any materials which have detectable defects. The Village will observe the work as it progresses and may reject any material or workmanship which is determined to be defective or carelessly performed. However, primary responsibility for the quality of the work and performance of the system remains with the contractor.

SECTION 404.2 - HANDLING OF PIPE:

Water main pipe shall be handled in the manner that will prevent damage to the pipe. Methods of construction which may damage the pipe shall be corrected when called to the attention of the contractor.

SECTION 405 - TRENCH EXCAVATION:

All trenches shall be excavated to a minimum depth of four (4) inches below the bottom of the pipe barrel, and unless otherwise specified, shall have a flat bottom conforming to the grade to which the pipe is to be laid.

SECTION 405.1 - STOCKPILING EXCAVATED MATERIAL:

Excavated material shall not be placed on pavement or sidewalks, except on the authorization of the Director of Public Works, and then only when adequate provisions have been made for the temporary passage of pedestrians and vehicles. Gutters shall be kept open or other satisfactory provisions shall be made for street drainage.

Excavated material shall not be stockpiled in any manner that will damage the work or obstruct natural water courses.

SECTION 405.2 - TRENCH WIDTH:

The ground shall be excavated in open trenches of sufficient width and depth to provide ample room within the limits of the excavation for the proper construction of the water main, water service, and all appurtenances shown on the plans. The maximum trench width at and below the top of the pipe shall not exceed a width of (eighteen (18) inches + outside diameter of the pipe + eighteen (18) inches).

If these trench widths are exceeded without the written permission of the Director of Public Works, the contractor shall, at his own expense, install a stronger class of pipe than originally specified to the satisfaction of the Director of Public Works.

SECTION 405.3 - USE OF TRENCH SUPPORTS (TRENCH BOX):

Trench supports shall be used as required by the rules and regulations of OSHA. Any trench five (5) feet or more in depth shall require trench supports.

When using a movable trench support, care shall be exercised so as not to disturb the pipe.

Trench supports shall ride on a shelf above the top of the pipe, with the pipe installed in a narrow, vertical-wall sub-ditch (step-trench). Trench supports below the top of the pipe shall not be used except when approved by the Director of Public Works.

SECTION 405.4 - TRENCHES WITH SLOPING SIDES:

The contractor may, at his option, where working conditions and the right-of-way permit (as determined by the Director of Public Works), excavate the pipe line trench with sloping sides, but with the following limitations:

- A. In general, only trench supported and vertical trenches will be permitted in the traveled streets, alleys, or narrow easements.
- B. Where trenches with sloping sides are permitted, the slopes shall not extend below the top of the pipe, and trench excavation below this point shall be made with vertical sides and the width shall not exceed those specified for the various sizes of pipe.

SECTION 405.5 - OPEN EXCAVATION:

The excavation of the trench shall not advance more than fifty (50) feet ahead of the completed work and in no way shall more trench be opened than can be completely backfilled by the end of the work day. If during the progress of work, it becomes necessary to keep the trench open overnight, this shall be done only with the approval of the Director of Public Works. Care shall be taken to fence off the open excavation in a manner satisfactory to the Director of Public Works to prevent anyone from entering the excavation. Where a utility crosses an existing street, see Section 1205 - Open Cutting A Municipal Street, or Section 1209 - Casing Pipe.

Streets, sidewalks, parkways, and other public property, disturbed in the course of this work, shall be restored in a manner satisfactory to the Director of Public Works.

SECTION 405.6 - DEWATERING TRENCH:

The contractor shall at his own expense do all pumping, well pointing, or other work necessary to keep the trench clear of ground water, sewage, or stormwater while the water main is being placed, and until the joint has been made.

All trench water pumped or drained from the trench shall be disposed of in a manner approved of by the Director of Public Works without damage to adjacent property or to other work under construction. No sanitary sewer shall be used for disposal of trench water, unless specifically approved of by the Director of Public Works, and then only if the trench water does not ultimately arrive at an existing pumping or sewage treatment facility. No water containing settle able solids or raw sewage shall be discharged into the storm sewer system.

SECTION 405.7 - OVER-EXCAVATION:

In cases where the excavation has been made deeper than necessary or where a firm foundation is not encountered at the grade established in the plans, the contractor shall replace the material removed with crushed stone fill.

Crushed stone refill shall be used up to six (6) inches below the bottom of the pipe and overlain with pipe bedding material. (See Section 405.8) Crushed stone refill shall be

compacted to ninety five (95%) percent of modified proctor density. Crushed stone refill shall meet IDOT specifications for CA-1 (crushed limestone).

SECTION 405.8 - PIPE BEDDING:

Granular pipe bedding material shall be required on all water lines installed in the Village of Addison. Granular pipe bedding shall be a minimum of four (4) inches deep in earth excavation and a minimum of six (6) inches deep in rock excavation. The pipe bedding shall be placed so that the entire length of pipe will have full bearing. No blocking of any kind shall be used to adjust the pipe to grade. When pipes having a bell are used, cross trenches of sufficient depth and not more than two (2) inches wider than the bell shall be excavated to provide uniform bearing.

Granular pipe bedding material shall meet IDOT specifications for CA-6 (sand).

SECTION 406 - LAYING OF PIPE:

Water main pipe shall be laid only after the trench has been dewatered and the bedding material has been properly prepared.

SECTION 406.1 - LAYING OF PIPE ON CURVES:

Pipe required to be laid on curved alignment shall be joined in straight alignment and then deflected, joint by joint. Trenches shall be made wider on curves for this purpose. Special care shall be taken in blocking the pipe just previously laid, by shovel-slicing haunching material around the pipe to prevent misalignment. Maximum deflections at pipe joints and laying radius for various pipe lengths can be found in AWWA C600. In no case shall the degree of deflection exceed two thirds ($\frac{2}{3}$) of the manufacturer's recommendations for the respective pipe size.

SECTION 406.2 - JOINTING DUCTILE IRON PIPE:

Joints for ductile iron pipe shall consist of mechanical joints or push-on rubber gaskets, unless otherwise approved by the Director of Public Works.

Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations. Any pipe or joint that has been installed with dirt or foreign material in it shall be removed, cleaned, and re-laid. At times when pipe laying is not in progress, the open end of the pipe shall be closed with a water tight plug or by other means approved by the Director of Public Works to ensure absolute cleanliness inside the pipe.

All pipe laid shall be held in position to maintain alignment and a tight joint, until sufficient haunching material has been placed to hold the pipe. (See Section 406.5)

- A. JOINING MECHANICAL JOINT PIPE: The outside of the spigot and inside of the bell of mechanical joint pipe shall be thoroughly cleaned to remove all foreign matter from the joint. The ductile iron gland (Meg-A-Lug, by EBAA Iron Sales,

Inc.) shall then be slipped onto the spigot end of the pipe with the lip extension of the gland toward the socket or bell end. The rubber gasket shall be placed on the spigot end with the thick edge toward the gland. The pipe shall be pushed forward to completely seat the spigot end in the bell. The gasket shall then be pressed into place within the bell, being careful to have the gasket evenly located around the entire joint. The ductile iron gland shall then be moved along the pipe into position and bolted.

Nuts, evenly spaced, shall be tightened alternately to AWWA C600 Standards in order to produce an equal pressure on all parts of the gland.

- B. JOINTING RUBBER GASKET PUSH-ON JOINT PIPE (AWWA C111): The inside of the bell shall be thoroughly cleaned to remove all foreign matter from the joint. The circular rubber gasket shall be inserted in the gasket seat provided.

A thin film of gasket lubricant shall be applied to the inside surface of the gasket. Gasket lubricant shall be a solution of vegetable soap or other solution supplied by the pipe manufacturer and approved by the Director of Public Works.

The spigot end of the pipe shall be cleaned and entered into the rubber gasket in the bell, using care to keep the joint from contacting the ground. The joint shall then be completed by forcing the plain end into the seat of the bell. Pipe which is not furnished with a depth mark shall be marked before assembly to assure that the spigot end is inserted to the full depth of the joint.

Field-cut pipe lengths shall be beveled to avoid damage to the gasket and facilitate making the joint.

SECTION 406.3 - DEPTH OF PIPE:

All pipe shall be laid to a minimum depth of five (5) feet six (6) inches as measured from the proposed ground surface to the top of the pipe barrel. Where conflicts arise with other underground utilities, greater depths may be allowed with the approval of the Director of Public Works.

SECTION 406.4 - THRUST RESTRAINTS:

Thrust restraints, to prevent movement of the water line when under pressure, shall be provided. Several methods of restraining the water main are to be used.

Thrust blocking and retained joints shall be used at all bends, tees, reducers, caps, valves and fire hydrants. Where conditions prevent the use of concrete thrust blocks, such as in soft ground, tie rods and retained joints shall be used.

- A. THRUST BLOCKING: Blocking shall consist of solid prefabricated Portland Cement concrete blocks, a minimum of twelve (12) inches thick, placed between solid ground and the fitting. Wood wedges may be used between the fitting and the concrete block. Blocking shall be placed in such a manner that the pipe and

fitting joints will be accessible for repairs. Poured in place concrete will not be permitted without prior approval of the inspector.

- B. RETAINED JOINTS: Ductile iron (Meg-A-Lug) retainer glands, by EBAA Iron Sales, Inc.
- C. TIE RODS: Stainless steel rods with stainless steel nuts.

Dead end water mains shall be retained by using "Field Locking Gaskets" on the last sixty (60) feet of the watermain, and a "Retained Cap" with thrust blocking, at the end of the water main.

SECTION 406.5 - HAUNCHING OF PIPE:

Granular material shall be placed and compacted by shovel-slicing under the pipe haunch to provide adequate side support to the water main pipe while avoiding both vertical and horizontal movement. The same material used for bedding shall be used for haunching.

Shovel-slicing of the granular haunching material shall take place when the material is no higher than the quarter point of the pipe. The remainder of the haunching material can then be placed to the spring line of the pipe and mechanically compacted.

Granular haunching material shall meet IDOT specifications for FA-6 (sand).

SECTION 406.6 - INITIAL BACKFILL:

Granular material shall be placed and compacted in all water main and water service trenches to an elevation of one (1) foot over the top of the pipe. Initial backfilling shall not start until the water main, water service, or any appurtenances have been inspected and approved. Where initial backfilling has taken place prior to being inspected and approved, the contractor shall uncover the work for inspection. The cost for this work shall be borne by the contractor. Initial backfill material shall meet IDOT specifications for FA-6 (sand) and shall be compacted with vibratory equipment to ninety five (95%) percent of Modified Proctor Density.

SECTION 406.7 - TRENCH BACKFILL:

Unless otherwise directed, all trenches and excavations shall be backfilled as soon as the initial backfilling has been completed.

- A. GRANULAR TRENCH BACKFILL: All trenches caused by the construction of water mains, water services or appurtenances which fall beneath or within two (2) feet of the outer edge of existing or proposed pavement, curb and gutter, sidewalks, paved or unpaved driveways, shall be backfilled with granular trench backfill to the elevation of the finished subgrade.

Granular trench backfill shall be placed from two (2) feet outside of the existing or proposed pavement, curb and gutter, sidewalks, paved or unpaved driveways,

at a forty five (45) degree angle to the top of the initial trench backfill.

Granular trench backfill shall be free of frozen lumps and foreign material that may have become mixed with it during handling.

Granular trench backfill shall meet IDOT specifications for FA-6 (sand).

- B. **EXCAVATED TRENCH BACKFILL:** Where granular trench backfill is not required, selected materials originally excavated from the trench may be used. The backfill material shall not contain tree limbs, stumps, boulders, frozen clumps of dirt, or rubble of any kind.

Where there is a deficiency of suitable backfill material due to a rejection of part or all of the excavated material as unsatisfactory for backfill purposes as directed by the Director of Public Works, the contractor shall furnish sufficient satisfactory material to complete the backfilling.

All rejected or surplus excavated material which is not used for backfilling shall be removed from the site.

Any settlement of the backfill shall be remedied by the owner / developer for a period of one (1) year after final acceptance of the subdivision upon receipt of a written notice from the Director of Public Works.

SECTION 406.8 - BACKFILL COMPACTION:

Initial backfill material shall be carefully deposited in uniform layers not exceeding eight (8) inches thick (loose measure) to a height of twelve (12) inches above the pipe. The material in each layer shall be firmly compacted by mechanical methods approved by the Director of Public Works in such a manner as to not disturb or damage the pipe. All trenches shall have the remaining backfill (above the initial backfill) compacted by either water jetting or mechanical methods, except that water jetting will not be allowed where granular trench backfill is used.

- A. **MECHANICAL METHOD:** Backfill material shall be deposited in uniform layers not exceeding twelve (12) inches thick (loose measure), and each layer shall be compacted by mechanical methods approved by the Director of Public Works. Granular trench backfill shall be compacted to ninety five (95%) percent of Modified Proctor density.

It shall be the contractor's responsibility to provide to the Village of Addison with compaction reports on all granular trench backfilled areas.

SECTION 407 - WATER SERVICES:

The minimum size of a water service in the Village of Addison shall be one (1) inch copper water tube, type K, soft temper, for underground service, conforming to ASTM B-88 and B-251. All copper connections shall be made with flared joints. For water

services having an inside diameter larger than two (2) inches, cement lined ductile iron pipe shall be used, and shall comply with all specifications for the installation of water mains.

When a copper water service is installed beneath an existing road, sidewalk, or driveway, the service pipe shall be installed by pushing or auguring a hole beneath the road, sidewalk, or driveway and installing the service pipe through the hole. A ductile iron water service pipe shall be installed in a casing pipe. (See Section 1209) The size of the opening in the road to connect the water service to the water main shall be kept to a minimum, and the road repaired. (See Section 1205)

When a water service is installed to supply a fire sprinkler system, there shall be both a domestic service, and a fire service. The domestic service shall be tapped off the fire service, out side the building, and provided with a separate Buffalo Box.

SECTION 407.1 - SERVICE TAPS:

Service taps shall only be made on water mains that are under pressure. The size and location of all taps shall be shown on the plans. There shall be a minimum separation of two (2) feet between each tap or any pipe joint. All taps and connections to the water main shall be made in the presence of an authorized Village Inspector. Service taps shall be as follows:

- A. Service taps one (1) inch in size shall be made using a corporation stop.
- B. Service taps over one (1) inch in diameter, up to and including two (2) inches in size, shall be made with a stainless steel tapping sleeve and a corporation stop.
- C. Service taps larger than two (2) inches in diameter, shall use a stainless steel tapping sleeve and a tapping valve. Taps shall be made in accordance with Section 410-A "Pressure Connections". A valve vault shall be used on all service taps four (4) inches in diameter and larger.

Corporation stops shall be fabricated of brass, with outlets suitable for flared joint copper connections, Ford Grip-Tight, Mueller Ori-Seal (or approved equal). Taps shall be made by using a tapping machine in the upper third of the water main at an angle of forty five (45) degrees to the water main. A tap into the top of the water main will not be permitted. The corporation stop shall be turned so that the T-handle will be on top. Sand shall be placed to one (1) foot above the corporation stop and hand tamped to prevent damage during backfilling.

SECTION 407.2 - LAYING WATER SERVICE PIPE:

A water service pipe shall not be laid less than ten (10) feet horizontally from a sanitary sewer service, and shall be separated by undisturbed or compacted earth. When this condition cannot be met:

- A. The bottom of the water service pipe shall be installed a minimum of eighteen

(18) inches above the top of the sanitary sewer service at its highest point, and shall be placed on a solid shelf, excavated to one side of the sanitary sewer service.

- B. The sanitary sewer service shall be constructed of ductile iron pipe with push-on joints or SDR 26, PVC pipe.

Copper water services shall be laid on undisturbed, smooth earth, sufficiently weaving from side to side to allow for not less than one (1) foot of extra slack in the line to prevent undue stress on the water main. The service pipe shall be laid at least five (5) feet six (6) inches below finished grade, in a trench that shall not exceed two (2) feet six (6) inches in width.

The water shall be shut off at the curb stop.

Ductile iron water services shall be laid on four (4) inches of granular pipe bedding, at least five (5) feet six (6) inches below finished grade. The trench width shall comply with the specifications for the installation of water mains.

Initial backfill shall be placed and compacted to an elevation of one (1) foot over the top of all water services. (See Section 406.6)

All service trenches which are located within the right-of-way shall be backfilled with granular trench backfill to within one (1) foot of finished grade, per Section 406.8. Granular trench backfill shall meet IDOT specifications for FA-6 (sand). Service trenches outside the right of way shall be backfilled, per Section 406.7.

Water services shall be left water tight. The location shall be marked by placing a two (2) inch x four (4) inch x eight (8) foot board at the end of each service before backfilling. The board shall extend a minimum of three (3) feet above the ground surface, with the upper two (2) feet painted blue.

SECTION 407.3 - CURB STOPS AND CURB BOXES:

A curb stop shall be furnished and installed for each water service. Curb stops shall be fabricated of brass and shall be provided with outlets suitable for flared joint copper connections. Curb stops shall be of the round-way type, Ford, Mueller Ori-seal (or approved equal). Curb stops shall be set on a flat concrete block twelve (12) inches x twelve (12) inches x one (1) inch, at least five (5) feet six (6) inches below finished dirt grade.

A cast iron curb box, of the Buffalo type with an arch-type saddle, Mueller (or approved equal) shall be furnished and installed over the curb stop. Curb boxes, also known as Buffalo boxes or B-boxes, shall be size 95E with the top section having a two (2) and one half (½) inch shaft size. The lid of a curb box shall contain the word "Water". Curb boxes shall be installed approximately seven (7) feet from the property line on the right-of-way, and shall not be located in any sidewalk or driveway. The contractor shall record the location of the boxes from the nearest fire hydrant. Curb boxes shall be held in a truly

vertical position, and staked in place to ensure permanent vertical alignment of the box. The location of the box shall be marked with a two (2) inch x four (4) inch x eight (8) foot board. The board shall extend three (3) feet above the ground surface, with the upper two (2) feet painted blue.

Curb boxes shall be installed flush with the finished grade. This may require adjusting prior to final acceptance.

SECTION 407.4 - TESTING OF WATER SERVICES:

Testing of all water services that will supply a fire sprinkler system shall be required. The contractor that installed the water service shall be responsible for testing the water service. Testing of the water service shall conform to Section 416 (Testing Of Water Main), and shall also include a flush and flow test.

A flush and flow test shall be witnessed by a representative of the Addison Fire Protection District, and the Village of Addison's Public Works Water Department. The contractor shall advise the Addison Fire Protection District and Public Works Water Department forty eight (48) hours in advance of performing the tests.

Flushing of the water service shall be performed as outlined in Section 417.1 (Flushing), with the exception that a hydrant will not be required.

Flow testing of the water service shall be performed to satisfy the Addison Fire Protection District's code requirements.

SECTION 407.5 - WATER SERVICE AS-BUILT RECORDS:

The contractor shall record the location of each water service that they install. Corporation stops shall be located by measurement to the nearest fire hydrant. B-boxes, and the ends of all water services, shall be located by measurements to the right-of-way, and to the nearest side property line. The depth from finished grade at the end of each water service shall also be recorded.

This information shall be given to the developer's engineer so that at the completion of construction, accurate as-built drawings can be prepared. Final payment to the contractor shall be held until the as-built records are received by the engineer. If the contractor fails to properly locate any water service, he shall be responsible for all costs which are incurred as a result of inadequate information.

SECTION 408 - VALVE VAULTS:

Valve vaults shall be used on all valves four (4) inches in diameter and larger, except for fire hydrant auxiliary valves.

Minimum inside diameter for a valve vault shall be five (5) feet for four (4) inch to twelve (12) inch valves, and six (6) feet for fourteen (14) inch to sixteen (16) inch valves. Valve vaults shall be constructed of reinforced precast concrete units. Split concrete bottoms will not be allowed. Precast units shall conform to ASTM C-478. Larger

diameter valve vaults may be required by the Director of Public Works. All valve vaults shall be water-tight to prevent the infiltration of storm or ground water into the structure. Valve vaults shall not put undue pressure on the water main. The contractor shall be liable for any costs due to repairing a water main break that may occur within ten (10) feet of the valve vault for a period of one (1) year after installation.

SECTION 408.1 - VALVE AND VALVE VAULT LOCATIONS:

A valve vault shall be located so that in the event of a single break, not more than five hundred (500) feet of main will be out of service and require the closing of not more than three (3) valves. Whenever possible, a valve and valve vault shall not be located in a street, driveway, or other paved areas. Additional valves and valve vaults may be required by the Director of Public Works.

SECTION 408.2 - VALVE VAULT BEDDING:

Granular bedding material shall be required on all valve vaults installed in the Village of Addison. Granular bedding shall be a minimum of three (3) inches in thickness and shall extend to the limits of the excavation. Valve vault bedding shall be firmly tamped, made smooth and level to assure uniform contact and support for the base.

Granular valve vault bedding material shall meet IDOT specifications for CA-6 (crushed limestone), or FA-6 (sand).

SECTION 408.3 - PRECAST VALVE VAULT COMPONENTS:

Cones and sections shall be of sound construction and free from gravel pockets, fractures, large or deep cracks, and surface roughness. Walls shall have a minimum thickness of five (5) inches and slab bottoms a minimum thickness of six (6) inches. Joints shall be of the tongue and groove type. Valve vault cones shall be concentric in design.

Bituminous material shall be used to securely seal the joints between precast sections. Surfaces may be set in full bituminous mastic beds or two (2) rows of resilient, flexible, non-hardening, pre-formed, bituminous mastic material (Ramnek or approved equal). Pre-cast mortar plugs shall not be used to plug lifting holes in valve vaults. Lifting holes and joints shall be thoroughly wetted, and then filled with a non-shrink or hydraulic grout. Openings through which pipes enter the valve vault shall be blocked shut using solid concrete blocks, bricks, and non-shrink or hydraulic grout. All grouted areas shall be smoothed, both inside and out, and then covered with a bituminous water proofing compound on the outside only.

SECTION 408.4 - VALVE VAULT FRAMES AND LIDS:

Each valve vault shall be furnished with a Type-1 frame and a Type "B" lid design. The lid shall be self-sealing and have concealed pick-holes to prevent the inflow of surface water into the valve vault. The word "Water" shall be imprinted in the lid. Valve vault frames and lids shall meet the following Village of Addison requirements:

- A. Standard frame and lid for use in paved areas, curb and gutter, or driveways shall be of cast iron, heavy duty construction, and equivalent to Neenah R-1031.
- B. Standard frame and lid for use in parkways and other non-paved areas shall be of cast iron, medium duty construction, and equivalent to Neenah R-1060 or Neenah R-1700.
- C. For those locations that will be subjected to prolonged standing water (locations shall be subject to the approval of the Director of Public Works) the Director of Public Works shall require the use of a water tight frame and lid. They shall be of heavy duty construction, and equivalent to Neenah R-1755-B, or Neenah R-1916-E.

SECTION 408.5 - VALVE VAULT STEPS:

Steps shall not be installed in valve vaults.

SECTION 408.6 - EXCAVATION AND BACKFILL OF VALVE VAULTS:

Any excavation for a valve vault shall be made a minimum of one (1) foot greater than the diameter of the structure in order to permit proper patching and compaction of the backfill material. Excavations shall be undercut to provide for three (3) inches of granular bedding. (See Section 408.2)

Backfilling shall not begin until the exterior of the valve vault has been inspected and approved. The space between the sides of the excavation and the outer surface of the valve vault shall be completely backfilled with granular trench backfill if the edge of excavation is within two (2) feet of the outer edge of existing or proposed pavement, curb and gutter, sidewalks, paved or unpaved drives.

If the excavation falls beyond these limits, then excavated trench backfill material may be used, provided that it meets with the approval of the Director of Public Works. (See Section 406.7).

SECTION 408.7 - VALVE VAULT FRAME ADJUSTMENT:

All new and existing valve vaults on the site or in the area disturbed by the construction shall be adjusted to finished grade prior to final inspection of the work. Adjustments shall be made using precast, reinforced concrete adjusting rings. No more than two (2) adjusting rings shall be installed on a given valve vault; however, no more than one (1) of these rings shall be two (2) inches in size. Adjusting rings shall be placed with the thickest ring on the bottom. In no case shall more than twelve (12) inches of adjusting rings be permitted. If the total thickness of all adjustments exceeds twelve (12) inches, then adjustments shall be made by interchanging and or adding / removing complete barrel sections to achieve the desired elevations.

Bituminous material shall be used at all joints to securely seal the concrete adjusting rings and frame to the valve vault. Surfaces may be set in full bituminous mastic beds or two

(2) rows of resilient, flexible, non-hardening, pre-formed, bituminous mastic material (Ramnek, or approved equal). This mastic shall be applied in such a manner that no surface or ground water can enter the valve vault through the joints.

Also see Section 1201 (Frame and Grate Adjustment) for structures located in the curb and gutter or paved areas.

SECTION 408.8 - INSPECTION OF VALVE VAULTS:

All valve vaults shall be thoroughly cleaned of dirt and debris and all visible leakage eliminated before final inspection and acceptance.

SECTION 409 - WATER MAIN VALVES:

Valves shall be manufactured in the USA, and shall be of the gate valve type, suitable for use in an underground water distribution system. All gate valves shall be of the resilient wedge type, conforming to the latest edition of AWWA C-509. The name, or make of the manufacturer, size, and working pressure shall be plainly cast in raised letters on the valve body. Valve bodies shall be of ductile iron. All bolts used in the assembly of a valve shall be stainless steel. Valves from the following manufacturers are acceptable: Clow, Waterous, or Mueller. All gate valves shall be furnished with mechanical or flanged joints conforming to ANSI A21.11 (AWWA C-111).

All gate valves shall be equipped with a two (2) inches square operating nut that shall turn to the left (counter clockwise) to open the valve. The word "Open" in one half (½) inch or larger letters shall be cast on the nut to clearly indicate the direction of opening. Operating nuts shall have a flanged base with an arrow, (minimum two (2) inches long) cast on the base, showing in which direction to turn the nut to open the valve. All gate valves shall be designed to withstand a cold water working pressure of one hundred and fifty (150) psi, and a hydrostatic test pressure of three hundred (300) psi.

SECTION 409.1 - TAPPING VALVES:

All pressure connections shall be made with a tapping valve. Tapping valves shall be furnished with flanged inlet and outlet connections. The outlet end shall conform in dimensions to the AWWA standards for hub or mechanical joint connections, except that the outside of the hub shall have a flange for attaching the tapping machine. The seat opening of the valve shall be larger than normal size to permit for full diameter cuts.

SECTION 409.2 - INSTALLATION OF GATE VALVES:

All gate valves shall be inspected upon delivery in the field to insure proper working order before installation. Valves shall be installed in a vertical position, supported on a solid concrete block. Three quarter (¾) inch thick asphalt impregnated fiberboard expansion joint material shall be placed between the concrete block and the valve.

SECTION 409.3 - CAST IRON VALVE BOXES FOR GATE VALVES:

Cast iron valve boxes with the word "Water" imprinted in the lid shall be used to enclose gate valves smaller than 4 inches in size and fire hydrant auxiliary valves. A screw type cast iron valve box shall be set in position during the backfilling so that it will be in vertical alignment to the gate valve operating stem. The lower part of the unit shall be installed on concrete blocks in such a manner as to not rest directly on the body of the gate valve, or on the water main. The upper part of the valve box shall then be placed and adjusted to finished grade. Valve boxes shall be staked in place to insure permanent alignment with the valve stem. Backfill around the valve box shall be placed and compacted to the satisfaction of the Director of Public Works.

Valve boxes shall be installed flush with the finished grade. This may require adjusting prior to final acceptance.

SECTION 410 - CONNECTION TO AN EXISTING WATER SYSTEM:

The existing water main shall be uncovered and exposed to allow for confirmation of the existing pipe size in advance of making the connection.

Sufficient length of main shall be exposed to allow for the connection. The main shall be supported to properly carry its own weight plus the weight of the connection. The owner/developer shall be liable for any costs incurred in repairing any water main break that may occur within ten (10) feet of the connection for a period of one (1) year after installation.

All connections to the Village of Addison's water system shall be made in the presence of an authorized Village inspector.

- A. PRESSURE CONNECTIONS: Connections to the existing water system shall be accomplished whenever possible without interruption of service. A pressure tap, using a stainless steel tapping sleeve (See Section 410.1), a tapping valve (See Section 409.1) and pressure connection vault (See Section 410.2) shall be provided at the point of connection to the existing system. The size and location of all pressure taps shall be shown on the plans. There shall be a minimum of two (2) foot between a pressure tap and any pipe joint, and a minimum of five (5) feet from any other tap.
- B. CUT IN CONNECTIONS: When a new water main of equal or smaller size is to be connected to the existing water system, a ductile iron cut in tee, of equal size, shall be installed. When this requires a shut down of the Village's water system, the contractor shall agree upon a date and time for the shut down with the Village of Addison's water department. A minimum of forty eight (48) hours shall be required, which will allow ample time for the water department to notify all customers affected. If the work on the connection goes beyond regular working hours, the cost of the overtime shall be reimbursed to the Village by the owner / developer.

SECTION 410.1 - STAINLESS STEEL TAPPING SLEEVE:

A stainless steel tapping sleeve with a full circle gridded, tapered overlapping gasket (Rockwell 662, 663, or approved equal) shall be used whenever a tap is larger than one (1) inch in size. All nuts and bolts used with the tapping sleeve shall also be of stainless steel.

SECTION 410.2 - PRESSURE CONNECTION VAULT:

A pressure connection vault shall be used on all pressure connections four (4) inches and larger. A pressure connection vault shall be similar to a valve vault except that the minimum size shall be six (6) feet.

SECTION 411 - FIRE HYDRANTS:

Fire hydrants with auxiliary valves shall be installed throughout the entire development, located at intervals not to exceed three hundred (300) feet as measured along the pipe length. A fire hydrant shall also be located at the end of every water main that is not looped, to provide the ability to flush the water main at scouring velocity. The closest edge of the fire hydrant shall be no closer than two (2) feet from the back of curb nor more than four (4) feet. The steamer port shall be fourteen (14) inches to twenty six (26) inches above the proposed surface of the ground, per State Bill 1291, passed 1/1/88, and shall face the street.

All fire hydrants shall be located a minimum of six (6) feet from any existing or proposed driveways.

SECTION 411.1 - HYDRANT DETAILS:

The dimensions and details of hydrants and nozzles, unless otherwise noted, shall be as follows:

A.

Fire hydrant type:	Clow-Eddy F-2640 Supplied with a breakaway flange
Inlet connection size:	Six (6) inch
Main valve opening size:	Five and one quarter (5¼) inch
Hose nozzles, number and size:	Two (2) – (2½) inch
Pumper nozzle, number and size:	One (1) – (4½) inch
Auxiliary gate valve size:	Six (6) inch
Thread pattern:	National standard

B. All nozzles shall be fitted with cast iron threaded caps securely connected to the fire hydrant with one eighth (1/8) inch thick chain. An operating nut on the end of the cap shall be of the same design and proportions as the fire hydrant stem nut. Caps shall be threaded to fit the corresponding nozzles and shall be fitted with

suitable gaskets for positive water tightness under test pressures. After testing, all nozzles and caps shall have their threads greased.

- C. The hydrant valve shall open by turning to the left (counter clockwise).
- D. All fire hydrants shall be painted yellow (Dura-King Supreme # 457-57 School Bus Yellow - Truck, Tractor, and Implement Enamel).

SECTION 411.2 - AUXILIARY VALVE:

A six (6) inch auxiliary valve shall be provided at each fire hydrant. The auxiliary valve shall be connected directly to the water main with a locking hydrant tee. The auxiliary valve shall be a resilient wedge gate valve. The valve shall be designed for a minimum water pressure of 200 psi. Auxiliary valves shall be provided with a cast iron valve box. (See Section 409.3)

SECTION 411.3 - LOCKING HYDRANT TEES:

Locking hydrant tees, also known as anchoring tees, shall be used on all fire hydrant installations. When a fire hydrant auxiliary valve cannot be connected directly to a locking hydrant tee, Meg-A-Lug retainer glands and stainless steel tie rods shall be used to connect the auxiliary valve to the tee.

SECTION 411.4 - INSTALLATION DETAILS:

The contractor shall inspect all fire hydrants in the field upon delivery to the job site to insure proper operation before installation. The hydrant shall be set on a concrete block, twelve (12) inch x twelve (12) inch x eight (8) inch in size, to insure a firm bearing for the hydrant base. Additional concrete blocks a minimum of twelve (12) inches thick shall be placed in back of the hydrant. The concrete blocks shall extend from the hydrant to undisturbed soil. Wood wedges may be used to ensure a solid fit. Care shall be taken to ensure that the weep holes are not covered by the concrete blocks. Poured-in-place concrete blocking will not be allowed. A minimum of one cubic yard of washed gravel shall be placed at and around the base of the hydrant to insure proper drainage of the hydrant after use. A layer of filter fabric shall be installed over the gravel drain field before backfilling begins. Fire hydrants shall be set in a vertical position, and staked in place to insure that the hydrant stays in a permanent vertical position. All hydrants shall be adjusted to finished grade.

The resetting, moving, or reconnection of any existing fire hydrant shall be handled in the same manner as a new installation.

SECTION 412 - POLYETHYLENE LINERS:

All new and replaced water main shall be encased in polyethylene liners unless it is determined by a competent soils laboratory that each type of soil encountered in the water main installation is not corrosive to ductile iron water main.

Polyethylene liners shall be Class C (black) conforming to ANSI A21.5 and AWWA C-105. The polyethylene shall have a minimum thickness of 0.0008 inch (8 mils).

SECTION 412.1 - TUBE SIZE OR SHEET WIDTH:

The tube or sheet size for each pipe diameter shall be as listed in the following table:

Nominal Pipe Diameter	Minimum Polyethylene Width	
	Flat Tube	Sheet
3 inches	14 inches	28 inches
4 inches	16 inches	32 inches
6 inches	20 inches	40 inches
8 inches	24 inches	48 inches
10 inches	27 inches	54 inches
12 inches	30 inches	60 inches
14 inches	34 inches	68 inches
16 inches	37 inches	74 inches

SECTION 412.2 - INSTALLATION:

The polyethylene liner shall prevent contact between the pipe and the surrounding backfill and bedding material but is not intended to be a completely air and water tight enclosure. Overlaps shall be secured by the use of polyethylene tape capable of holding the polyethylene liner in place until backfilling operations are completed. The encased pipe shall be lowered into the trench using a sling that will not tear the polyethylene liner.

SECTION 412.3 - PIPE WRAPPING:

This standard includes three different methods for the installation of polyethylene liners on pipe. Methods A and B are for use with polyethylene tubes and Method C is for use with polyethylene sheets.

- A. METHOD A: Cut polyethylene tube to a length approximately two (2) feet longer than that of the pipe section. Slip the tube around the pipe, centering it to provide a one (1) foot overlap on each adjacent pipe section, and bunching it in accordion fashion lengthwise until it clears the pipe ends.

Lower the pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at joints to facilitate installation of the polyethylene tube.

After assembling the pipe joint, overlap the polyethylene tube. Pull the bunched polyethylene from the preceding length of pipe and slip it over the end of the new length of pipe, and secure it in place. Then slip the end of the polyethylene from the new pipe section over the end of the first wrap until it overlaps the joint at the end of the preceding length of pipe. Secure the overlap in place. Take up the slack width to make a snug, but not tight, fit along the barrel of the pipe, securing the fold at quarter points.

Repair any rips, punctures, or other damage to the polyethylene with polyethylene tape or with a short length of polyethylene tube cut open, wrapped around the pipe and secured in place. Proceed with installation of the next section of pipe in the same manner.

- B. METHOD B: Cut polyethylene tube to a length approximately one (1) foot shorter than that of the pipe section. Slip the tube around the pipe, centering it to provide six (6) inches of bare pipe at each end. Make polyethylene snug, but not tight; secure ends as described elsewhere.

Before making up a joint, slip a three (3) foot length of polyethylene tube over the end of the preceding pipe section, bunching it in accordion fashion lengthwise. After completing the joint, pull the three (3) foot length of polyethylene over the joint, overlapping the polyethylene previously installed on each adjacent section of pipe by at least one foot. Secure each end as described elsewhere.

Repair any rips, punctures, or other damage to the polyethylene. Proceed with installation of the next section of pipe in the same manner.

- C. METHOD C: Cut polyethylene sheet to a length approximately two (2) feet longer than that of the pipe section. Center the cut length to provide a one (1) foot overlap on each adjacent pipe section, bunching it until it clears the pipe ends. Wrap the polyethylene around the pipe so that it circumventially overlaps the top quadrant of the pipe. Secure the cut edge of polyethylene sheet at intervals of approximately three (3) feet.

Lower the wrapped pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at joints to facilitate installation of the polyethylene. After completing the joint, make the overlap as described above.

Repair any rips, punctures, or other damage to the polyethylene. Proceed with installation of the next section in the same manner.

SECTION 412.4 - WRAPPING OF PIPE-SHAPED APPURTENANCES:

Cover bends, reducers, offsets and other pipe-shaped appurtenances with polyethylene in the same manner as the pipe.

SECTION 412.5 - WRAPPING OF ODD-SHAPED APPURTENANCES:

Valves, tees, crosses, and other odd-shaped pieces can be wrapped by passing the sheet under the appurtenance and bringing it up around the body, making seams by bringing the edges together, folding over twice, and taping down. Handle width and overlaps at joints as described above. Tape polyethylene securely in place at valve stem and other penetrations.

SECTION 412.6 - OPENINGS IN ENCASEMENTS:

Provide openings for service taps and similar appurtenances by making an X-shaped cut in the polyethylene and temporarily folding back the film. After the appurtenance is

installed, tape the slack securely to the polyethylene with tape.

SECTION 412.7 - JUNCTION BETWEEN WRAPPED AND UNWRAPPED PIPE:

Where polyethylene wrapped pipe joins an adjacent pipe that is not wrapped, extend the polyethylene wrap to cover the adjacent pipe for a distance of at least two (2) feet. Secure the end with turns of tape.

SECTION 412.8 - BACKFILL FOR POLYETHYLENE-WRAPPED PIPE:

Use the same backfill material as that specified for pipe without polyethylene wrapping, exercising care to prevent damage to the polyethylene wrapping when placing backfill. Backfill material shall be free from cinders, refuse, boulders, rocks, stones, or other material that could damage the polyethylene.

SECTION 413 - WATER MAIN STREAM CROSSINGS:

Water mains crossing streams should be designed to cross the stream as nearly perpendicular to the stream flow as possible. A water distribution system shall be designed to minimize the number of stream crossings. Water mains located along streams shall be located outside of the stream bed and sufficiently removed there from to provide for future possible stream widening. A valve and valve vault shall be located on each side of the stream, located so as not to interfere with the free discharge of flood flows of the stream.

SECTION 413.1 - CONSTRUCTION REQUIREMENTS:

- A. MATERIALS: Water mains crossing streams shall be constructed of ductile iron river crossing pipe (Clow River Crossing Pipe or approved equal).
- B. COVER DEPTH: The top of the water main shall be a minimum of five (5) feet six (6) inches below the natural bottom of the stream bed.
- C. BACKFILL: The backfill used in the trench shall be washed gravel, or other materials which will not cause siltation or damage the pipe during placement.
- D. SILTATION AND EROSION: Construction methods shall be employed that will minimize siltation and erosion. The design engineer shall include in the project specifications the method to be employed in the construction of the water main in or near streams to provide adequate control of siltation and erosion.

SECTION 414 - AERIAL CROSSINGS:

- A. STRUCTURAL SUPPORT: All joints shall be supported with the supports designed to prevent frost heave and settlement.
- B. FREEZE AND EXPANSION PROTECTION: Protection against freezing shall be provided. This may be accomplished through the use of insulation. Increased

expansion shall be provided for between the aerial and buried sections of the water line.

- C. FLOOD CLEARANCE: For aerial stream crossings the impact of flood waters and debris shall be considered. The bottom of the pipe shall be placed no lower than two (2) feet above the elevation of the one hundred (100) year flood.

SECTION 415 - INSTALLATION OF PERMANENT MARKERS:

The developer or owner who installs or causes to be installed a new water main that will become the property of the Village, shall cause permanent markers to be installed in the concrete curb identifying the points where the curb crosses the service trench.

The developer or owner will require his curb contractor to embed permanent markers in the vertical or horizontal face of the curb at all crossing points before the concrete hardens.

The markers shall be the letter "W" and shall measure at least three (3) inches in height. Materials may be metal, plastic, or other material approved by the Director of Public Works.

If the service line is installed under an existing curb, it shall be the responsibility of the water main contractor to saw cut into the concrete curb a "W" to mark the location of the water service line. This marker shall measure at least three (3) inches in height.

SECTION 416 - TESTING OF WATER MAIN:

Prior to placing a new water main into service, it shall pass a pressure and leakage test. The contractor shall be responsible for supplying the equipment and performing the tests.

The Engineering Division shall be notified by the contractor at least twenty four (24) hours in advance, so that a representative can be present during the test.

The contractor shall notify the Public Works Water Department forty eight (48) hours in advance of the test. (The Water Department is solely responsible for opening and closing all water valves in Addison.)

SECTION 416.1 - PRESSURE TEST:

Each section of pipe shall be slowly filled with water, and all the air shall be expelled from the pipe. Each section of pipe shall be brought to the specified test pressure by means of a pump connected to the pipe. Auxiliary valves on all fire hydrants on the test section shall be open at the time of the test so that the hydrants and connections are pressure tested at the same time the main is tested. The water main shall be pressure tested for at least two (2) hours at a minimum pressure of one hundred and fifty (150) pounds per square inch.

Test results shall show the main not losing more than five (5) psi in the two (2) hour test.

The test shall not begin until the inspector has visually checked the pressure and noted the time. Any cracked or defective pipes, fittings, valves, or hydrants discovered by this pressure test shall be removed and replaced by the contractor with sound material and the test repeated until a satisfactory test is witnessed by the inspector.

SECTION 416.2 - LEAKAGE TEST:

After satisfactorily completing the pressure test, a leakage test shall be conducted to determine the quantity of water lost by leakage during the pressure test. Suitable means shall be provided by the contractor for determining the quantity of water lost during the pressure test.

Allowable leakage (in gallons per hour) for the water main being tested shall not be greater than that determined by the following formula:

$$L = \frac{SD \sqrt{P}}{133,200}$$

Note: D = Nominal diameter of the pipe (in inches)
L = Allowable leakage (in gallons per hour)
P = Average test pressure during the test (in pounds per square inch)
S = Length of pipeline tested (in feet)

Leakage is defined as the quantity of water that has to be added to the test section to bring the test pressure back to its original starting point.

SECTION 417 - CHLORINATION:

Upon passing the pressure and leakage test, the contractor shall have the water main flushed and disinfected.

SECTION 417.1 - FLUSHING:

Those sections of water main to be chlorinated shall first be flushed to remove any solids or contaminated material that may have become lodged in the main. The contractor shall advise the Village of Addison's water department forty eight (48) hours in advance of any flushing. The Water Department shall supervise the flushing. A hydrant shall be installed at the end of the main to facilitate flushing of the main. A velocity of at least two and one half (2½) feet per second shall be maintained in the main during the flushing. A two and one half (2½) inch hydrant opening will, under normal water main pressure, provide this velocity in pipe sizes up to, and including twelve (12) inches.

SECTION 417.2 - DISINFECTANT:

Before being placed into service, all new water mains, repaired sections, or extensions to existing mains shall be chlorinated. The initial chlorine residual is not to be less than fifty (50) parts per million, and a chlorine residual of not less than twenty five (25) parts per million shall remain in the water after standing in the pipe for twenty four (24) hours. The contractor shall notify the Village of Addison's Water Department at least twenty

four (24) hours in advance of the chlorination and sampling, so that a representative can be present.

SECTION 417.3 - FORM OF APPLIED CHLORINE:

Chlorine shall be applied by one of the following methods, subject to approval by the Director of Public Works:

- A. **LIQUID CHLORINE:** A chlorine gas-water mixture shall be applied by means of a solution-feed chlorinating device or the dry gas may be fed directly through proper devices for regulating the rate of flow and providing effective diffusion of the gas into the water within the pipe being treated. Chlorinating devices for feeding solutions of the chlorine gas or the gas itself must provide means for preventing the backflow of water into the chlorine.
- B. **CHLORINE BEARING COMPOUNDS IN WATER:** In certain instances, when the usage of chlorine gas is not practical, such as in congested or confined areas, upon approval of the Director of Public Works, a chlorine-bearing compound of known chlorine content, prepared in solution form, may be substituted for chlorine gas.

SECTION 417.4 - POINT AND RATE OF APPLICATION:

- A. **POINT OF APPLICATION:** The preferred point of application of the chlorinating agent is at the beginning of the pipe line extension or any valved section of it, and through a corporation stop inserted in the pipe. The water injector (for delivering the chlorine-bearing water into the pipe) should be supplied from a tap made on the pressure side of the gate valve controlling the flow into the pipe line extension. Alternate points of application may be used when approved or directed by the Director of Public Works.
- B. **RATE OF APPLICATION:** Water from the existing distribution system or other approved source of supply shall be controlled to flow very slowly into the newly laid pipe line during application of the chlorine. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the newly laid pipe that the dosage applied to the water will be at least FIFTY (50) parts per million unless otherwise directed by the Director of Public Works.
- C. **RETENTION PERIOD:** Treated water shall be retained in the pipe at least twenty four (24) hours. After this period, the chlorine residual at pipe extremities and at other representative points shall be at least twenty five (25) parts per million.
- D. **CHLORINATING VALVES AND HYDRANTS:** In the process of chlorinating newly laid pipe, all valves and other appurtenances shall be operated while the pipe line is filled with the chlorinating agent and under normal operating pressure.
- E. **PREVENTING REVERSE FLOW:** Valves shall be manipulated so that the

strong chlorine solution in the line being treated will not flow back into the line supplying the water. Check valves may be used if desired.

SECTION 417.5 - FINAL FLUSHING AND TESTING:

Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipe at its extremity until the replacement water throughout its length shows, upon test, the absence of chlorine. In the event chlorine is normally used in the source of supply, then the tests shall show a residual not in excess of that carried in the system.

After flushing, water samples collected on two (2) successive days from the treated piping system, as directed by the Director of Public Works, shall show satisfactory bacteriological results. Bacteriological analyses must be performed by a laboratory approved by the Director of the Illinois Department of Public Health and the Director of Public Works.

Should the initial treatment result in an unsatisfactory bacterial test, the chlorination procedure shall be repeated by the contractor until satisfactory results are obtained.

No water shall be used until a satisfactory report has been received by the Water Department.

SECTION 418 - TEST RESULTS:

The decision of the Director of Public Works shall be final in determining the test results. If the water main installation fails to meet the specified test requirements, the contractor shall determine the cause (or causes) of the defect and shall, at his own expense, repair or replace all materials and workmanship as may be necessary to comply with the test requirements before the termination of the guarantee period. No reduction in the amount of monies held in contingency shall be permitted until this is completed.

SECTION 419 - CERTIFICATION:

It shall be the contractor's responsibility to secure certification from the pipe manufacturer that the pipe and joint materials furnished are capable of meeting the air and leakage tests, and are manufactured in conformance with the ASTM, ANSI, or AWWA test(s) specified.

SECTION 420 - "AS-BUILT" DRAWINGS:

Upon completion of construction, "As-Built" or "Record" drawings (drawn in ink on mylar) shall be prepared by the owner or developer. The length, size, and type of each pipe run shall be given from valve vault to valve vault, valve vault to fire hydrant, valve vault to tee, valve vault to bend, etc. The size of each valve shall be noted, and service connections dimensioned per Section 407.5. These drawings shall be submitted to (and be approved by) the Director of Public Works prior to the acceptance of the water main system by the President and Board of Trustees.

STANDARD SPECIFICATIONS FOR CURB AND GUTTER CONSTRUCTION

SECTION 700 - GENERAL:

The standards and requirements found in this section are for materials and construction of concrete curb, concrete gutter, and combination concrete curb and gutter within the Village of Addison. These items are the most apparent to the traveling public, therefore, good lines and a smooth appearance are of the utmost importance.

SECTION 700.1 - SPECIFICATIONS:

These specifications cover the installation of concrete curb, concrete gutter, and combination concrete curb and gutter which shall be installed in accordance with the latest revision of IDOT's Standard Specifications for Road and Bridge Construction, and applicable ordinances of the Village of Addison. In case of a conflict, the Village of Addison's Standard Specifications for Curb and Gutter Construction and other applicable ordinances of the Village of Addison shall take precedence and shall govern.

SECTION 700.2 - REGULATIONS AND PERMITS:

Additional regulations and requirements governing the construction of curb and gutter in the Village of Addison are:

- A. Any restrictions, policies, and instructions that may be adopted or issued from time to time by the Village of Addison.
- B. No person shall construct or remove any public curb and gutter without first obtaining a written permit from the Village of Addison.
- C. No person shall construct private curb and gutter without first obtaining a written permit from the Village of Addison.
- D. All work shall be available for inspection by the Village of Addison at all times.
- E. New curb and gutter shall connect to existing curb and gutter where available. When existing curb and gutter is within one hundred (100) feet of a proposed curb and gutter, the developer or builder shall at the discretion of the Director of Community Development connect the two (2) curb and gutters.

SECTION 700.3 - GENERAL DESIGN REQUIREMENTS:

All streets and medians shall be bordered by combination concrete curb and gutter for their full length. However, in areas outside the Village limits where satisfactory storm drain facilities do not exist or are not available, and in residential areas with a density of over twenty thousand (20,000) sq. ft. per dwelling unit, the curb and gutter may be omitted if proper surface drainage is provided, or as recommended by the Director of Community Development.

SECTION 700 - CURB AND GUTTER

New street curb and gutter shall be of the B- 6.18 type with Neenah R-3278-AL frame and grates. Median curb and gutter shall be B-6.12. Gutter flags shall be a minimum of ten (10) inches thick. Curb corners in residential areas shall have radii of not less than thirty (30) feet, commercial areas shall have radii of not less than forty (40) feet. Larger radii may be required by the Director of Community Development at his discretion.

When a curb cut is proposed on one side of the street, to permit pedestrians to cross the street, there shall be a corresponding curb cut on the opposite side of the street to accept the pedestrians. This may require the removal and replacement of existing sidewalk, curb and gutter.

SECTION 701 - CONCRETE CURB AND GUTTER:

All public curb and gutter shall be concrete, constructed on a prepared subgrade with expansion and contraction joints as shown in the standard drawings and described herein.

SECTION 701.1 - EARTH EXCAVATION:

The excavation shall consist of removing all topsoil and unsuitable sub-grade material to a width of one (1) foot outside of the proposed curb and gutter. If material is removed below sub-grade elevation, a suitable material such as sand, limestone screenings, or crushed limestone shall be used as fill to the correct sub-grade elevation. This fill material shall be compacted with vibratory equipment to ninety (90%) percent of Modified Proctor density. Tree roots exposed by the excavation shall be cut off at least three (3) inches outside of the new curb and gutter and three (3) inches below the sub-grade elevation.

SECTION 701.2 - SUB-BASE PREPARATION:

The sub-base shall consist of four (4) inches of crushed limestone to a width of not less than one (1) foot wider than the new curb and gutter. This sub-base material shall be compacted with vibratory equipment to ninety five (95%) of Modified Proctor density, and shall be true to grade and cross section for the bottom of the curb and gutter.

SECTION 701.3 - CONCRETE MIX:

The concrete shall be a SI mix, made with portland cement. A compressive strength of not less than thirty five hundred (3500) lb. per square inch shall be achieved after fourteen (14) days of curing. The compressive strength shall be determined in accordance with ASTM C-31. All concrete used shall be uniform throughout the mass, with air-entrainment of five (5%) percent to eight (8%) percent of the volume, and a slump of three (3) inches to five (5) inches. Admixtures other than air-entraining agents shall not be used.

SECTION 702 - INSTALLATION OF FORMS:

Side forms shall be of lumber of not less than two (2) inches nominal thickness or of steel of equal rigidity. They shall be held securely in place by stakes or braces, with the top edges true to line and grade. The forms shall be of a depth equal to the depth of the curb and gutter. All forms shall be cleaned and oiled before concrete is placed against them. With the approval of the Director of Community Development, the curb and gutter may

SECTION 700 - CURB AND GUTTER

be constructed by using a slip forming machine. If a slip forming machine is used, the concrete slump shall be adjusted to meet the conditions for this type of work. The continued use of a slip forming machine shall be based on satisfactory results.

No concrete shall be poured until the sub-base and forms have been approved by the Village of Addison.

SECTION 703 - PLACING AND FINISHING:

The sub-grade and forms shall be moistened just before the concrete is placed. The concrete shall be placed to the proper depth, tamped and spaded or mechanically vibrated sufficiently to bring the mortar to the surface. Before the curb and gutter is given the final finishing, the surface shall be checked with a ten (10) foot straight edge, and any irregularities of more than ¼ inch in ten (10) feet shall be eliminated. Extreme care shall be taken to insure a well defined gutter section. This is necessary to accomplish complete drainage to the nearest drainage structure. Gutter drainage irregularities greater than those noted shall be corrected. All edges shall be rounded with finishing tools having the radii as shown on the standard drawings. The exposed surfaces of the curb and gutter shall be finished smooth and even, and given a light broom finish. The broom shall be drawn across the curb and gutter, with adjacent strokes slightly overlapping, producing a uniform, slightly roughened surface.

SECTION 703.1 - REMOVAL OF FORMS:

Forms shall remain undisturbed for a minimum of twelve (12) hours, or until the concrete has attained sufficient strength to sustain its own weight in addition to any temporary or permanent loads that may be placed upon it. After the forms have been removed, minor honey-combing, porous areas, and defects shall be filled with mortar composed of one part of portland cement, and two parts of fine aggregate.

SECTION 704 - JOINTS:

All joints shall conform to the details as shown in the standard drawings of these specification. Joints shall be straight and perpendicular to the face of the curb.

SECTION 704.1 - CONTRACTION JOINTS:

Contraction joints shall be installed at a maximum interval of twenty five (25) feet, and shall be one of the following:

- A. Grooved contraction joints shall extend a minimum of two (2) inches below the surface of the curb and gutter. The groove shall not be less than one eighth ($\frac{1}{8}$) inch nor more than one quarter ($\frac{1}{4}$) inch in width, and shall be edged with an edging tool having a one quarter ($\frac{1}{4}$) inch radius.
- B. Saw cut contraction joints shall be cut to a minimum depth of two (2) inches while the concrete is still green. Sawing shall commence as soon as the concrete has hardened sufficiently to prevent spilling, and shall be completed within twenty four (24) hours of pouring the concrete.

SECTION 700 - CURB AND GUTTER

SECTION 704.2 - EXPANSION JOINTS:

Expansion joints shall be constructed using one (1) inch thick pre-formed expansion joint filler, cut to the exact cross section of the curb and gutter. A single one and one quarter (1¼) inch diameter x eighteen (18) inch long epoxy coated, smooth dowel bar, fitted with a pinched stop cap that will provide one (1) inch of expansion, shall be placed mid-depth through the joint filler.

Expansion joints shall be installed five (5) feet on either side of any structure that is located within the curb line, at the beginning and ending of a radius, and at the end of each concrete pour.

SECTION 704.3 - CONSTRUCTION JOINTS:

Construction joints shall be used whenever the placing of concrete is held up for thirty (30) minutes or more. Construction joints shall be installed in the same manner as expansion joints.

SECTION 704.4 - SEALING JOINTS:

As soon after the curing period as possible, all sawed and grooved joints shall be sealed with either hot-poured or cold-poured joint sealer, meeting with the approval of the Director of Community Development. Each joint shall be thoroughly cleaned of all foreign material, and dry before sealing. Sealing shall be done in such a manner that the material will not be spilled on the exposed concrete surface. Any excess material on the surface of the concrete shall be removed immediately and the surface cleaned. Poured joint sealing material shall not be placed when the air temperature in the shade is less than fifty (50) degrees F.

- A. Hot-poured joint sealer shall comply with the requirements of ASTM D 3405. The material shall be stirred during heating so that localized overheating does not occur.
- B. Cold-poured joint sealer shall comply with the requirements of ASTM D 1850.

SECTION 704.5 - STEEL REINFORCEMENT OVER TRENCH CROSSINGS:

Steel reinforcement, consisting of two (2) continuous No. 4 bars, shall be centered in the curb over all trench crossings. The bars shall extend five (5) feet beyond the trench edge on each side.

SECTION 705 - CURING:

Newly poured curb and gutter shall be cured in the manner as called for in Section 625 of IDOT's Standard Specifications for Road and Bridge Construction and to the satisfaction of the Director of Community Development. The material used for curing shall conform with the material specifications per article 718.04 of the specifications noted above. A minimum five (5) day curing period is required.

SECTION 700 - CURB AND GUTTER

SECTION 706 - BACKFILL:

The space along the outside edge of the curb and gutter shall be backfilled to the required elevation with approved material. The material shall then be compacted until firm, and the surface neatly graded to receive grass cover.

SECTION 707 - DISPOSAL OF SURPLUS MATERIAL:

Surplus or waste material resulting from the construction of curb and gutter shall be disposed of by the contractor.

SECTION 708 - PROTECTION OF THE CURB AND GUTTER:

Special attention is called for in the protection of fresh concrete curb and gutter against the following:

- A. VANDALISM: While the concrete is still soft, the contractor should maintain a watch.
- B. FREEZING: Protection of fresh concrete curb and gutter against freezing shall follow the methods in Section 713 - Cold Weather Protection.
- C. VEHICLES: All vehicles shall be kept off the curb and gutter for seven (7) days.
- D. RAIN: All exposed surfaces shall be protected against washing by rain.

The contractor shall assume all responsibility for damage to the curb and gutter by action of the elements or from any other cause, and shall repair, or remove and replace all damaged curb and gutter.

SECTION 709 - CURB AND GUTTER REMOVAL:

The contractor shall saw to full depth the portion of the curb and gutter being removed and that part left in place. It shall be the responsibility of the contractor to determine the thickness of the existing curb and gutter to be removed. Sawing shall be done with a concrete saw in such a manner that a straight joint will result. If, while removing the curb and gutter, additional curb and gutter is damaged, the damaged curb and gutter shall also be removed.

SECTION 710 - INSTALLATION OF PERMANENT CURB MARKERS:

The developer or owner shall require his curb contractor to embed permanent markers in the vertical or horizontal face of the curb before the concrete hardens. These permanent markers shall identify the points where the curb crosses a service trench. The permanent marker shall be in the shape of the letter "W" for a water service, and the letter "S" for a sanitary service. The markers shall be a minimum of three (3) inches in height, and made of metal, plastic, or any other material approved by the Director of Community Development.

SECTION 700 - CURB AND GUTTER

SECTION 711 - DRIVEWAY AND PARKING LOT CURB AND GUTTER:

All driveways and parking lots shall be bordered by B-6.12 combination concrete curb and gutter, except for one (1) and two (2) family residential units which shall not be required to have curb and gutter.

The back of the curb shall be located no closer than:

- A. Ten (10) feet to the front yard property line; and
- B. Five (5) feet to the rear and side yard property line.

When the property line is also the boundary line of a zoning district, additional setback requirements may be required by the Zoning Ordinance.

SECTION 712 - DEPRESSED CURB AND GUTTER:

Where curb and gutter intersect with a driveway or sidewalk, the curb shall be depressed to meet the sidewalk or driveway. The transition shall be at the rate of three (3) inches per one (1) foot. (See Section 514)

SECTION 713 - COLD WEATHER PROTECTION:

No concrete shall be placed on ice, snow, or any other frozen material. The contractor shall be responsible for all concrete damaged by low temperatures, and any concrete so damaged shall be removed and replaced at the contractor's expense.

No concrete shall be placed when the air temperature is below forty (40) degrees F., without the permission of the Director of Community Development. When placing of concrete is permitted during cold weather, the temperature of the mixed concrete shall not be less than fifty (50) degrees F. nor more than one hundred (100) degrees F. at the time it is placed. The aggregate shall be heated by steam or dry heat prior to being placed in the mixer, and the water shall be heated to not hotter than one hundred and seventy (170) degrees F. When the air temperature is expected to drop below thirty five (35) degrees F., a supply of straw or other insulating material shall be brought to the job site. When the air temperature is expected to reach, or drop below, thirty two (32) degrees F. during the day or night, the straw or insulating material shall be spread over the sub-grade if concrete is to be placed the next day, or over the newly poured concrete if it has already been poured. The straw or insulating material shall be spread to a sufficient depth to prevent freezing. Concrete less than seventy two (72) hours old shall also be covered. New concrete shall be protected for a minimum period of four (4) days, so as to maintain a temperature of fifty (50) degrees F. or higher.

SECTION 714 - TESTING:

Testing shall be the responsibility of the owner or developer at the discretion of the Director of Community Development. All unsuitable material shall be removed and replaced by the contractor.

SECTION 700 - CURB AND GUTTER

When testing is requested by the Director of Community Development, a set of four (4) test cylinders shall be made for each day a minimum of twenty (20) cubic yards of concrete is poured. An air test, slump test, and concrete temperature shall be taken along with the test cylinders.



Route FAU (2642)
Section 06-00095-00-RS
County DuPage

Marked Rt. Addison Road
Project No. _____
Contract No. _____

This plan has been prepared to comply with the provisions of the NPDES Permit Number ILR10, issued by the Illinois Environmental Protection Agency on May 30, 2003 for storm water discharges from Construction Site Activities. This plan has also been prepared to comply with the provisions of NPDES Permit Number ILR40 for discharges from small municipal separate storm sewer systems if checked below.

NPDES permits associated with this project:

- ILR10 Permit No. (if applicable): _____
- ILR40 Permit No. (if applicable): 0227

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.

Rudolfo M. Espedido, P.E.

Print Name

Village Engineer

Title

Village of Addison

Agency

Signature

Dec. 30, 2008

Date

I. Site Description:

A. The following is a description of the project location:

This improvement includes Addison Road (FAU 2642) from IL Route 64 (North Avenue) to U.S. Route 20 (Lake Street) located in the Village of Addison, DuPage County, Illinois. The total length of improvement is 1.59 miles.

Improvements include the resurfacing of Addison Road, portland cement concrete base repair/patching, spot combination concrete curb and gutter replacement, water main construction and updated water main lateral crossings as well as pavement marking, landscape restoration, and all incidental and collateral work necessary to complete the project as shown on the plans and as described within the project specifications..

B. The following is a description of the construction activity which is the subject of this plan:

1. Curb and Gutter Removal/Replacement (Location Specific)
2. Pavement Patching (Concrete Base Repair)
3. Water Main Construction
4. Sidewalk Construction
5. Pavement Marking and Signing
6. Landscape Restoration

C. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

1. Earth Excavation
2. Curb and Gutter Removal
3. Water Main Installation
4. Sidewalk Construction
5. Parkway Restoration / Parkway Grading
6. Landscaping

D. The total area of the construction site is estimated to be 23 acres.

The total area of the site that is estimated will be disturbed by excavation, grading or other activities is 2 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

F. The following is a description of the soil types found at the project site followed by information regarding their erosivity:

G. The following is a description of potentially erosive areas associated with this project:

H. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

Existing soil removal and replacement will be performed in areas west of Addison Road beneath the areas that the sidewalk construction will occur. Ditch lines and steeply sloped areas along the roadway will be subject to potentially erosive conditions while those areas are being constructed. The proposed detention pond will also be a potentially erosive area.

I. 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.

J. The following is a list of receiving water(s) and the ultimate receiving water(s), and areal extent of wetland acreage at the site. The location of the receiving waters can be found on the erosion and sediment control plans:

K. The following pollutants of concern will be associated with this construction project:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Soil Sediment | <input type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete | <input type="checkbox"/> Antifreeze / Coolants |
| <input checked="" type="checkbox"/> Concrete Truck Waste | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input 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. 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 14 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 21 or more calendar days.

- a. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following Stabilization Practices will be used for this project:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Preservation of Mature Vegetation | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips | <input type="checkbox"/> Sodding |
| <input checked="" type="checkbox"/> Protection of Trees | <input type="checkbox"/> Geotextiles |
| <input type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7) | <input type="checkbox"/> Other (specify) |
| <input 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:

Perservation of Mature Vegetation and Protection of Trees will be utilized where applicable, Tree Trunk Protection, Tree Root Pruning, and Tree Pruning (1 to 10 inch Diameter) in accordance with Section 201 of the IDOT "Section Specifications" for Road and Bridge Construction" shall be used to preserve existing trees.

Permanent Seeding shall be applied to all areas shown in the Plans.

Erosion Control Blanket will be used to prevent erosion, assist in germination of the seeds, and protect the seeds, all areas receiving pulverized topsoil, fertilizer, and seed shall be covered.

2. Structural Practices: Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following Structural Practices will be used for this project:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Rock Outlet Protection |
| <input type="checkbox"/> Temporary Ditch Check | <input type="checkbox"/> Riprap |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions |
| <input type="checkbox"/> Sediment Trap | <input type="checkbox"/> Slope Mattress |
| <input type="checkbox"/> Temporary Pipe Slope Drain | <input type="checkbox"/> Retaining Walls |

- | | |
|--|--|
| <input type="checkbox"/> Temporary Sediment Basin | <input type="checkbox"/> Slope Walls |
| <input type="checkbox"/> Temporary Stream Crossing | <input type="checkbox"/> Concrete Revetment Mats |
| <input type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders |
| <input type="checkbox"/> Turf Reinforcement Mats | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Check Dams | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Permanent Sediment Basin | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Aggregate Ditch | <input type="checkbox"/> Other (specify) |
| <input type="checkbox"/> Paved Ditch | <input type="checkbox"/> Other (specify) |

Describe how the Structural Practices listed above will be utilized:

Perimeter Erosion Barrier will be provided along the project construction limits to minimize potential erosion sediment runoff where indicated in the plans or as approved by the Engineer.

Storm Drain Inlet Protection will be placed at storm sewer structures per the Erosion Control Plans to reduce sediment infiltration and downstream erosion.

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 Section 59-8 (Erosion and Sediment Control) in Chapter 59 (Landscape Design and Erosion Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Section 59-8 are selected for implementation or if practices are applied to situations different from those covered in Section 59-8, the technical basis for such decisions will be explained below.

- b. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls.

The enclosed storm system will have storm drain Inlet Filters placed at storm sewer structures per the Erosion Control Plans to reduce sediment infiltration and downstream erosion

4. Other Controls:

- a. Vehicle Entrances and Exits – Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

- b. Material Delivery, Storage, and Use – The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:
- All products delivered to the project site must be properly labeled.
 - Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
 - A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.

- Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
 - Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.
- c. Stockpile Management – BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:
- Perimeter Erosion Barrier
 - Temporary Seeding
 - Temporary Mulch
 - Plastic Covers
 - Soil Binders
 - Storm Drain Inlet Protection

The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

- d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
- e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
- f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

5. 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, 1995. 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 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:

III. Maintenance:

The following is a description of procedures that 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. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution runoff in compliance with environmental law and EPA Water Quality Regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site. The construction field engineer on a bi-weekly basis shall inspect the project to determine that erosion control efforts are in place and effective and if other control is necessary. Sediment collected during the construction by various temporary erosion systems shall be disposed on the site on a regular basis as directed by the Engineer.

All erosion control measures will be checked weekly and after each significant rainfall (0.5 inches or greater in a 24 hour period.)

All maintenance of the erosion control systems will be the responsibility of the contractor. All locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically. Inspection of these areas shall be made at least once every seven days and within 24 hours of the end of each 0.5 inch or greater rainfall.

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. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

- A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.
- B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.
- C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.
- D. 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 complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency 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 noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

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. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

- A. Spill Prevention and Control – BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company

BDE 2342 (Rev. 06/07)

will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.

- B. Concrete Residuals and Washout Wastes – The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:
 - Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
 - The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
 - All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
 - Concrete waste solids/liquids shall be disposed of properly.
- C. Litter Management – A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.
- D. Vehicle and Equipment Cleaning – Vehicles and equipment are to be cleaned in designated areas only, preferably off site.
- E. Vehicle and Equipment Fueling – A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:
 - Containment
 - Spill Prevention and Control
 - Use of Drip Pans and Absorbents
 - Automatic Shut-Off Nozzles
 - Topping Off Restrictions
 - Leak Inspection and Repair
- F. Vehicle and Equipment Maintenance – On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

VI. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of an Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.



This certification statement is part of the Storm Water Pollution Prevention Plan for the project described below, in accordance with NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency on May 30, 2003.

Route FAU (2642)

Marked Rt. Addison Road

Section 06-00095-00-RS

Project No. _____

County DuPage

Contract No. _____

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification. I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project. I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan 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

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INTENT (NOI)
GENERAL PERMIT TO DISCHARGE STORM WATER
CONSTRUCTION SITE ACTIVITIES**

OWNER INFORMATION

NAME:	LAST Village of Addison	FIRST	MIDDLE	(OR COMPANY NAME)	OWNER TYPE: City
MAILING ADDRESS:	One Friendship Plaza				
CITY:	Addison	STATE:	IL	ZIP:	60101
CONTACT PERSON:	Mr. Rudolfo Espedido, P.E.	TELEPHONE NUMBER:	AREA CODE 630	NUMBER 693-7533	

CONTRACTOR INFORMATION

NAME:	LAST	FIRST	MIDDLE	(OR COMPANY NAME)	TELEPHONE NUMBER:	AREA CODE	NUMBER
MAILING ADDRESS:	CITY:			STATE:	ZIP:		

CONSTRUCTION SITE INFORMATION

SELECT ONE:	<input type="checkbox"/> New Site	<input checked="" type="checkbox"/> CHANGE OF INFORMATION TO PERMIT NO. ILR10	0227		
FACILITY NAME:	OTHER NPDES PERMIT NOS.:				
FACILITY LOCATION:	TELEPHONE NUMBER:		AREA CODE	NUMBER	
CITY:	ST:	IL	ZIP:	LATITUDE:	LONGITUDE:
COUNTY:	SECTION:	TOWNSHIP:	RANGE:		
APPROX. CONST. START DATE:	/ /	APPROX. CONSTRUCTION END DATE:	/ /	TOTAL SIZE OF CONSTRUCTION SITE IN ACRES:	
STORM WATER POLLUTION PREVENTION PLAN COMPLETED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If no, separate notification required to Agency prior to construction.)					

TYPE OF CONSTRUCTION

Reconstructor	TYPE BRIEF DESCRIPTION OF PROJECT: Pavement reconstruction and widening
---------------	--

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

HAS THIS PROJECT SATISFIED APPLICABLE REQUIREMENTS FOR COMPLIANCE WITH ILLINOIS LAW ON:			
HISTORIC PRESERVATION	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
ENDANGERED SPECIES	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	

RECEIVING WATER INFORMATION

DOES YOUR STORM WATER DISCHARGE DIRECTLY TO: <input type="checkbox"/> WATERS OF THE STATE OR <input checked="" type="checkbox"/> STORM SEWER	OWNER OF STORM SEWER SYSTEM:
NAME OF CLOSEST RECEIVING WATER:	

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.

OWNER SIGNATURE: _____ DATE: _____

FOR OFFICE USE ONLY

MAIL COMPLETED FORM TO: (DO NOT SUBMIT ADDITIONAL DOCUMENTATION UNLESS REQUESTED)	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF WATER POLLUTION CONTROL ATTN: PERMIT SECTION POST OFFICE BOX 19276 SPRINGFIELD, ILLINOIS 62794-9276 www.epa.state.il.us	LOG:
		PERMIT NO. ILR10
		DATE:

Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

MIDLAND STANDARD ENGINEERING & TESTING, INC.

558 PLATE DRIVE, UNIT 6
EAST DUNDEE, IL 60118
(847) 844-1895 fax (847) 844-3875

October 12, 2006

Mr. Joel E. Christell, P.E.
Civiltech Engineering, Inc.
450 E. Devon Avenue
Suite 300
Itasca, Illinois 60143

Re: **Addison Road** – North Avenue to Lake Street.
Addison, Illinois
MSET File No. 76317

RECEIVED
CIVILTECH ENGINEERING, INC.

Dear Mr. Christell:

Midland Standard Engineering & Testing, Inc. has completed the pavement cores and sidewalk subgrade proposed requested for the referenced project.

Pavement Materials

A total of nine (9) pavement cores were made to determine the pavement and base course thickness along the alignment. Results of the exploration are provided on the attached Core Logs (C-1 through C-9). The general pavement section includes Bituminous Concrete over P.C. Concrete. The bituminous concrete overlay ranged in thickness from 3-1/4" to 5-1/4" at the core locations. Three of the cores were extended through the PC Concrete, measuring 7-1/2" to 10-1/4" thick.

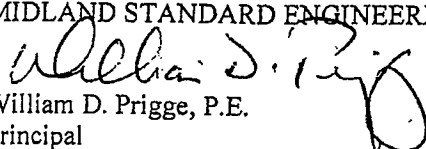
Sidewalk Alignment

A series of nine (9) topsoil probes and subgrade tests were made along the proposed sidewalk corridor on the west side of Addison Road between North Avenue and Fullerton Avenue. The path of the sidewalk generally runs along the right of way but the actual alignment has not been established. Results of the exploration and field testing are presented in the attached 'Subgrade Soil Conditions', Table 1. Along the path, topsoil was encountered to a depth of 4" to 24" and the subgrade soils were comprised of stiff to very stiff Silty CLAY, A-6 or SAND and Gravel, A-1 to Sandy Gravel, A-2-4. Cone Penetrometer testing was conducted on the cohesive soils. The subgrade material encountered, beneath the topsoil was suitable for support of the proposed construction.

Closure

Thank you for the opportunity to be of continuing service. Please do not hesitate to contact us with any questions or if you require additional information.

Very truly yours,
MIDLAND STANDARD ENGINEERING & TESTING, INC.


William D. Prigge, P.E.
Principal

WDP/mlw
Attachments

SUBGRADE SOIL CONDITIONS
 Addison Road Sidewalk
 North Avenue to Fullerton

Probe No.	Station	Offset from West Curbline	Topsoil Thickness	Subgrade Description	Strength/Consistency
P-1	20+50	50'	24"	Brown Silty CLAY, stiff, A-6	220
P-2	25+50	45'	7"	Brown SAND and Gravel, A-1	granular
P-3	30+50	45'	7"	Brown SAND and Gravel, A-1	granular
P-4	35+50	50'	15"	Dark brown SAND and Gravel, A-1	granular
P-5	40+50	30'	24"	Brown Silty CLAY, very stiff, A-6	240
P-6	45+00	50'	10"	Brown Silty CLAY, very stiff, A-6	240
P-7	50+50	35'	8"	Brown Silty CLAY, stiff, A-6	220
P-8	54+50	50'	4"	Lt Brown Sandy Gravel, A-2-4	granular
P-9	60+50	23'	10"	Brown Silty CLAY, very stiff, A-6	240

Reference: IL ROUTE 64 AND ADDISON ROAD - STA 10+00

TABLE 1

PAVEMENT CORE MEASUREMENT LOG**Addison Road Resurfacing
North Avenue to Lake Street****Core No. C-1****Location**

Sta. 20+50, 24'L

MaterialBituminous Surface
Bituminous Surface
Concrete0 to 1- 1/2
1- 1/2 to 3- 1/2
3-1/2+**Thickness(in.)**1- 1/2
2**Remarks/Condition**Good
Good**Core No. C-2****Location**

Sta. 25+50, 24'L

MaterialBituminous Surface
Bituminous Surface
Concrete0 to 1
1 to 4- 1/4
4-1/4+**Thickness(in.)**1
3- 1/4**Remarks/Condition**Good
Good**Core No. C-3****Location**

Sta. 35+50, 24.3'L

MaterialBituminous Surface
Bituminous Binder
Concrete0 to 1- 1/2
1- 1/2 to 3- 1/4
3-1/4+**Thickness(in.)**1- 1/2
1- 3/4**Remarks/Condition**Good
Good**Core No. C-4****Location**

Sta. 45+50, 23.3'R

MaterialBituminous Surface
Bituminous Binder
Concrete0 to 1- 1/4
1- 1/4 to 3- 1/2
3- 1/2 to 13- 3/4**Thickness(in.)**1- 1/4
2- 1/4
10- 1/4**Remarks/Condition**Good
Good
Good**Core No. C-5****Location**

Sta. 55+50, 23.3'L

MaterialBituminous Surface
Bituminous Surface
Concrete0 to 3
3 to 5- 1/4
5-1/4+**Thickness(in.)**3
2- 1/4**Remarks/Condition**Good
Good**Core No. C-6****Location**

Sta. 65+50, 22.3'R

MaterialBituminous Surface
Bituminous Binder
Concrete0 to 1- 1/2
1- 1/2 to 4
4+**Thickness(in.)**1- 1/2
2- 1/2**Remarks/Condition**Good
Good**Core No. C-7****Location**Sta. 75+50, 24'L → *~1000' n. of Fullerton***Material**Bituminous Surface
Concrete0 to 4
4 to 11- 1/2**Thickness(in.)**4
7- 1/2**Remarks/Condition**Poor
Core on Joint**Core No. C-8****Location**

Sta. 85+50, 23.6R

MaterialBituminous Surface
Bituminous Binder
Concrete0 to 1- 1/2
1- 1/2 to 4
4 to 13- 1/2**Thickness(in.)**1- 1/2
2- 1/2
9- 1/2**Remarks/Condition**Good
Poor
Good**Core No. C-9****Location**

Sta. 95+50, 23.3'L

MaterialBituminous Surface
Concrete0 to 4
4+**Thickness(in.)**

4

Remarks/Condition

Good

**Pavement Core Measurement Log
Addison Road
Howard Street to Emerson Street**

Core No. - HMA Material Thickness

<u>Core No.</u>	<u>Bituminous</u>	<u>PCC</u>
C-1	3.500	
C-2	4.250	
C-3	3.250	
C-4	3.500	10.250
C-5	5.250	
C-6	4.000	
C-7	4.000	7.500
C-8	4.000	9.500
C-9	4.000	

Avg. Bit. Core Thickness = 3.972 = 3-7/8"
Avg. PCC Core Thickness = 9.083 = 9-1/8"

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 Addison

Village of Villa Park

Addison Township

Civiltech Engineering, Inc

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

ALKALI-SILICA REACTION FOR CAST-IN-PLACE CONCRETE (BDE)

Effective: August 1, 2007

Revised: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to precast products or precast prestressed products.

Aggregate Expansion Values. Each coarse and 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 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 and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

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		
	$\leq 0.16\%$	$> 0.16\% - 0.27\%$	$> 0.27\%$
$\leq 0.16\%$	Group I	Group II	Group III
$> 0.16\% - 0.27\%$	Group II	Group II	Group III
$> 0.27\%$	Group III	Group III	Group IV

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.

- Group I - Mixture options are not applicable. Use any cement or finely divided mineral.
- Group II - Mixture options 1, 2, 3, 4, or 5 shall be used.
- Group III - Mixture options 1, 2 and 3 combined, 4, or 5 shall be used.

Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

For Class PP-3 concrete the mixture options are not applicable, and any cement may be used with the specified finely divided minerals.

- 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.

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. The replacement ratio is defined as "finely divided mineral:portland cement".

- 1) Class F Fly Ash. For Class PV, BS, MS, DS, SC, and SI concrete and cement aggregate mixture II (CAM II), Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

- 2) Class C Fly Ash. For Class PV, MS, SC, and SI Concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.

For Class PP-1, RR, BS, and DS concrete and CAM II, Class C fly ash with less than 26.5 percent calcium oxide content shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

- 3) Ground Granulated Blast-Furnace Slag. For Class PV, BS, MS, SI, DS, and SC concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.

For Class PP-1 and RR concrete, ground granulated blast-furnace slag shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.

For Class PP-2, ground granulated blast-furnace slag shall replace 25 to 30 percent of the portland cement at a minimum replacement ratio of 1:1.

- 4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.
- 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, any finely divided mineral may be used with a portland cement.
- 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, any finely divided mineral may be used with a portland cement.
- 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 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.

Testing. If an individual aggregate has an ASTM C 1260 expansion value > 0.16 percent, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The ASTM C 1293 test shall be performed with Type I or II 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 or wick of absorbent material, 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.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 or 1567 test result. The Engineer will not accept the result if the precision and bias for the test methods are not met.

The laboratory performing the ASTM C 1567 test shall either be accredited by the AASHTO Materials Reference Laboratory (AMRL) for ASTM C 227 under Portland Cement Concrete or Aggregate; or shall be inspected for Hydraulic Cement - Physical Tests by the Cement and Concrete Reference Laboratory (CCRL) and shall be approved by the Department. The laboratory performing the ASTM C 1293 test shall be inspected for Portland Cement Concrete by CCRL and shall be approved by the Department.

80186

ALKALI-SILICA REACTION FOR PRECAST AND PRECAST PRESTRESSED CONCRETE (BDE)

Effective: January 1, 2009

Description. This special provision is intended to reduce the risk of a deleterious alkali-silica reaction in precast and precast prestressed concrete exposed to humid or wet conditions. The special provision is not intended or adequate for concrete exposed to potassium acetate, potassium formate, sodium acetate or sodium formate. The special provision shall not apply to the dry environment (humidity less than 60 percent) found inside buildings for residential or commercial occupancy. The special provision shall also not apply to cast-in-place concrete.

Aggregate Expansion Values. Each coarse and 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 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 and 0.03 percent to limestone or dolomite fine aggregates (manufactured stone sand); however the Department reserves the right to perform the ASTM C 1260 test.

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

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.

- Group I - Mixture options are not applicable. Use any cement or finely divided mineral.
- Group II - Mixture options 1, 2, 3, 4, or 5 shall be used.
- Group III - Mixture options 1, 2 and 3 combined, 4, or 5 shall be used.

Group IV - Mixture options 1, 2 and 4 combined, or 5 shall be used.

- a) Mixture Option 1. The coarse or fine aggregates shall be blended to place the material in a group that will allow the selected cement or finely divided mineral to be used.

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. The replacement ratio is defined as "finely divided mineral:portland cement".
- 1) Class F Fly Ash. For Class PC concrete, precast products, and PS concrete, Class F fly ash shall replace 15 percent of the portland cement at a minimum replacement ratio of 1.5:1.
 - 2) Class C Fly Ash. For Class PC Concrete, precast products, and Class PS concrete, Class C fly ash with 18 percent to less than 26.5 percent calcium oxide content, and less than 2.0 percent loss on ignition, shall replace 20 percent of the portland cement at a minimum replacement ratio of 1:1; or at a minimum replacement ratio of 1.25:1 if the loss on ignition is 2.0 percent or greater. Class C fly ash with less than 18 percent calcium oxide content shall replace 20 percent of the portland cement at a minimum replacement ratio of 1.25:1.
 - 3) Ground Granulated Blast-Furnace Slag. For Class PC concrete, precast products, and Class PS concrete, ground granulated blast-furnace slag shall replace 25 percent of the portland cement at a minimum replacement ratio of 1:1.
 - 4) Microsilica or High Reactivity Metakaolin. Microsilica solids or high reactivity metakaolin shall be added to the mixture at a minimum 25 lb/cu yd (15 kg/cu m) or 27 lb/cu yd (16 kg/cu m) respectively.
- 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, any finely divided mineral may be used with a portland cement.
- 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, any finely divided mineral may be used with a portland cement.
- 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 ASTM C 1567 test will be valid for two years, unless the Engineer determines the materials have changed significantly. 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.

Testing. If an individual aggregate has an ASTM C 1260 expansion value > 0.16 percent, an ASTM C 1293 test may be performed by the Contractor to evaluate the Department's ASTM C 1260 test result. The ASTM C 1293 test shall be performed with Type I or II 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 or wick of absorbent material, 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.

The Engineer reserves the right to verify a Contractor's ASTM C 1293 or 1567 test result. The Engineer will not accept the result if the precision and bias for the test methods are not met.

The laboratory performing the ASTM C 1567 test shall either be accredited by the AASHTO Materials Reference Laboratory (AMRL) for ASTM C 227 under Portland Cement or Aggregate; or shall be inspected for Hydraulic Cement - Physical Tests by the Cement and Concrete Reference Laboratory (CCRL) and shall be approved by the Department. The laboratory performing the ASTM C 1293 test shall be inspected for Portland Cement Concrete by CCRL and shall be approved by the Department.

80213

**APPROVAL OF PROPOSED BORROW AREAS, USE AREAS, AND/OR WASTE AREAS
INSIDE ILLINOIS STATE BORDERS (BDE)**

Effective: November 1, 2008

Revise the title of Article 107.22 of the Standard Specifications to read:

"107.22 Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas Inside Illinois State Borders."

Add the following sentence to the end of the first paragraph of Article 107.22 of the Standard Specifications:

"Proposed borrow areas, use areas, and/or waste areas outside of Illinois shall comply with Article 107.01."

80207

BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)

Effective: November 2, 2006

Revised: January 2, 2007

Description. For projects with at least 1200 tons (1100 metric tons) of work involving applicable bituminous materials, cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and pavement preservation type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.

BPI_P = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).

BPI_L = Bituminous Price Index, as published by the Department for the month prior to the letting, \$/ton (\$/metric ton).

%AC_V = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC_V will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC_V and undiluted emulsified asphalt will be considered to be 65% AC_V.

Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$. For HMA mixtures measured in square meters: $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 24.99) / 1000$. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different G_{mb} and % AC_V.

For bituminous materials measured in gallons: $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$

For bituminous materials measured in liters: $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).

D = Depth of the HMA mixture, in. (mm).

G_{mb} = Average bulk specific gravity of the mixture, from the approved mix design.

V = Volume of the bituminous material, gal (L).

SG = Specific Gravity of bituminous material as shown on the bill of lading.

Basis of Payment. Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI_L and BPI_P in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract?

Yes No

Signature: _____ **Date:** _____

80173

CEMENT (BDE)

Effective: January 1, 2007

Revised: November 1, 2007

Revise Section 1001 of the Standard Specifications to read:

"SECTION 1001. CEMENT

1001.01 Cement Types. Cement shall be according to the following.

- (a) Portland Cement. Acceptance of portland cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland cement shall be according to ASTM C 150, and shall meet the standard physical and chemical requirements. Type I or Type II may be used for cast-in-place, precast, and precast prestressed concrete. Type III may be used according to Article 1020.04, or when approved by the Engineer. All other cements referenced in ASTM C 150 may be used when approved by the Engineer.

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement and the total of all inorganic processing additions shall be a maximum of 4.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids that improve the flowability of cement, reduce pack set, and improve grinding efficiency. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302 and Class C fly ash according to the chemical requirements of AASHTO M 295.

- (b) Portland-Pozzolan Cement. Acceptance of portland-pozzolan cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland-pozzolan cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type IP or I(PM) may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. The pozzolan constituent for Type IP shall be a maximum of 21 percent of the weight (mass) of the portland-pozzolan cement. All other cements referenced in ASTM C 595 may be used when approved by the Engineer.

For cast-in-place construction, portland-pozzolan cements shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-

reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall not be used.

- (c) Portland Blast-Furnace Slag Cement. Acceptance of portland blast-furnace slag cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland blast-furnace slag cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type I(SM) slag-modified portland cement may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. All other cements referenced in ASTM C 595 may be used when approved by the Engineer.

For cast-in-place construction, portland blast-furnace slag cements shall not be used in concrete mixtures when the air temperature is below 40 °F (4 °C) without permission of the Engineer. If permission is given, the mix design strength requirement may require the Contractor to increase the cement or eliminate the cement factor reduction for a water-reducing or high range water-reducing admixture which is permitted according to Article 1020.05(b).

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall not be used.

- (d) Rapid Hardening Cement. Rapid hardening cement shall be used according to Article 1020.04 or when approved by the Engineer. The cement shall be on the Department's current "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs", and shall be according to the following.

- (1) The cement shall have a maximum final set of 25 minutes, according to Illinois Modified ASTM C 191.
- (2) The cement shall have a minimum compressive strength of 2000 psi (13,800 kPa) at 3.0 hours, and 4000 psi (27,600 kPa) at 24.0 hours, according to Illinois Modified ASTM C 109.
- (3) The cement shall have a maximum drying shrinkage of 0.050 percent at seven days, according to Illinois Modified ASTM C 596.
- (4) The cement shall have a maximum expansion of 0.020 percent at 14 days, according to Illinois Modified ASTM C 1038.

(5) The cement shall have a minimum 80 percent relative dynamic modulus of elasticity; and shall not have a weight (mass) gain in excess of 0.15 percent or a weight (mass) loss in excess of 1.0 percent, after 100 cycles, according to Illinois Modified AASHTO T 161, Procedure B. At 100 cycles, the specimens are measured and weighed at 73 °F (23 °C).

(e) Calcium Aluminate Cement. Calcium aluminate cement shall be used when specified by the Engineer. The cement shall meet the standard physical requirements for Type I cement according to ASTM C 150, except the time of setting shall not apply. The chemical requirements shall be determined according to ASTM C 114 and shall be as follows: minimum 38 percent aluminum oxide (Al_2O_3), maximum 42 percent calcium oxide (CaO), maximum 1 percent magnesium oxide (MgO), maximum 0.4 percent sulfur trioxide (SO_3), maximum 1 percent loss on ignition, and maximum 3.5 percent insoluble residue.

1001.02 Uniformity of Color. Cement contained in single loads or in shipments of several loads to the same project shall not have visible differences in color.

1001.03 Mixing Brands and Types. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall not be mixed or used alternately in the same item of construction unless approved by the Engineer.

1001.04 Storage. Cement shall be stored and protected against damage, such as dampness which may cause partial set or hardened lumps. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall be kept separate."

80166

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)

Effective: September 1, 2000

Revised: November 1, 2008

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 or most recent addendum.

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. This 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 14 % 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 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 forth in this Special Provision:

- (a) The bidder documents that firmly committed 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 may 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 web site at www.dot.il.gov.

BIDDING PROCEDURES. Compliance with the bidding procedures of this Special Provision is required prior to the award of the contract and the failure of the as-read low bidder to comply will render the bid not responsive.

- (a) In order to assure the timely award of the contract, the as-read low bidder shall submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven working days after the date of letting. To meet the seven day requirement, the bidder may send the Plan by certified mail or delivery service within the seven working day period. If a question arises concerning the mailing date of a Plan, the mailing date will be established by the U.S. Postal Service postmark on the original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the bidder to ensure that the postmark or receipt date is affixed within the seven working days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Plan is to be submitted 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). It is the responsibility of the bidder to obtain confirmation of telefax delivery. The Department will not accept a Utilization Plan if it does not meet the seven day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the

penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.

- (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. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:
 - (1) The name and address of each DBE to be used;
 - (2) A description, including pay item numbers, of the commercially useful work to be done by each DBE;
 - (3) The price to be paid to each DBE for the identified work specifically stating 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) A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and
 - (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).
- (d) The contract will not be awarded until the Utilization Plan submitted by the bidder is approved. The Utilization Plan will be approved by the Department if the Plan commits sufficient commercially useful DBE work performance to meet the contract goal. The Utilization Plan will not be approved by the Department if the Plan does not commit sufficient DBE performance to meet the contract goal unless the bidder documents that it made a good faith effort to meet the goal. The good faith procedures of Section VIII of this special provision apply. If the Utilization Plan is not approved because it is deficient in a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no less than a five working day period in order to cure the deficiency.

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 full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non-DBE company.
- (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.

GOOD FAITH EFFORT PROCEDURES. If the bidder cannot obtain sufficient DBE commitments to meet the contract goal, the bidder must document in the Utilization Plan the good faith efforts made in the attempt 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 could reasonably be expected to obtain sufficient DBE participation. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts are not good faith efforts; rather, the bidder is expected to have taken those 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 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 a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will designate a five working day period during which the bidder shall take additional efforts. The bidder is not limited by a statement of additional efforts, but may take other action beyond any stated additional efforts in order to obtain additional DBE commitments. The bidder shall submit an amended Utilization Plan if additional DBE commitments to meet the contract goal are secured. If additional DBE commitments sufficient to meet the contract goal are not secured, the bidder shall report the final good faith efforts made in the time allotted. All additional efforts taken by the bidder will be considered as part of the bidder's good faith efforts. If the bidder is not able to meet the goal after taking additional efforts, the Department will make a pre-final determination of the good faith efforts of the bidder and will notify the designated responsible company official of the reasons for an adverse determination.
- (c) The bidder may request administrative reconsideration of a pre-final determination adverse to the bidder within the five working days after 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 pre-final determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. In addition, the request shall be considered a consent by the bidder to extend the time for award. 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 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 reconsideration, 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.

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 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.

- (a) 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) All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to

find another DBE to substitute for the terminated DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau of Small Business Enterprises and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau of Small Business Enterprises will evaluate the good faith efforts in light of all circumstances surrounding the performance status of the contract, and determine whether the contract goal should be amended.

- (c) 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 therefor 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 DBE companies indicated in the Plan, the Department will deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages.
- (d) 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.
- (e) 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.

DOWEL BARS (BDE)

Effective: April 1, 2007

Revised: January 1, 2008

Revise the fifth and sixth sentences of Article 1006.11(b) of the Standard Specifications to read:

“The bars shall be epoxy coated according to AASHTO M 284, except the thickness of the epoxy shall be 7 to 12 mils (0.18 to 0.30 mm) and patching of the ends will not be required. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, “Epoxy Coating Plant Certification Procedure”. The Department will maintain an approved list.”

80178

EQUIPMENT RENTAL RATES (BDE)

Effective: August 2, 2007

Revised: January 2, 2008

Replace the second and third paragraphs of Article 105.07(b)(4)a. of the Standard Specifications with the following:

"Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4)."

Replace Article 109.04(b)(4) of the Standard Specifications with the following:

"(4) Equipment. Equipment used for extra work shall be authorized by the Engineer. The equipment shall be specifically described, be of suitable size and capacity for the work to be performed, and be in good operating condition. For such equipment, the Contractor will be paid as follows.

- a. Contractor Owned Equipment. Contractor owned equipment will be paid for by the hour using the applicable FHWA hourly rate from the "Equipment Watch Rental Rate Blue Book" (Blue Book) in effect when the force account work begins. The FHWA hourly rate is calculated as follows.

$$\text{FHWA hourly rate} = (\text{monthly rate}/176) \times (\text{model year adj.}) \times (\text{Illinois adj.}) + \text{EOC}$$

Where: EOC = Estimated Operating Costs per hour (from the Blue Book)

The time allowed will be the actual time the equipment is operating on the extra work. For the time required to move the equipment to and from the site of the extra work and any authorized idle (standby) time, payment will be made at the following hourly rate: $0.5 \times (\text{FHWA hourly rate} - \text{EOC})$.

All time allowed shall fall within the working hours authorized for the extra work.

The rates above include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance of any kind, depreciation, storage, overhead, profits, insurance, and all incidentals. The rates do not include labor.

The Contractor shall submit to the Engineer sufficient information for each piece of equipment and its attachments to enable the Engineer to determine the proper equipment category. If a rate is not established in the Blue Book for a particular piece of equipment, the Engineer will establish a rate for that piece of equipment that is consistent with its cost and use in the industry.

- b. Rented Equipment. Whenever it is necessary for the Contractor to rent equipment to perform extra work, the rental and transportation costs of the equipment plus five percent for overhead will be paid. In no case shall the rental rates exceed those of established distributors or equipment rental agencies.

All prices shall be agreed to in writing before the equipment is used."

80189

HOT-MIX ASPHALT - FIELD VOIDS IN THE MINERAL AGGREGATE (BDE)

Effective: April 1, 2007

Revised: April 1, 2008

Add the following to the table in Article 1030.05(d)(2)a. of the Standard Specifications:

"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	
VMA Note 5.	Day's production ≥ 1200 tons: 1 per half day of production	N/A	Illinois-Modified AASHTO R 35
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

Note 5. 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."

Add the following to the Control Limits table in Article 1030.05(d)(4) of the Standard Specifications:

"CONTROL LIMITS			
Parameter	High ESAL Low ESAL	High ESAL Low ESAL	All Other
	Individual Test	Moving Avg. of 4	
VMA	-0.7 % ^{2/}	-0.5 % ^{2/}	N/A

2/ Allowable limit below minimum design VMA requirement"

Add the following to the table in Article 1030.05(d)(5) of the Standard Specifications:

"CONTROL CHART REQUIREMENTS	High ESAL Low ESAL	All Other
	VMA"	

Revise the heading of Article 1030.05(d)(6)a.1. of the Standard Specifications to read:

"1. Voids, VMA, and Asphalt Binder Content."

Revise the first sentence of the first paragraph of Article 1030.05(d)(6)a.1.(a.) of the Standard Specifications to read:

"If the retest for voids, VMA, or asphalt binder content exceeds control limits, HMA production shall cease and immediate corrective action shall be instituted by the Contractor."

Revise the table in Article 1030.05(e) of the Standard Specifications to read:

"Test Parameter	Acceptable Limits of Precision
% Passing: ^{1/}	
1/2 in. (12.5 mm)	5.0 %
No. 4 (4.75 mm)	5.0 %
No. 8 (2.36 mm)	3.0 %
No. 30 (600 μm)	2.0 %
Total Dust Content No. 200 (75 μm) ^{1/}	2.2 %
Asphalt Binder Content	0.3 %
Maximum Specific Gravity of Mixture	0.026
Bulk Specific Gravity	0.030
VMA	1.4 %
Density (% Compaction)	1.0 % (Correlated)

1/ Based on washed ignition."

80181

HOT-MIX ASPHALT – PLANT TEST FREQUENCY (BDE)

Effective: April 1, 2008

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

"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	
<p>Aggregate Gradation</p> <p>Hot bins for batch and continuous plants.</p> <p>Individual cold-feed or combined belt-feed for drier drum plants.</p> <p>% 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)</p> <p>Note 1.</p>	<p>1 dry gradation per day of production (either morning or afternoon sample).</p> <p>and</p> <p>1 washed ignition oven test on the mix per day of production (conduct in the afternoon if dry gradation is conducted in the morning or vice versa).</p> <p>Note 3.</p> <p>Note 4.</p>	<p>1 gradation per day of production.</p> <p>The first day of production shall be a washed ignition oven test on the mix. Thereafter, the testing shall alternate between dry gradation and washed ignition oven test on the mix.</p> <p>Note 4.</p>	<p>Illinois Procedure</p>
<p>Asphalt Binder Content by Ignition Oven</p> <p>Note 2.</p>	<p>1 per half day of production</p>	<p>1 per day</p>	<p>Illinois-Modified AASHTO T 308</p>
<p>Air Voids</p> <p>Bulk Specific Gravity of Gyratory Sample</p>	<p>Day's production ≥ 1200 tons:</p> <p>1 per half day of production</p> <hr/> <p>Day's production < 1200 tons:</p> <p>1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)</p>	<p>1 per day</p>	<p>Illinois-Modified AASHTO T 312</p>

"Parameter	Frequency of Tests High ESAL Mixture Low ESAL Mixture	Frequency of Tests All Other Mixtures	Test Method See Manual of Test Procedures for Materials
Maximum Specific Gravity of Mixture	Day's production \geq 1200 tons: 1 per half day of production	1 per day	Illinois-Modified AASHTO T 209"
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

80201

HOT-MIX ASPHALT – TRANSPORTATION (BDE)

Effective: April 1, 2008

Revise Article 1030.08 of the Standard Specifications to read:

“1030.08 Transportation. Vehicles used in transporting HMA shall have clean and tight beds. The beds shall be sprayed with asphalt release agents from the Department’s approved list. In lieu of a release agent, the Contractor may use a light spray of water with a light scatter of manufactured sand (FA 20 or FA 21) evenly distributed over the bed of the vehicle. After spraying, the bed of the vehicle shall be in a completely raised position and it shall remain in this position until all excess asphalt release agent or water has been drained.

When the air temperature is below 60 °F (15 °C), the bed, including the end, endgate, sides and bottom shall be insulated with fiberboard, plywood or other approved insulating material and shall have a thickness of not less than 3/4 in (20 mm). When the insulation is placed inside the bed, the insulation shall be covered with sheet steel approved by the Engineer. Each vehicle shall be equipped with a cover of canvas or other suitable material meeting the approval of the Engineer which shall be used if any one of the following conditions is present.

- (a) Ambient air temperature is below 60 °F (15 °C).
- (b) The weather is inclement.
- (c) The temperature of the HMA immediately behind the paver screed is below 250 °F (120 °C).

The cover shall extend down over the sides and ends of the bed for a distance of approximately 12 in. (300 mm) and shall be fastened securely. The covering shall be rolled back before the load is dumped into the finishing machine.”

80202

MULTILANE PAVEMENT PATCHING (BDE)

Effective: November 1, 2002

Pavement broken and holes opened for patching shall be completed prior to weekend or holiday periods. Should delays of any type or for any reason prevent the completion of the work, temporary patches shall be constructed. Material able to support the average daily traffic and meeting the approval of the Engineer shall be used for the temporary patches. The cost of furnishing, placing, maintaining, removing and disposing of the temporary work, including traffic control, shall be the responsibility of the Contractor.

80082

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM / EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: April 1, 2007

Revised: November 1, 2008

Revise Article 105.03(a) of the Standard Specifications to read:

“(a) National Pollutant Discharge Elimination System (NPDES) / Erosion and Sediment Control Deficiency Deduction. When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, or the Contractor’s activities represents a violation of the Department’s NPDES permits, the Engineer will notify and direct the Contractor to correct the deficiency within a specified time. The specified time, which begins upon notification to the Contractor, will be from 1/2 hour to 1 week based on the urgency of the situation and the nature of the work effort required. The Engineer will be the sole judge.

A deficiency may be any lack of repair, maintenance, or implementation of erosion and/or sediment control devices included in the contract, or any failure to comply with the conditions of the Department’s NPDES permits. A deficiency may also be applied to situations where corrective action is not an option such as the failure to participate in a jobsite inspection of the project, failure to install required measures prior to initiating earth moving operations, disregard of concrete washout requirements, or other disregard of the NPDES permit.

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The calendar day(s) will begin with notification to the Contractor and end with the Engineer’s acceptance of the correction. The daily monetary deduction will be either \$1000.00 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option, the monetary deduction will be immediate and will be valued at one calendar day.”

80180

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section

| 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

PERSONAL PROTECTIVE EQUIPMENT (BDE)

Effective: November 1, 2008

Revise the first sentence of Article 701.12 of the Standard Specifications to read:

“All personnel on foot, excluding flaggers, within the highway right-of-way shall wear a fluorescent orange, fluorescent yellow/green, or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of ANSI/ISEA 107-2004 for Conspicuity Class 2 garments.”

80209

PORTLAND CEMENT CONCRETE PLANTS (BDE)

Effective: January 1, 2007

Add the following to Article 1020.11(a) of the Standard Specifications.

- "(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 their mean strength shall not exceed 450 psi (3100 kPa) compressive and 80 psi (550 kPa) flexural. The strength standard deviation for each plant shall not exceed 650 psi (4480 kPa) compressive and 110 psi (760 kPa) flexural. The mean and standard deviation requirements shall apply to the test of record. 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 until the haul time difference is corrected."

80170

PRECAST CONCRETE HANDLING HOLES (BDE)

Effective: January 1, 2007

Add the following to Article 540.02 of the Standard Specifications:

“(g) Handling Hole Plugs..... 1042.16”

Add the following paragraph after the sixth paragraph of Article 540.06 of the Standard Specifications:

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar, or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Article 542.02 of the Standard Specifications:

“(ee) Handling Hole Plugs 1042.16”

Revise the fifth paragraph of Article 542.04(d) of the Standard Specifications to read:

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 550.02 of the Standard Specifications:

“(o) Handling Hole Plugs..... 1042.16”

Replace the fourth sentence of the fifth paragraph of Article 550.06 of the Standard Specifications with the following:

“Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation.”

Add the following to Article 602.02 of the Standard Specifications:

“(p) Handling Hole Plugs..... 1042.16(a)”

Replace the fifth sentence of the first paragraph of Article 602.07 of the Standard Specifications with the following:

“Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar.”

Add the following to Section 1042 of the Standard Specifications:

“**1042.16 Handling Hole Plugs.** Plugs for handling holes in precast concrete products shall be as follows.

- (a) Precast Concrete Plug. The precast concrete plug shall have a tapered shape and shall have a minimum compressive strength of 3000 psi (20,700 kPa) at 28 days.
- (b) Polyethylene Plug. The polyethylene plug shall have a “mushroom” shape with a flat round top and a stem with three different size ribs. The plug shall fit snugly and cover the handling hole.

The plug shall be according to the following.

Mechanical Properties	Test Method	Value (min.)
Flexural Modulus	ASTM D 790	3300 psi (22,750 kPa)
Tensile Strength (Break)	ASTM D 638	1600 psi (11,030 kPa)
Tensile Strength (Yield)	ASTM D 638	1200 psi (8270 kPa)

Thermal Properties	Test Method	Value (min.)
Brittle Temperature	ASTM D 746	-49 °F (-45 °C)
Vicat Softening Point	ASTM D 1525	194 °F (90 °C)”

80171

REFLECTIVE SHEETING ON CHANNELIZING DEVICES (BDE)

Effective: April 1, 2007

Revised: November 1, 2008

Revise the seventh paragraph of Article 1106.02 of the Standard Specifications to read:

"At the time of manufacturing, the retroreflective prismatic sheeting used on channelizing devices shall meet or exceed the initial minimum coefficient of retroreflection as specified in the following table. Measurements shall be conducted according to ASTM E 810, without averaging. Sheeting used on cones, drums and flexible delineators shall be reboundable as tested according to ASTM D 4956. Prestriped sheeting for rigid substrates on barricades shall be white and orange. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration, and to the daytime and nighttime color requirements of ASTM D 4956.

Initial Minimum Coefficient of Retroreflection candelas/foot candle/sq ft (candelas/lux/sq m) of material				
Observation Angle (deg.)	Entrance Angle (deg.)	White	Orange	Fluorescent Orange
0.2	-4	365	160	150
0.2	+30	175	80	70
0.5	-4	245	100	95
0.5	+30	100	50	40"

Revise the first sentence of the first paragraph of Article 1106.02(c) of the Standard Specifications to read:

"Barricades and vertical panels shall have alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass."

Revise the third sentence of the first paragraph of Article 1106.02(d) of the Standard Specifications to read:

"The bottom panels shall be 8 x 24 in. (200 x 600 mm) with alternating white and orange stripes sloping downward at 45 degrees toward the side on which traffic will pass."

80183

REINFORCEMENT BARS (BDE)

Effective: November 1, 2005

Revised: January 2, 2008

Revise Article 1006.10(a) of the Standard Specifications to read:

" (a) Reinforcement Bars. Reinforcement bars will be accepted according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reinforcement Bar and/or Dowel Bar Plant Certification Procedure". The Department will maintain an approved list of producers.

(1) Reinforcement Bars (Non-Coated). Reinforcement bars shall be according to ASTM A 706 (A 706M), Grade 60 (420) for deformed bars and the following.

- a. For straight bars furnished in cut lengths and with a well-defined yield point, the yield point shall be determined as the elastic peak load, identified by a halt or arrest of the load indicator before plastic flow is sustained by the bar and dividing it by the nominal cross-sectional area of the bar.
- b. For bars without a well-defined yield point, including bars straightened from coils, the yield strength shall be determined by taking the corresponding load at 0.005 strain as measured by an extensometer (0.5% elongation under load) and dividing it by the nominal cross-sectional area of the bar.
- c. For bars straightened from coils or bars bent from fabrication, there shall be no upper limit on yield strength; and for bar designation Nos. 3 - 6 (10 - 19), the elongation after rupture shall be at least 9%.
- d. Heat Numbers. Bundles or bars at the construction site shall be marked or tagged with heat identification numbers of the bar producer.
- e. Guided Bend Test. Bars may be subject to a guided bend test across two pins which are free to rotate, where the bending force shall be centrally applied with a fixed or rotating pin of a certain diameter as specified in Table 3 of ASTM A 706 (A 706M). The dimensions and clearances of this guided bend test shall be according to ASTM E 190.
- f. Spiral Reinforcement. Spiral reinforcement shall be deformed or plain bars conforming to the above requirements or cold-drawn steel wire conforming to AASHTO M 32.

(2) Epoxy Coated Reinforcement Bars. Epoxy coated reinforcement bars shall be according to Article 1006.10(a)(1) and shall be epoxy coated according to AASHTO M 284 (M 284M) and the following.

- a. Certification. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, "Epoxy Coating Plant Certification Procedure". The Department will maintain an approved list.
- b. Coating Thickness. The thickness of the epoxy coating shall be 7 to 12 mils (0.18 to 0.30 mm). When spiral reinforcement is coated after fabrication, the thickness of the epoxy coating shall be 7 to 20 mils (0.18 to 0.50 mm).
- c. Cutting Reinforcement. Reinforcement bars may be sheared or sawn to length after coating, providing the end damage to the coating does not extend more than 0.5 in. (13 mm) back and the cut is patched before any visible rusting appears. Flame cutting will not be permitted."

80151

REINFORCEMENT BARS - STORAGE AND PROTECTION (BDE)

Effective: August 1, 2008

Revise Article 508.03 of the Standard Specifications to read:

“508.03 Storage and Protection. Reinforcement bars, when delivered on the job, shall be stored off the ground using platforms, skids, or other supports; and shall be protected from mechanical injury and from deterioration by exposure. Epoxy coated bars shall be stored on wooden or padded steel cribbing and all systems for handling shall have padded contact areas. The bars or bundles shall not be dragged or dropped.

When it is necessary to store epoxy coated bars outside for more than two months, they shall be protected from sunlight, salt spray, and weather exposure. The protection shall consist of covering with opaque polyethylene sheeting or other suitable opaque material. The covering shall be secured and allow for air circulation around the bars to minimize condensation under the cover.

When placed in the work the bars shall be free from dirt, detrimental scale, paint, oil, or other foreign substances. A light coating of rust will not be considered objectionable on black bars.”

80206

SEEDING (BDE)

Effective: July 1, 2004
 Revised: January 1, 2009

Revise the following seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

"Table 1 - SEEDING MIXTURES		
Class – Type	Seeds	lb/acre (kg/hectare)
2 Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV)	100 (110)
	Perennial Ryegrass	50 (55)
	Creeping Red Fescue	40 (50)
	Red Top	10 (10)
2A Salt Tolerant Roadside Mixture 7/	Tall Fescue (Inferno, Tarheel II, Quest, Blade Runner, or Falcon IV)	60 (70)
	Perennial Ryegrass	20 (20)
	Red Fescue (Audubon, Sea Link, or Epic)	30 (20)
	Hard Fescue (Rescue 911, Spartan II, or Reliant IV)	30 (20)
	Fults Salt Grass 1/	60 (70)"

Revise Note 7 of Table 1 – Seeding Mixtures of Article 250.07 of the Standard Specifications to read:

"7/ In Districts 1 through 6, the planting times shall be April 1 to June 15 and August 1 to November 1. In Districts 7 through 9, the planting times shall be March 1 to June 1 and August 1 to November 15. Seeding may be performed outside these dates provided the Contractor guarantees a minimum of 75 percent uniform growth over the entire seeded area(s) after a period of establishment. Inspection dates for the period of establishment will be as follows: Seeding conducted in Districts 1 through 6 between June 16 and July 31 will be inspected after April 15 and seeding conducted between November 2 and March 31 will be inspected after September 15. Seeding conducted in Districts 7 through 9 between June 2 and July 31 will be inspected after April 15 and seeding conducted between November 16 and February 28 will be inspected after September 15. The guarantee shall be submitted to the Engineer in writing prior to performing the work. After the period of establishment, areas not exhibiting 75 percent uniform growth shall be interseeded or reseeded, as determined by the Engineer, at no additional cost to the Department."

Revise Table II of Article 1081.04(c)(6) of the Standard Specifications to read:

TABLE II						
Variety of Seeds	Hard Seed %	Purity %	Pure Live Seed %	Weed %	Secondary * Noxious Weeds No. per oz (kg)	Notes
	Max.	Min.	Min.	Max.	Max. Permitted	
Alfalfa	20	92	89	0.50	6 (211)	1/
Clover, Alsike	15	92	87	0.30	6 (211)	2/
Red Fescue, Audubon	0	97	82	0.10	3 (105)	-
Red Fescue, Creeping	-	97	82	1.00	6 (211)	-
Red Fescue, Epic	-	98	83	0.05	1 (35)	-
Red Fescue, Sea Link	-	98	83	0.10	3 (105)	-
Tall Fescue, Blade Runner	-	98	83	0.10	2 (70)	-
Tall Fescue, Falcon IV	-	98	83	0.05	1 (35)	-
Tall Fescue, Inferno	0	98	83	0.10	2 (70)	-
Tall Fescue, Tarheel II	-	97	82	1.00	6 (211)	-
Tall Fescue, Quest	0	98	83	0.10	2 (70)	-
Fults Salt Grass	0	98	85	0.10	2 (70)	-
Kentucky Bluegrass	-	97	80	0.30	7 (247)	4/
Oats	-	92	88	0.50	2 (70)	3/
Redtop	-	90	78	1.80	5 (175)	3/
Ryegrass, Perennial, Annual	-	97	85	0.30	5 (175)	3/
Rye, Grain, Winter	-	92	83	0.50	2 (70)	3/
Hard Fescue, Reliant IV	-	98	83	0.05	1 (35)	-
Hard Fescue, Rescue 911	0	97	82	0.10	3 (105)	-
Hard Fescue, Spartan II	-	98	83	0.10	3 (105)	-
Timothy	-	92	84	0.50	5 (175)	3/
Wheat, hard Red Winter	-	92	89	0.50	2 (70)	3/

Revise the first sentence of the first paragraph of Article 1081.04(c)(7) of the Standard Specifications to read:

"The seed quantities indicated per acre (hectare) for Prairie Grass Seed in Classes 3, 3A, 4, 4A, 6, and 6A in Article 250.07 shall be the amounts of pure, live seed per acre (hectare) for each species listed."

80131

SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)

Effective: November 1, 2005

Revised: January 1, 2009

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for cast-in-place concrete construction items involving Class MS, DS, and SI concrete.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. Article 1020.04 of the Standard Specifications shall apply, except as follows:

- (a) The cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m). The cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used.
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-5, SCC-6, and Illinois Modified AASHTO T 22, 23, 121, 126, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mix Design Submittal. The Contractor's Level III PCC Technician shall submit a mix design according to the "Portland Cement Concrete Level III Technician" course manual, except target slump information is not applicable and will not be required. However, a slump flow target range shall be submitted. In addition, the design mortar factor may exceed 1.10 and durability test data will be waived.

A J-ring value shall be submitted if a lower mix design maximum will apply. An L-box blocking ratio shall be submitted if a higher mix design minimum will apply. The Contractor shall also indicate applicable construction items for the mix design.

Trial mixture information will be required by the Engineer. A trial mixture is a batch of concrete tested by the Contractor to verify the Contractor's mix design will meet specification requirements. Trial mixture information shall include test results as specified in the "Portland Cement Concrete Level III Technician" course manual. Test results shall also include slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index. For the trial mixture, the slump flow shall be near the midpoint of the proposed slump flow target range.

Trial Batch. A minimum 2 cu yd (1.5 cu m) trial batch shall be produced, and the self-consolidating concrete admixture dosage proposed by the Contractor shall be used. The slump flow shall be within 1.0 in. (25 mm) of the maximum slump flow range specified by the Contractor, and the air content shall be within the top half of the allowable specification range.

The trial batch shall be scheduled a minimum of 21 calendar days prior to anticipated use and shall be performed in the presence of the Engineer.

The Contractor shall provide the labor, equipment, and materials to test the concrete. The mixture will be evaluated by the Engineer for strength, air content, slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index.

Upon review of the test data from the trial batch, the Engineer will verify or deny the use of the mix design and notify the Contractor. Verification by the Engineer will include the Contractor's target slump flow range. If applicable, the Engineer will verify the Contractor's maximum J-ring value and minimum L-box blocking ratio.

A new trial batch will be required whenever there is a change in the source of any component material, proportions beyond normal field adjustments, dosage of the self-consolidating concrete admixture, batch sequence, mixing speed, mixing time, or as determined by the Engineer. The testing criteria for the new trial batch will be determined by the Engineer.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall ensure the design of the falsework and forms is adequate for the additional form pressure caused by the fluid concrete. Forms shall be tight to prevent leakage of fluid concrete.

When the form height for placing the self-consolidating concrete is greater than 10.0 ft (3.0 m), direct monitoring of form pressure shall be performed according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. A minimum of one sensor will be required below each point of concrete placement to measure the maximum pressure. The first sensor below the point of concrete placement shall be approximately 12 in. (300 mm) above the base of the formwork. Additional sensors shall be installed above the bottom sensor when the form height is greater than 10.0 ft (3.0 m) above the bottom sensor. The additional sensors shall be installed at a maximum vertical spacing of 10.0 ft (3.0 m). The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer. For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

"Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer."

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The column segregation index test and hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

The column segregation index test will not be required to be performed at the jobsite. The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, J-ring or L-box, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

80152

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)

Effective: July 1, 2004

Revised: January 1, 2007

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. The mix design criteria shall be as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.
- (d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Placing and Consolidating. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer.

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 shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

80132

SILT FILTER FENCE (BDE)

Effective: January 1, 2008

For silt filter fence fabric only, revise Article 1080.02 of the Standard Specifications to read:

“**1080.02 Geotextile Fabric.** The fabric for silt filter fence shall be a woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence with less than 50 percent geotextile elongation.”

Replace the last sentence of Article 1081.15(b) of the Standard Specifications with the following:

“Silt filter fence stakes shall be a minimum of 4 ft (1.2 m) long and made of either wood or metal. Wood stakes shall be 2 in. x 2 in. (50 mm x 50 mm). Metal stakes shall be a standard T or U shape having a minimum weight (mass) of 1.32 lb/ft (600 g/300 mm).”

80197

STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)

Effective: April 2, 2004

Revised: April 1, 2007

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of steel cost adjustments.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)
Structural Steel
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), frames and grates, and other miscellaneous items will be subject to a steel cost adjustment when the pay item they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) Evidence that increased or decreased steel costs have been passed on to the Contractor.
- (b) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (c) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in lb (kg)
D = price factor, in dollars per lb (kg)

$$D = CBP_M - CBP_L$$

Where: CBP_M = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the American Metal Market (AMM) for the day the steel is shipped from the mill. The indices will be converted from dollars per ton to dollars per lb (kg).

CBP_L = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the AMM for the day the contract is let. The indices will be converted from dollars per ton to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the CBP_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the CBP_L and CBP_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(CBP_L - CBP_M) \div CBP_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Attachment

Item	Unit Mass (Weight)
Metal Piling (excluding temporary sheet piling) Furnishing Metal Pile Shells 12 in. (305 mm), 0.179 in. (3.80 mm) wall thickness) Furnishing Metal Pile Shells 12 in. (305 mm), 0.250 in. (6.35 mm) wall thickness) Furnishing Metal Pile Shells 14 in. (356 mm), 0.250 in. (6.35 mm) wall thickness) Other piling	23 lb/ft (34 kg/m) 32 lb/ft (48 kg/m) 37 lb/ft (55 kg/m) See plans
Structural Steel	See plans for weights (masses)
Reinforcing Steel	See plans for weights (masses)
Dowel Bars and Tie Bars	6 lb (3 kg) each
Mesh Reinforcement	63 lb/100 sq ft (310 kg/sq m)
Guardrail Steel Plate Beam Guardrail, Type A w/steel posts Steel Plate Beam Guardrail, Type B w/steel posts Steel Plate Beam Guardrail, Types A and B w/wood posts Steel Plate Beam Guardrail, Type 2 Steel Plate Beam Guardrail, Type 6 Traffic Barrier Terminal, Type 1 Special (Tangent) Traffic Barrier Terminal, Type 1 Special (Flared)	20 lb/ft (30 kg/m) 30 lb/ft (45 kg/m) 8 lb/ft (12 kg/m) 305 lb (140 kg) each 1260 lb (570 kg) each 730 lb (330 kg) each 410 lb (185 kg) each
Steel Traffic Signal and Light Poles, Towers and Mast Arms Traffic Signal Post Light Pole, Tenon Mount and Twin Mount, 30 - 40 ft (9 - 12 m) Light Pole, Tenon Mount and Twin Mount, 45 - 55 ft (13.5 - 16.5 m) Light Pole w/Mast Arm, 30 - 50 ft (9 - 15.2 m) Light Pole w/Mast Arm, 55 - 60 ft (16.5 - 18 m) Light Tower w/Luminaire Mount, 80 - 110 ft (24 - 33.5 m) Light Tower w/Luminaire Mount, 120 - 140 ft (36.5 - 42.5 m) Light Tower w/Luminaire Mount, 150 - 160 ft (45.5 - 48.5 m)	11 lb/ft (16 kg/m) 14 lb/ft (21 kg/m) 21 lb/ft (31 kg/m) 13 lb/ft (19 kg/m) 19 lb/ft (28 kg/m) 31 lb/ft (46 kg/m) 65 lb/ft (97 kg/m) 80 lb/ft (119 kg/m)
Metal Railings (excluding wire fence) Steel Railing, Type SM Steel Railing, Type S-1 Steel Railing, Type T-1 Steel Bridge Rail	64 lb/ft (95 kg/m) 39 lb/ft (58 kg/m) 53 lb/ft (79 kg/m) 52 lb/ft (77 kg/m)
Frames and Grates Frame Lids and Grates	250 lb (115 kg) 150 lb (70 kg)

Return With Bid

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of steel cost adjustments. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans?

Yes No

Signature: _____ **Date:** _____

80127

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: April 2, 2005

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 in accordance with 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.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

80143

TEMPORARY EROSION CONTROL (BDE)

Effective: November 1, 2002

Revised: January 1, 2008

Revise the third paragraph of Article 280.03 of the Standard Specifications to read:

"Erosion control systems shall be installed prior to beginning any activities which will potentially create erodible conditions. Erosion control systems for areas outside the limits of construction such as storage sites, plant sites, waste sites, haul roads, and Contractor furnished borrow sites shall be installed prior to beginning soil disturbing activities at each area. These offsite systems shall be designed by the Contractor and be subject to the approval of the Engineer."

Add the following paragraph after the third paragraph of Article 280.03 of the Standard Specifications:

"The temporary erosion and sediment control systems shown on the plans represent the minimum systems anticipated for the project. Conditions created by the Contractor's operations, or for the Contractor's convenience, which are not covered by the plans, shall be protected as directed by the Engineer at no additional cost to the Department. Revisions or modifications of the erosion and sediment control systems shall have the Engineer's written approval."

Add the following paragraph after the ninth paragraph of Article 280.07 of the Standard Specifications:

"Temporary or permanent erosion control systems required for areas outside the limits of construction will not be measured for payment."

Delete the tenth (last) paragraph of Article 280.08 of the Standard Specifications.

80087

THERMOPLASTIC PAVEMENT MARKINGS (BDE)

Effective: January 1, 2007

Revise Article 1095.01(a)(2) of the Standard Specifications to read:

"(2) Pigment. The pigment used for the white thermoplastic compound shall be a high-grade pure (minimum 93 percent) titanium dioxide (TiO₂). The white pigment content shall be a minimum of ten percent by weight and shall be uniformly distributed throughout the thermoplastic compound.

The pigments used for the yellow thermoplastic compound shall not contain any hazardous materials listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1. The combined total of RCRA listed heavy metals shall not exceed 100 ppm when tested by X-ray fluorescence spectroscopy. The pigments shall also be heat resistant, UV stable and color-fast yellows, golds, and oranges, which shall produce a compound which shall match Federal Standard 595 Color No. 33538. The pigment shall be uniformly distributed throughout the thermoplastic compound."

Revise Article 1095.01(b)(1)e. of the Standard Specifications to read:

"e. Daylight Reflectance and Color. The thermoplastic compound after heating for four hours \pm five minutes at 425 ± 3 °F (218.3 ± 2 °C) and cooled at 77 °F (25 °C) shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degree circumferential/zero degree geometry, illuminant C, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

White: Daylight Reflectance75 percent min.

*Yellow: Daylight Reflectance45 percent min.

*Shall meet the coordinates of the following color tolerance chart.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456"

Revise Article 1095.01(b)(1)k. of the Standard Specifications to read:

"k. Accelerated Weathering. After heating the thermoplastic for four hours \pm five minutes at 425 ± 3 °F (218.3 ± 2 °C) the thermoplastic shall be applied to a steel wool abraded aluminum alloy panel (Federal Test Std. No. 141, Method 2013) at a film thickness of 30 mils (0.70 mm) and allowed to cool for 24 hours at room temperature. The coated panel shall be subjected to accelerated weathering

using the light and water exposure apparatus (fluorescent UV - condensation type) for 75 hours according to ASTM G 53 (equipped with UVB-313 lamps).

The cycle shall consist of four hours UV exposure at 122 °F (50 °C) followed by four hours of condensation at 104 °F (40 °C). UVB 313 bulbs shall be used. At the end of the exposure period, the panel shall not exceed 10 Hunter-Lab Delta E units from the original material."

80176

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 4 . 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

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within **95** working days.

80071

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

	Page
I. General	1
II. Nondiscrimination	1
III. Nonsegregated Facilities	3
IV. Payment of Predetermined Minimum Wage.....	3
V. Statements and Payrolls	5
VI. Record of Materials, Supplies, and Labor.....	6
VII. Subletting or Assigning the Contract.....	6
VIII. Safety: Accident Prevention	7
IX. False Statements Concerning Highway Projects.....	7
X. Implementation of Clean Air Act and Federal Water Pollution Control Act	7
XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion	8
XII. Certification Regarding Use of Contract Funds for Lobbying	9

ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. 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.
2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.
3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:
 - Section I, paragraph 2;
 - Section IV, paragraphs 1, 2, 3, 4 and 7;
 - Section V, paragraphs 1 and 2a through 2g.
5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 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 DOL, or the contractor's employees or their representatives.
6. Selection of Labor: During the performance of this contract, the contractor shall not:
 - a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
 - b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

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 and 41 CFR 60 (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 Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American 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 State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
- b. The contractor will accept as his 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, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO 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 minority group employees.
- 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 minority groups 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 employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group 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, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
- c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group 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 his 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 his avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
- 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. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.
- 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 minority group and women employees 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 his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. 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 best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
- b. The contractor will use best 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 SHA 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 minority and women 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 quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) 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 SHA.

8. 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.

- a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
- b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.
- c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. 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 completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number 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;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA 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. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers 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 (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) 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. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, 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 paragraphs 4 and 5 of this Section IV.

b. 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.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification 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 DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour 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.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional 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 question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said 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.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. 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 or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost 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.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) 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 DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/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 Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees 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 employee 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 listed in 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 or subcontractor 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-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) 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 journeyman-level 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 for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) 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 DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. 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.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level 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-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor 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. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. 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.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor 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, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's 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 SHA contracting officer 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.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her 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, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10

for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall; upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies 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 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

- a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
- b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof 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. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found 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 and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.
- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees

(including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for submitting payroll copies of all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such 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 the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. 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 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, 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 SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions 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.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed

on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

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 State. 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 contractors' own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly 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, assignee, or agent of the prime contractor.

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 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 VII 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 SHA 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 SHA 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 SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

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 SHA 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. 333).

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. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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, the following notice 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:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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 not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective primary 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 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 primary 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 department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
- d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary 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," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary 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 primary 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 Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. 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.

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.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-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;

c. 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 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary 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 Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

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," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

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.

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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

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 dealing.

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.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she 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.

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion-Lower Tier Covered Transactions:

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 participation in this transaction 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.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(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.

**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.