

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 downloading and/or ordering CD-ROM's and are 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, signed and notarized, "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: It is the contractor's responsibility to determine which, if any, addenda pertains to any project they may be bidding. Failure to incorporate all relevant addenda may cause the bid to be declared unacceptable.

Each addendum will be placed with the contract number. Addenda will also be placed on the Addendum/Revision Checksheet and each subscription service subscriber will be notified by e-mail of each addendum 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 bidder check IDOT's website <http://www.dot.il.gov/desenv/delett.html> before submitting final bid information.

IDOT is not responsible for any e-mail related 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 Roseanne Nance (217)-785-5875 or nancer@dot.il.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
Electronic plans and proposals	217/785-5875

ADDENDUMS TO THE PROPOSAL FORMS

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

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RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting March 11, 2005

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. 83785
COOK County
Section 00-00068-01-WR (Schaumburg)
Route FAU 2585 (Meacham Road)
Project M-8003(352)
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

F

Checked by

(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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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 _____

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

**Contract No. 83785
COOK County
Section 00-00068-01-WR (Schaumburg)
Project M-8003(352)
Route FAU 2585 (Meacham Road)
District 1 Construction Funds**

0.78 mile of roadway reconstruction and widening, lighting, curb and gutter, storm sewers and landscaping from Tower Road/McConnor Parkway to Algonquin Road (excluding bridge over I-90) and traffic signal modernization and replacement at the intersections of Tower Road/McConnor Parkway, Thoreau Lane, Drummer Drive and IL Route 62, all in Schaumburg.

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

RETURN WITH BID

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

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

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

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

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

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

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

Attach Cashier's Check or Certified Check Here

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

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

Item _____

Section No. _____

County _____

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

BD 354 (Rev. 11/2001)

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-91-082-04
 PPS NBR - 1-10812-0000

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83785

ECMS002 DTGECM03 ECMR003 PAGE 1
 RUN DATE - 02/08/05
 RUN TIME - 202554

COUNTY NAME	CODE	DIST	SECTION NUMBER	PROJECT NUMBER	ROUTE
COOK	031	01	00-00068-01-WR (SCHAUMBURG)	M-8003/352/000	FAU 2585

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
A2004724	T-GLED TRI-I SM 3	EACH	72.000 X				
A2005024	T-GYMNOCLA DIO 3	EACH	6.000 X				
C2012036	S-VIBURN DEN SYN 3'	EACH	12.000 X				
D2C04024	E-YUCCA FILAMN 2' C	EACH	37.000 X				
XX000613	MODULAR BLOC RET WALL	SQ FT	190.000 X				
XX002161	ABAND EX WATER MAIN	EACH	2.000 X				
XX002856	RE-OPTIMIZE TR SIG SY	L SUM	1.000 X				
XX002866	CONC BAR WALL SPL	CU YD	102.000 X				
XX003170	CALAM A KARL FORESTER	EACH	17.000 X				
XX003174	RUDBECK F S GOLDSTRUM	EACH	44.000 X				
XX003209	LOW VOLTAGE WIRE	FOOT	40.000 X				
XX003240	MISCAN SIN GRAC 2G	EACH	6.000 X				
XX003338	TEST HOLE	EACH	46.000 X				
XX003503	FLARED END SEC REM	EACH	4.000 X				
XX003718	FIELD TRANSMITTER	EACH	1.000 X				

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 00-00068-01-WR (SCHAUMBURG)
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83785

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 RUN DATE - 02/08/05
 RUN TIME - 202554

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX003782	HEUCH MIC PURP PAL 1G	EACH	33.000 X			=	
XX003843	ELECTRIC VALVE 1	EACH	12.000 X			=	
XX003848	GYP SUM PLACEMENT	POUND	69,056.000 X			=	
XX003856	PREEMER GRAN HERBICID	POUND	375.000 X			=	
XX004051	LIGHT POLE ORNAMENTAL	EACH	2.000 X			=	
XX004146	POLYETHELYNE P 1	FOOT	2,490.000 X			=	
XX004147	POLYETHELYNE P 1.25	FOOT	980.000 X			=	
XX004527	RHUS AROM GROLO 24SPD	EACH	78.000 X			=	
XX004914	TEMP TR SIG SYSTEM	EACH	1.000 X			=	
XX004920	CL D PATCH SUPER T410	SQ YD	556.000 X			=	
XX004921	PED PUSH-BUTTON SPL	EACH	7.000 X			=	
XX005084	LIGHTING CONTR FOUND	EACH	1.000 X			=	
XX005140	ELECTRIC CONTROLLER	EACH	4.000 X			=	
XX005141	PVC 1-1/2" 40IPS PP	FOOT	100.000 X			=	
XX005142	COPPER WS 1.5" TRENCH	FOOT	200.000 X			=	

FAU 2585
 00-00068-01-WR (SCHAUMBURG)
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83785

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 RUN DATE - 02/08/05
 RUN TIME - 202554

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX005143	COPPER WS 1.5" DIR BORE	FOOT	200.000 X				
XX005145	SRRY HD RB 1812-15H	EACH	18.000 X				
XX005147	SRRY HD RB 1812-12H	EACH	36.000 X				
XX005149	SRRY HD RB 1804-10H	EACH	9.000 X				
XX005150	SRRY HD RB 1812-10H	EACH	19.000 X				
XX005153	SRRY HD RB 1812-8H	EACH	62.000 X				
XX005157	SRRY HD RB 1804-EST	EACH	6.000 X				
XX005159	SRRY HD RB 1804-CST	EACH	29.000 X				
XX005160	ROSA CAREFRE BEAUT 5G	EACH	56.000 X				
XX005163	SYMPHORICARPOS ORB 2' B&B	EACH	38.000 X				
XX005164	ROSA RUGOSA SCARLET MEIDILAND 5 G	EACH	28.000 X				
XX005166	HYDRANGEA ARBOR ANNA SMOOTH 2'	EACH	65.000 X				
XX005170	LIRIOPE JOHN BIRCH	EACH	370.000 X				
XX005171	PEROVSKIA ATRIPLIC 1G	EACH	22.000 X				
XX005172	SYRINGA RETIC IS 2.5 TREE FORM	EACH	53.000 X				

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 83785

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 RUN DATE - 02/08/05
 RUN TIME - 202554

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX005173	MORUS ALBA 'CHAPARRAL'	EACH	4.000 X			=	
XX005178	HEMEROCALLIS CHICAGO APACH DAYLIL	EACH	119.000 X			=	
XX005179	ACHILLEA X HYBRIDA PAPRIKA	EACH	80.000 X			=	
XX005180	SEDUM SPECTIBLE AUTUMN JOY	EACH	90.000 X			=	
XX005181	BERGENIA CORD EVENING GLOW	EACH	45.000 X			=	
XX005182	COREOP VERT ZAGREB	EACH	85.000 X			=	
XX005186	HEMERO STELLA DORO 1 GAL	EACH	60.000 X			=	
XX005801	SRRY HD RB 1804-12H	EACH	9.000 X			=	
XX005914	SRRY HD RB 1804-12HV	EACH	1.000 X			=	
XX005998	SRRY HD RB 1804-8H	EACH	25.000 X			=	
XX006063	SRRY HD RB 1804-8HV	EACH	5.000 X			=	
XX006120	ABAND STORM SEWER	FOOT	600.000 X			=	
XX006126	BACKFLOW PREVENT 1.5	EACH	4.000 X			=	
XX006149	SRRY HD RB 1812-12HV	EACH	2.000 X			=	
XX006150	SRRY HD RB1812-15SST	EACH	2.000 X			=	

FAU 2585
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
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ECMS002 DTGECM03 ECMR003 PAGE 5
 RUN DATE - 02/08/05
 RUN TIME - 202554

ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
XX006151	S MAA & P DMA 16 & 52	EACH	1.000 X			=	
XX006152	S MAA & P DMA 20 & 55	EACH	1.000 X			=	
XX006153	S MAA & P DMA 22 & 46	EACH	1.000 X			=	
XX006154	S MAA & P DMA 36 & 54	EACH	1.000 X			=	
XX006155	S MAA & P DMA 38 & 55	EACH	1.000 X			=	
XX006156	HEMER ORCH DAYLILY 1G	EACH	42.000 X			=	
XX006157	JUN BX SS ES 16X12X6	EACH	2.000 X			=	
XX006158	LT P FDN M 15BC 10X10	EACH	31.000 X			=	
XX006159	MEDIAN SOIL MIX F & P	CU YD	1,282.000 X			=	
XX006160	UD5-1C#4/1C#6G600V P	FOOT	825.000 X			=	
XX006161	WATER SERV CONN 1.5	EACH	4.000 X			=	
XX006162	SRRY HD RB 1804-15SST	EACH	8.000 X			=	
X0301023	CONFIRMATION BEACON	EACH	2.000 X			=	
X0321020	PCC SUR RM (CM) VAR D	SQ YD	1,695.000 X			=	
X0322033	STORM SEW WM REQ 12	FOOT	167.000 X			=	

FAU 2585
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X0322256	TEMP INFO SIGNING	SQ FT	450.000	X	=		
X0322298	DR STR/R-PLT 2-T1F CL	EACH	1.000	X	=		
X0322925	ELCBL C TRACER 14 1C	FOOT	5,195.000	X	=		
X0323426	SED CONT DR ST INL CL	EACH	100.000	X	=		
X0323574	MAINTAIN LIGHTING SYS	CAL MO	1.000	X	=		
X0323670	PREFORM DETECT LOOP	FOOT	2,943.000	X	=		
X0323973	SED CONT SILT FENCE	FOOT	8,598.000	X	=		
X0323974	SED CONT SILT FN MAIN	FOOT	8,598.000	X	=		
X0919000	TEMP PAVT REMOVAL	SQ YD	7,600.000	X	=		
X3550500	BIT BC SUPER 8	SQ YD	7,600.000	X	=		
X4066414	BC SC SUPER "C" N50	TON	307.000	X	=		
X4066426	BC SC SUPER "D" N70	TON	256.000	X	=		
X4066548	P BCSC SUPER "F" N90	TON	348.000	X	=		
X4066614	BCBC SUP IL-19.0 N50	TON	413.000	X	=		
X6060500	CORRUGATED MED REM	SQ FT	1,094.000	X	=		

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ILLINOIS DEPARTMENT OF TRANSPORTATION
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 RUN DATE - 02/08/05
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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X6700405	ENGR FLD OFF A MOD	CAL MO	17.000 X			=	
X7015050	PORT CHANGE MESS SIGN	CAL MO	34.000 X			=	
X8050015	SERV INSTALL POLE MT	EACH	2.000 X			=	
X8410102	TEMP LIGHTING SYSTEM	L SUM	1.000 X			=	
X8710020	FOCC62.5/125 MM12SM12	FOOT	5,267.000 X			=	
X8730027	ELCBL C GROUND 6 1C	FOOT	1,680.000 X			=	
X8730250	ELCBL C 20 3C TW SH	FOOT	1,948.000 X			=	
X8800020	SH LED 1F 3S MAM	EACH	25.000 X			=	
X8800035	SH LED 1F 3S BM	EACH	1.000 X			=	
X8800038	SH LED 1F 4S MAM	EACH	3.000 X			=	
X8800040	SH LED 1F 5S BM	EACH	2.000 X			=	
X8800045	SH LED 1F 5S MAM	EACH	5.000 X			=	
X8805275	SH LED 2F 1-3 1-4 BM	EACH	1.000 X			=	
X8805280	SH LED 2F 1-3 1-5 BM	EACH	1.000 X			=	
X8810610	PED SH LED 1F BM	EACH	4.000 X			=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
X8810620	PED SH LED 2F BM	EACH	3.000 X			=	
X8950090	RELOC EX LIGHT CONTR	EACH	1.000 X			=	
Z0001050	AGG SUBGRADE 12	SQ YD	48,084.000 X			=	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000 X			=	
Z0018500	DRAINAGE STR CLEANED	EACH	100.000 X			=	
Z0076600	TRAINEES	HOUR	3,000.000 X	0.80		=	2,400.00
20100110	TREE REMOV 6-15	UNIT	451.000 X			=	
20100210	TREE REMOV OVER 15	UNIT	37.000 X			=	
20101000	TEMPORARY FENCE	FOOT	2,200.000 X			=	
20101100	TREE TRUNK PROTECTION	EACH	22.000 X			=	
20200100	EARTH EXCAVATION	CU YD	18,491.000 X			=	
20201200	REM & DISP UNS MATL	CU YD	8,369.000 X			=	
20400800	FURNISHED EXCAV	CU YD	28,756.000 X			=	
20700420	POROUS GRAN EMB SUBGR	CU YD	2,102.000 X			=	
20800150	TRENCH BACKFILL	CU YD	846.000 X			=	

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				DOLLARS	CENTS	DOLLARS	CTS
21001000	GEOTECH FAB F/GR STAB	SQ YD	2,600.000 X				
21101505	TOPSOIL EXC & PLAC	CU YD	1,385.000 X				
21101615	TOPSOIL F & P 4	SQ YD	23,965.000 X				
21101805	COMPOST F & P 2	SQ YD	1,725.000 X				
21300010	EXPLOR TRENCH SPL	FOOT	200.000 X				
25000400	NITROGEN FERT NUTR	POUND	478.000 X				
25000500	PHOSPHORUS FERT NUTR	POUND	465.000 X				
25000600	POTASSIUM FERT NUTR	POUND	458.000 X				
25100630	EROSION CONTR BLANKET	SQ YD	23,965.000 X				
25200110	SODDING SALT TOLERANT	SQ YD	23,965.000 X				
25200200	SUPPLE WATERING	UNIT	750.000 X				
28000250	TEMP EROS CONTR SEED	POUND	528.000 X				
28000300	TEMP DITCH CHECKS	EACH	15.000 X				
28000510	INLET FILTERS	EACH	100.000 X				
28100101	STONE RIPRAP CL A1	SQ YD	6.000 X				

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				DOLLARS	CENTS	DOLLARS	CTS
28100107	STONE RIPRAP CL A4	SQ YD	207.000 X		=		
28200100	FILTER FAB FOR RIPRAP	SQ YD	213.000 X		=		
35101600	AGG BASE CSE B 4	SQ YD	1,605.000 X		=		
35101800	AGG BASE CSE B 6	SQ YD	6,175.000 X		=		
35400500	PCC BASE CSE W 10	SQ YD	95.000 X		=		
40600100	BIT MATLS PR CT	GALLON	799.000 X		=		
40600300	AGG PR CT	TON	16.000 X		=		
40600985	PCC SURF REM BUTT JT	SQ YD	1,390.000 X		=		
40600990	TEMPORARY RAMP	SQ YD	580.000 X		=		
42000501	PCC PVT 10 JOINTED	SQ YD	24,485.000 X		=		
42001100	HES PCC PVT 10	SQ YD	14,327.000 X		=		
42001200	PAVEMENT FABRIC	SQ YD	36,964.000 X		=		
42001300	PROTECTIVE COAT	SQ YD	45,388.000 X		=		
42001420	BR APPR PVT CON (PCC)	SQ YD	1,199.000 X		=		
42400200	PC CONC SIDEWALK 5	SQ FT	7,169.000 X		=		

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				DOLLARS	CENTS	DOLLARS	CTS
44000100	PAVEMENT REM	SQ YD	40,126.000 X				
44000200	DRIVE PAVEMENT REM	SQ YD	360.000 X				
44000500	COMB CURB GUTTER REM	FOOT	15,823.000 X				
44000600	SIDEWALK REM	SQ FT	26,091.000 X				
44003100	MEDIAN REMOVAL	SQ FT	30,103.000 X				
48200400	BIT SHOULDERS 6	SQ YD	901.000 X				
54213657	PRC FLAR END SEC 12	EACH	5.000 X				
54213669	PRC FLAR END SEC 24	EACH	2.000 X				
54247130	GRATING-C FL END S 24	EACH	2.000 X				
550A0050	STORM SEW CL A 1 12	FOOT	1,280.000 X				
550A0090	STORM SEW CL A 1 18	FOOT	154.000 X				
550A0120	STORM SEW CL A 1 24	FOOT	64.000 X				
550A0180	STORM SEW CL A 1 42	FOOT	510.000 X				
550A0190	STORM SEW CL A 1 48	FOOT	519.000 X				
550A0340	STORM SEW CL A 2 12	FOOT	1,543.000 X				

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
550A0380	STORM SEW CL A 2 18	FOOT	389.000 X			=	
550A0400	STORM SEW CL A 2 21	FOOT	140.000 X			=	
550A0430	STORM SEW CL A 2 30	FOOT	40.000 X			=	
550A0440	STORM SEW CL A 2 33	FOOT	32.000 X			=	
55100500	STORM SEWER REM 12	FOOT	1,282.000 X			=	
55101400	STORM SEWER REM 30	FOOT	40.000 X			=	
55101500	STORM SEWER REM 33	FOOT	32.000 X			=	
56400400	FIRE HYDNTS RELOCATED	EACH	6.000 X			=	
56400500	FIRE HYDNTS TO BE REM	EACH	2.000 X			=	
60109510	P UNDR FAB LINE TR 4	FOOT	2,075.000 X			=	
60201340	CB TA 4 DIA T24F&G	EACH	5.000 X			=	
60207605	CB TC T8G	EACH	1.000 X			=	
60207915	CB TC T11V F&G	EACH	4.000 X			=	
60208240	CB TC T24F&G	EACH	23.000 X			=	
60214700	RD CB 4 DIA T11F&G	EACH	4.000 X			=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60214714	RD CB 4 DIA T24F&G	EACH	3.000 X			=	
60221100	MAN TA 5 DIA T1F CL	EACH	5.000 X			=	
60223800	MAN TA 6 DIA T1F CL	EACH	3.000 X			=	
60236825	INLETS TA T11V F&G	EACH	3.000 X			=	
60237470	INLETS TA T24F&G	EACH	9.000 X			=	
60250200	CB ADJUST	EACH	3.000 X			=	
60251740	CB ADJ NEW T24F&G	EACH	1.000 X			=	
60255500	MAN ADJUST	EACH	15.000 X			=	
60260100	INLETS ADJUST	EACH	3.000 X			=	
60265700	VV ADJUST	EACH	12.000 X			=	
60500040	REMOV MANHOLES	EACH	12.000 X			=	
60500050	REMOV CATCH BAS	EACH	16.000 X			=	
60500060	REMOV INLETS	EACH	17.000 X			=	
60604000	COMB CC&G TB6.12 DOW	FOOT	1,616.000 X			=	
60605200	COMB CC&G TB6.24 DOW	FOOT	8,370.000 X			=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
60606100	COMB CC&G TB9.12 DOW	FOOT	1,916.000 X			=	
60607600	COMB CC&G TB9.24 DOW	FOOT	688.000 X			=	
60619100	CONC MED TSB SPL	SQ FT	15,148.000 X			=	
60625900	PCC RAMP MED TERM	EACH	2.000 X			=	
63000000	SPBGR TY A	FOOT	1,317.000 X			=	
63000130	SPBGR TY A SPL	FOOT	1,267.000 X			=	
63100045	TRAF BAR TERM T2	EACH	2.000 X			=	
63100070	TRAF BAR TERM T5	EACH	2.000 X			=	
63100085	TRAF BAR TERM T6	EACH	2.000 X			=	
63100169	TR BAR TRM T1 SPL FLR	EACH	2.000 X			=	
63200600	SPBGR REM SINGLE RAIL	FOOT	2,372.000 X			=	
67100100	MOBILIZATION	L SUM	1.000 X			=	
70101700	TRAF CONT & PROT	L SUM	1.000 X			=	
70300100	SHORT-TERM PAVT MKING	FOOT	5,000.000 X			=	
70300210	TEMP PVT MK LTR & SYM	SQ FT	2,278.000 X			=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
70300220	TEMP PVT MK LINE 4	FOOT	69,896.000 X		=		
70300240	TEMP PVT MK LINE 6	FOOT	11,495.000 X		=		
70300260	TEMP PVT MK LINE 12	FOOT	1,096.000 X		=		
70300280	TEMP PVT MK LINE 24	FOOT	1,521.000 X		=		
72000100	SIGN PANEL T1	SQ FT	396.000 X		=		
72000200	SIGN PANEL T2	SQ FT	60.000 X		=		
72400100	REMOV SIN PAN ASSY TA	EACH	24.000 X		=		
72400500	RELOC SIN PAN ASSY TA	EACH	3.000 X		=		
72800100	TELES STL SIN SUPPORT	FOOT	220.000 X		=		
73100110	BASE TEL SIN SUPP, SP	EACH	34.000 X		=		
78001100	PT PVT MK LTRS & SYMB	SQ FT	1,082.000 X		=		
78001110	PAINT PVT MK LINE 4	FOOT	15,835.000 X		=		
78001130	PAINT PVT MK LINE 6	FOOT	7,077.000 X		=		
78001180	PAINT PVT MK LINE 24	FOOT	438.000 X		=		
78100100	RAISED REFL PAVT MKR	EACH	507.000 X		=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
78200410	GUARDRAIL MKR TYPE A	EACH	34.000 X				
78201000	TERMINAL MARKER - DA	EACH	2.000 X				
78300100	PAVT MARKING REMOVAL	SQ FT	400.000 X				
78300200	RAISED REF PVT MK REM	EACH	372.000 X				
80400200	ELECT UTIL SERV CONN	L SUM	1.000 X	2,000	00	2,000	00
80500300	SERV INSTALL TY C	EACH	1.000 X				
80700140	GROUND ROD 5/8 X 10	EACH	45.000 X				
81000600	CON T 2 GALVS	FOOT	3,127.000 X				
81000700	CON T 2 1/2 GALVS	FOOT	246.000 X				
81000800	CON T 3 GALVS	FOOT	27.000 X				
81001000	CON T 4 GALVS	FOOT	17.000 X				
81001100	CON T 5 GALVS	FOOT	20.000 X				
81018500	CON P 2 GALVS	FOOT	515.000 X				
81018600	CON P 2 1/2 GALVS	FOOT	218.000 X				
81018700	CON P 3 GALVS	FOOT	1,071.000 X				

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
81018900	CON P 4 GALVS	FOOT	1,094.000	X	=		
81306500	REM EX JUNCTION BOX	EACH	2.000	X	=		
81400100	HANDHOLE	EACH	17.000	X	=		
81400200	HD HANDHOLE	EACH	5.000	X	=		
81400300	DBL HANDHOLE	EACH	4.000	X	=		
81500200	TR & BKFIL F ELECT WK	FOOT	3,427.000	X	=		
81601020	UD 3#4 #6G XLP USE 1.25	FOOT	6,650.000	X	=		
81702130	EC C XLP USE 1C 6	FOOT	550.000	X	=		
81702170	EC C XLP USE 1C 2/0	FOOT	750.000	X	=		
81702410	EC C XLP USE 3-1C 4	FOOT	550.000	X	=		
82102150	LUM SV HOR MT 150W	EACH	2.000	X	=		
82102250	LUM SV HOR MT 250W	EACH	8.000	X	=		
82102400	LUM SV HOR MT 400W	EACH	34.000	X	=		
82500540	LT CONT CBRCS 100-480	EACH	1.000	X	=		
83009600	LT P A 45MH 15MA	EACH	42.000	X	=		

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
83600200	LIGHT POLE FDN 24D	FOOT	14.000 X			=	
83600215	LIGHT POLE FDN 24D OS	FOOT	132.000 X			=	
83800505	BKWY DEV COU AL SKIRT	EACH	40.000 X			=	
84200500	REM EX LT UNIT SALV	EACH	10.000 X			=	
84200700	LIGHTING FDN REMOV	EACH	13.000 X			=	
84400105	RELOC EX LT UNIT	EACH	3.000 X			=	
85000200	MAIN EX TR SIG INSTAL	EACH	2.000 X			=	
85700205	FAC T4 CAB SPL	EACH	2.000 X			=	
86400100	TRANSCEIVER - FIB OPT	EACH	2.000 X			=	
87301215	ELCBL C SIGNAL 14 2C	FOOT	1,296.000 X			=	
87301225	ELCBL C SIGNAL 14 3C	FOOT	3,252.000 X			=	
87301245	ELCBL C SIGNAL 14 5C	FOOT	7,085.000 X			=	
87301255	ELCBL C SIGNAL 14 7C	FOOT	2,058.000 X			=	
87301305	ELCBL C LEAD 14 1PR	FOOT	7,029.000 X			=	
87301805	ELCBL C SERV 6 2C	FOOT	356.000 X			=	

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ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE		TOTAL PRICE	
				DOLLARS	CENTS	DOLLARS	CTS
87502480	TS POST GALVS 14	EACH	1.000 X				
87502500	TS POST GALVS 16	EACH	1.000 X				
87502520	TS POST GALVS 18	EACH	2.000 X				
87700270	S MAA & P 46	EACH	1.000 X				
87700320	S MAA & P 55	EACH	1.000 X				
87702530	S MAA & P DMA 34 & 36	EACH	1.000 X				
87800100	CONC FDN TY A	FOOT	16.000 X				
87800200	CONC FDN TY D	FOOT	8.000 X				
87800415	CONC FDN TY E 36D	FOOT	120.000 X				
87900200	DRILL EX HANDHOLE	EACH	3.000 X				
88200210	TS BACKPLATE LOU ALUM	EACH	33.000 X				
88500100	INDUCTIVE LOOP DETECT	EACH	28.000 X				
88600100	DET LOOP T1	FOOT	129.000 X				
88700200	LIGHT DETECTOR	EACH	8.000 X				
88700300	LIGHT DETECTOR AMP	EACH	2.000 X				

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				DOLLARS	CENTS	DOLLARS	CTS
89000100	TEMP TR SIG INSTALL	EACH	3.000 X				
89502200	MOD EX CONTR	EACH	1.000 X				
89502350	REM & RE ELCBL FR CON	FOOT	355.000 X				
89502375	REMOV EX TS EQUIP	EACH	2.000 X				
89502380	REMOV EX HANDHOLE	EACH	24.000 X				
89502385	REMOV EX CONC FDN	EACH	17.000 X				
TOTAL						\$	

NOTE:

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

RETURN WITH BID

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

I. GENERAL

A. Article 50 of the 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 \$150,700.00. Sixty percent of the salary is \$90,420.00.

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.

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 provides:

Section 50-60(c).

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 each of its subcontractors. Unless otherwise directed in writing by the Department, 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 may be indicated as to be subcontracted.

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.

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 sign the following certification statement indicating that the information previously submitted by the bidder is, as of the date of signature, current and accurate. The Certification must be signed and dated by a person who is authorized to execute contracts for the bidding company. Before signing this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder signs 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)

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

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 \$90,420.00? YES ___ NO ___
3. Does anyone in your organization receive more than \$90,420.00 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 \$90,420.00? 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. It must be signed by an individual who is authorized to execute contracts for the bidding entity. *Note: Signing the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, signed 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 signature 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 \$90,420.00 (60% of the Governor's salary as of 7/1/01). **(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.

- Are you currently an officer or employee of either the Capitol Development Board or the Illinois Toll Highway Authority? Yes ___ No ___
- Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name the State agency for which you are employed and your annual salary. _____

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- 3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) 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 \$90,420.00, (60% of the Governor's salary as of 7/1/01) 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 \$90,420.00, (60% of the Governor's salary as of 7/1/01) 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 \$90,420.00, (60% of the salary of the Governor as of 7/1/01) 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 \$90,420.00, (60% of the Governor's salary as of 7/1/01) 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 ___

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(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: _____
Name of Authorized Representative (type or print)

Completed by: _____
Title of Authorized Representative (type or print)

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.

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative Date _____

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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 SIGNED

Name of Authorized Representative (type or print), Title of Authorized Representative (type or print), 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. 83785
COOK County
Section 00-00068-01-WR (Schaumburg)
Project M-8003(352)
Route FAU 2585 (Meacham 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. 83785
COOK County
Section 00-00068-01-WR (Schaumburg)
Project M-8003(352)
Route FAU 2585 (Meacham 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

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 SURETY
(Company Name)
By: (Signature & Title) By: (Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
COUNTY OF

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

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

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

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

My commission expires Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing 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 323
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. 83785
COOK County
Section 00-00068-01-WR (Schaumburg)
Project M-8003(352)
Route FAU 2585 (Meacham 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 11, 2005. 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. 83785
COOK County
Section 00-00068-01-WR (Schaumburg)
Project M-8003(352)
Route FAU 2585 (Meacham Road)
District 1 Construction Funds**

0.78 mile of roadway reconstruction and widening, lighting, curb and gutter, storm sewers and landscaping from Tower Road/McConnor Parkway to Algonquin Road (excluding bridge over I-90) and traffic signal modernization and replacement at the intersections of Tower Road/McConnor Parkway, Thoreau Lane, Drummer Drive and IL Route 62, all in Schaumburg.

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

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

By Order of the
Illinois Department of Transportation

Timothy W. Martin, Secretary

BD 351 (Rev. 01/2003)

**INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS**

Adopted March 1, 2005

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

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**MEACHAM ROAD
(F.A.U. ROUTE 2585)**

**FROM F.A.U. ROUTE 2582 (TOWER ROAD / McCONNER PARKWAY)
TO
F.A.P. ROUTE 339 (ILLINOIS ROUTE 62) (ALGONQUIN ROAD)**

**SECTION NO. 00-00068-01-WR
PROJECT NO. M-8003(352)
CONTRACT NO. 83785**

**VILLAGE OF SCHAUMBURG
COOK COUNTY**

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BDE SPECIAL PROVISIONS
For The March 11, 2005 Letting

The following special provisions indicated by an "x" are applicable to this contract and will be included by the Project Development and Implementation Section of the BD&E. 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	
* 80141			Additional Award Criteria	June 1, 2004	
80108			Asbestos Bearing Pad Removal	Nov. 1, 2003	
72541			Asbestos Waterproofing Membrane and Asbestos Bituminous Concrete Surface Removal	June 1, 1989	June 30, 1994
80128			Authority of Railroad Engineer	July 1, 2004	
80065			Bituminous Base Course/Widening Superpave	April 1, 2002	April 1, 2004
80050	145	X	Bituminous Concrete Surface Course	April 1, 2001	April 1, 2003
* 80142			Bituminous Equipment, Spreading and Finishing Machine	Jan 1, 2005	
80066			Bridge Deck Construction	April 1, 2002	April 1, 2004
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	Aug. 1, 2001
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80118			Butt Joints	April 1, 2004	
80031			Calcium Chloride Accelerator for Portland Cement Concrete Patching	Jan. 1, 2001	
80077			Chair Supports	Nov. 1, 2002	Nov. 2, 2002
80051	146	X	Coarse Aggregate for Trench Backfill, Backfill and Bedding	April 1, 2001	Nov. 1, 2003
80094	153	X	Concrete Admixtures	Jan. 1, 2003	July 1, 2004
80112	158	X	Concrete Barrier	Jan. 1, 2004	April 2, 2004
80102	161	X	Corrugated Metal Pipe Culverts	Aug. 1, 2003	July 1, 2004
80113	162	X	Curb Ramps for Sidewalk	Jan. 1, 2004	
80114	165	X	Curing and Protection of Concrete Construction	Jan. 1, 2004	
80029	173	X	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	June 1, 2004
31578			Epoxy Coating on Reinforcement	April 1, 1997	Jan. 1, 2003
80041			Epoxy Pavement Marking	Jan. 1, 2001	Aug. 1, 2003
80055	181	X	Erosion and Sediment Control Deficiency Deduction	Aug. 1, 2001	Nov. 1, 2001
80103	182	X	Expansion Joints	Aug. 1, 2003	
80101	183	X	Flagger Vests	April 1, 2003	
80079	184	X	Freeze-Thaw Rating	Nov. 1, 2002	
80072	185	X	Furnished Excavation	Aug. 1, 2002	Nov. 1, 2004
80054	186	X	Hand Vibrator	Nov. 1, 2003	
80109			Impact Attenuators	Nov. 1, 2003	
80110			Impact Attenuators, Temporary	Nov. 1, 2003	April 1, 2004
80104	187	X	Inlet Filters	Aug. 1, 2003	
80080			Insertion Lining of Pipe Culverts	Nov. 1, 2002	Aug. 1, 2003
80067	189	X	Light Emitting Diode (LED) Signal Head	April 1, 2002	Aug. 1, 2003
80081			Lime Gradation Requirements	Nov. 1, 2002	
80133			Lime Stabilized Soil Mixture	Nov. 1, 2004	
80045			Material Transfer Device	June 15, 1999	March 1, 2001
* 80137			Minimum Lane Width with Lane Closure	Jan. 1, 2005	
* 80138			Mulching Seeded Areas	Jan. 1, 2005	
80082			Multilane Pavement Patching	Nov. 1, 2002	
80129			Notched Wedge Longitudinal Joint	July 1, 2004	
80069			Organic Zinc-Rich Paint System	Nov. 1, 2001	Aug. 1, 2003
80116	191	X	Partial Payments	Sept. 1, 2003	
80013			Pavement and Shoulder Resurfacing	Feb. 1, 2000	July 1, 2004
53600	192	X	Pavement Thickness Determination for Payment	April 1, 1999	Jan. 1, 2004
80022	197	X	Payment to Subcontractors	June 1, 2000	Sept. 1, 2003
80130	198	X	Personal Protective Equipment	July 1, 2004	
80134			Plastic Blockouts for Guardrail	Nov. 1, 2004	
80073			Polymer Modified Emulsified Asphalt	Nov. 1, 2002	
80119			Polyurea Pavement Marking	April 1, 2004	
80124	199	X	Portable Changeable Message Signs	Nov. 1, 1993	April 2, 2004
* 80139			Portland Cement	Jan. 1, 2005	
80083	200	X	Portland Cement Concrete	Nov. 1, 2002	

<u>File Name</u>	<u>Pg.#</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80036			Portland Cement Concrete Patching	Jan. 1, 2001	Jan. 1, 2004
419	201	X	Precast Concrete Products	July 1, 1999	Nov. 1, 2004
80120			Precast, Prestressed Concrete Members	April 1, 2004	
80084			Preformed Recycled Rubber Joint Filler	Nov. 1, 2002	
80015	202	X	Public Convenience and Safety	Jan. 1, 2000	
80121			PVC Pipeliner	April 1, 2004	
80122			Railroad, Full-Actuated Controller	April 1, 2004	
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	May 1, 1988
80105			Raised Reflective Pavement Markers (Bridge)	Aug. 1, 2003	
80011			RAP for Use in Bituminous Concrete Mixtures	Jan. 1, 2000	April 1, 2002
* 80032			Remove and Re-Erect Steel Plate Beam Guardrail and Traffic Barrier Terminals	Jan. 1, 2001	Jan. 1, 2005
80085			Sealing Abandoned Water Wells		
80131	203	X	Seeding and Sodding	Nov. 1, 2002	
80132	206	X	Self-Consolidating Concrete for Precast Products	July 1, 2004	Nov. 1, 2004
80096			Shoulder Rumble Strips	July 1, 2004	
* 80140	208	X	Shoulder Stabilization at Guardrail	Jan. 1, 2003	
80135			Soil Modification	Jan. 1, 2005	
80070			Stabilized Subbase and Bituminous Shoulders Superpave	Nov. 1, 2004	
* 80127			Steel Cost Adjustment	April 1, 2002	July 1, 2004
80086	209	X	Subgrade Preparation	April 2, 2004	July 1, 2004
80136			Superpave Bituminous Concrete Mixture IL-4.75	Nov. 1, 2002	
80010	210	X	Superpave Bituminous Concrete Mixtures	Nov. 1, 2004	
80039			Superpave Bituminous Concrete Mixtures (Low ESAL)	Jan. 1, 2000	April 1, 2004
80075			Surface Testing of Pavements	Jan. 1, 2001	April 1, 2004
80092			Temporary Concrete Barrier	April 1, 2002	July 1, 2004
80087	217	X	Temporary Erosion Control	Oct. 1, 2002	Nov. 1, 2003
80008			Temporary Module Glare Screen System	Nov. 1, 2002	
80106			Temporary Portable Bridge Traffic Signals	Jan. 1, 2000	
80098	219	X	Traffic Barrier Terminals	Aug. 1, 2003	
* 57291	220	X	Traffic Control Deficiency Deduction	Jan. 1, 2003	
20338	221	X	Training Special Provisions	April 1, 1992	Jan. 1, 2005
80107			Transient Voltage Surge Suppression	Oct. 15, 1975	
80123			Truck Bed Release Agent	Aug. 1, 2003	
80091			Underdrain Operations	April 1, 2004	
80048	224	X	Weight Control Deficiency Deduction	Nov. 1, 2002	
* 80090			Work Zone Public Information Signs	April 1, 2001	Aug. 1, 2002
80125	226	X	Work Zone Speed Limit Signs	Sept. 1, 2002	Jan. 1, 2005
80126	227	X	Work Zone Traffic Control	April 2, 2004	April 15, 2004
80097	229	X	Work Zone Traffic Control Devices	April 2, 2004	
80071			Working Days	Jan. 1, 2003	Nov. 1, 2004
				Jan. 1, 2002	

The following special provisions have been **deleted** from use:

80111 Additional Bidder Responsibility This special provision has been replaced by the BDE Special Provision, "Additional Award Criteria".

43761 Driving Guardrail Posts This special provision has been made obsolete by revising Standard 630201 and issuing the BDE Special Provision, "Shoulder Stabilization at Guardrail".

The following special provisions are in the 2005 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>
80052	Adjusting Frames and Grates	Sections 602, 603, and 1043	Aug. 1, 2001	Nov. 1, 2001
80093	Articulated Block Revetment Mat	Sections 285 and 1005	Jan. 1, 2003	
80078	Controlled Aggregate Mixing System	Sections 311, 351, and 481	Nov. 1, 2002	
80100	Epoxy Coatings for Steel Reinforcement	Section 1006	April 1, 2003	
80095	Precast Block Revetment Mat	Sections 285 and 1005	Jan. 1, 2003	
80074	Shoulder Inlets with Curb	Section 610	Aug. 1, 2002	
80117	Stone for Erosion Protection, Sediment Control, and Rockfill	Sections 281 and 1005	Jan. 1, 2004	
80088	Traffic Structures	Sections 1069 and 1077	Nov. 1, 2002	

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

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provision supplement the **"Standard Specification for Road and Bridge Construction"**, adopted January 1, 2002 (hereinafter referred to as the "Standard Specifications"); the latest edition of the **"Standard Specifications for Water and Sewer Main Construction in Illinois"** (hereinafter referred to as the "Water and Sewer Main Specification"); the latest edition of the **"Manual on Uniform Traffic Control Devices for Streets and Highways"** and the **"Manual of Test Procedures for Materials"** in effect on the date of invitation for bids; and the "Supplemental Specifications and Recurring Special Provisions" indicated on the Check Sheet included herein: all of which apply to and govern the construction of F.A.U. Route 2858 (Meacham Road), Village of Schaumburg Section 00-00068-01-WR, Project No.: M-8003(352), Contract No. 83785, and in case of conflict with any part or parts of said Specifications, the said Special Provision shall take precedence and shall govern.

LOCATION OF PROJECT

This project is located on Meacham Road, in the Village of Schaumburg, Illinois, commencing north of Tower Road/Mc Conner Parkway, north to a point south of Algonquin Road, to include the bridge over the Northwest Tollway, and has a total length of 4,158 feet or 0.784 miles.

DESCRIPTION OF PROJECT

This project primarily consists of roadway reconstruction with an additional portion of the existing pavement will be overlaid with bituminous surface. The reconstructed roadway will be replaced with PCC pavement, while portions of the adjoining streets and entrances will be constructed with bituminous materials. Rehabilitation of the bridge over the Northwest Tollway is not part of this contract, although the removal of the existing median on the bridge is included. Other work items associated with this project include earth excavation and furnished excavation, pavement removal, construction of storm sewers, combination curb and gutter, driveway reconstruction, landscaped medians and restoration, traffic signal replacement and modernization, updated roadway lighting, pavement markings and all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

COMPLETION DATES

SUBSTANTIAL COMPLETION

The Contractor shall schedule his operations so as to be substantially complete with the project on or before November 30, 2005. Definition of substantially complete is the

completion of the construction of all permanent roadway pavement, all concrete curb and gutter, all sewer and utility construction, all embankment, all sidewalks and bike paths, modular block retaining walls, signage and all paved median surfaces.

Top Soil, Furnish and Place and Sodding adjacent to the roadway and in all disturbed areas should be completed as part of Substantial Completion. With the approval of the Engineer, these work tasks may be delayed until Spring 2006, provided that sufficient erosion control measures are in place and maintained by the Contractor until the sodding can be installed. Sufficient erosion control measures shall include, as a minimum, temporary seeding, which will occur no later than October 1, 2005 and erosion control blanket. The Engineer may require the Contractor to provide additional measures.

Should permanent pavement markings not be completed as of November 30, 2005, the Contractor will provide temporary pavements markings and maintain these markings until permanent pavement markings can be installed.

The items left to be completed following the substantial completion date may be permanent pavement markings, permanent traffic signals, permanent street lighting. Median soil mix furnish and place, all median planting materials and all trees will not be installed until the commencement of growing season in 2006, at the direction of the Engineer.

Additionally, at the far north end of the project, with the approval of the Engineer, the bituminous overlay may be completed in Spring, 2006. Should the Contractor postpone the completion of the bituminous overlay until the Spring of 2006, work involving the pay item "PCC Surface Removal (Cold milling), Variable Depth" shall also be delayed until the same time.

FAILURE TO COMPLETE WORK ON TIME (SUBSTANTIAL COMPLETION)

Should the Contractor fail to complete the work identified as **substantial** completion on or before the specified date of completion or within such extended time allowed by the Village, the contractor shall be liable to the Village in the amount of \$1650, not as a penalty but as liquidated and ascertained damages for each calendar day beyond the date of interim completion or extended time as may be allowed. Such damages may be deducted by the Village from any monies due the contractor.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Village's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. The Village shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of parties.

A calendar day is each day of a seven day week, starting at 12:00 midnight and ending the following midnight, twenty four hours later. Any portion of a day will be counted as a full day.

PROJECT COMPLETION

The Contractor will complete all work under this contract, to include punch list items, no later than June 15, 2006.

FAILURE TO COMPLETE THE WORK ON TIME

Failure to complete the work on or before the completion date stipulated herein, or within such extended time as may have been allowed, will result in liquidated damages as specified in Article 108.09 of the "Standard Specifications" and as modified herein.

Should the Contractor fail to complete the work on or before the specified date of completion of within such extended time allowed by the Village, the Contractor shall be liable to the Village in the amount of \$1650, not as a penalty but as liquidated and ascertained damages for each calendar day beyond the date of interim completion or extended time as may be allowed. Such damages may be deducted by the Village from any monies due the contractor.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Village's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. The Village shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of parties.

A calendar day is each day of a seven day week, starting at 12:00 midnight and ending the following midnight, twenty four hours later. Any portion of a day will be counted as a full day.

PROGRESS SCHEDULE

Time is of the essence of the contract. It may be necessary for the Contractor to work longer hours, use additional crews and work during weekends in order to complete work within the required time limit. The Contractor shall submit a Critical Path Method (CPM) Progress Schedule, or other such project schedule meeting the approval of the Engineer, the schedule itself being approved by the Engineer before work can be started.

Should the Contractor fall three (3) days behind in approved progress schedule, the contractor shall work seven (7) days a week at extended hours in order to meet the specified completion date, **with the approval of the Engineer.**

The Contractor will not be allowed any extra compensation for working longer hours or using extra shifts, working on weekends or during holidays, during winter months, etc., to meet the specified completion date.

CONTROL OF WORK & PROSECUTION AND PROGRESS

It is the intent of the Village that this project be constructed in an orderly and timely manner. Toward this end, the Contractor shall take special note of the provisions of Article 105.06, Article 108.01 paragraph 2, and Article 108.02 of the Standard Specifications which shall be adhered to. The Contractor's Superintendent shall be assigned to this project on a full-time basis, will be on-site during all construction activities and assigned to the project or the complete during of the project.

The Contractor shall coordinate all work between their forces and subcontractors to enable completion within the allotted working days.

COOPERATION BETWEEN CONTRACTORS

During the prosecution of this contract, it is fully expected that there will be a minimum of four General Contractors executing separate contracts adjacent to and in the vicinity of Meacham Road. In addition to this contract, the Village's Convention Center will be under construction. The Village anticipates letting a contract for the roadway reconstruction of Thoreau Drive, east of the limits of the Meacham Road project. The contract for the rehabilitation of the Meacham Road bridge over the Northwest Tollway is expected to be let in June 2005, with construction commencing in late July or early August 2005.

The Contractor is fully expected to cooperate with all adjacent contractors, especially as related to the Maintenance of Traffic. Advance notice of all adjustments to the traffic patterns are to be provided to adjacent Contractors via the Engineer. Attendance by the Contractor's Superintendent and others to all meetings with the Engineer is required, to be held on a weekly basis at a minimum.

Upon commencement of the bridge rehabilitation contract, the Engineer will coordinate the appropriate amount of traffic control responsibilities and expectations between the two contractors. If and when this redistribution of traffic control responsibilities occurs, the roadway contractor will provide to the Engineer an appropriate reduction in fee for the lump sum item of "TRAFFIC CONTROL AND PROTECTION." However, until the bridge contract is let and construction commences, the roadway contractor shall retain all responsibility for traffic control within the project area.

MAINTENANCE OF ROADWAYS

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement, to include private and commercial entrances and roads. The 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."

PUBLIC SAFETY AND CONVENIENCE

The Contractor shall maintain entrances along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences caused by the Contractor by complying with these requirements shall be considered as incidental to the contract, and no additional compensation will be allowed.

Contractors shall plan their work so that there will be no open holes in the pavement and that all barricades will be removed from the roadway during non-working hours, except where required for public safety.

SUBMISSIONS OF REQUIRED SUBMITTAL DATA

The Contractor is obligated to provide to the Engineer **NO LATER THAN AT THE PRE-CONSTRUCTION MEETING** all required submittal information for the traffic signal and street lighting work, to include all catalog cuts. This requirement supersedes that stated in the Traffic Signal Specifications and the Roadway Lighting Specifications found herein. The Engineer reserves the right to withhold the Authorization to Proceed until all such submittals are made, with no authorized extension of specified completion deadlines.

EXISTING UTILITIES

The Contractor shall be aware of the location of all utilities and structures in the project area. The Contractor shall conduct construction operations to avoid damage to the above-mentioned utilities or structures.

Should any damage to utilities occur due to the Contractor's negligence, the Contractor shall be responsible for making all repairs in a manner acceptable to the Engineer. All costs associated with making the repairs shall be the responsibility of the Contractor.

The Contractor shall be aware of the locations of vehicle detector loops cut into the pavement. Any vehicle detector loop damaged by the Contractor's negligence shall be repaired by the Contractor in a manner acceptable to the Engineer. All costs associated with making the repairs shall be the responsibility of the Contractor.

The Contractor shall notify all utility owners of the proposed construction schedule, and shall coordinate construction operations with the utility owners so that relocation of utility lines and structures may proceed in an orderly manner. Notification shall be in writing with copies transmitted to the Engineer.

FAU Route 2585 (Meacham Road)
Village of Schaumburg Sec. 00-00068-01-WR
Project M-8003(352)
Contract No. 83785
Cook County

POINTS OF CONTACT

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MCI

Mr. Gerry Crain
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P.O. Box 1048
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773-914-5505 (Cell)

TRAFFIC CONTROL PLAN

Traffic control shall be in accordance with 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 Articles 107.09 and Sections 701 and 702 of the "Standards Specifications" and the following Highway Standards, details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provision contained herein, related to traffic control. The Contractor shall contact the Village of Schaumburg at least 72 hours in advance of beginning of work.

STANDARDS

701001	Off Road Operations, 2L, 2W, 15' Min. away for Speeds \geq 45 MPH
701006	Off Road Operations, 2L, 2W, 15' to Pavement Edge for Speeds \geq 45 MPH
701101	Off Road Operations, Multilane, Less than 15' away for speeds \geq 45 MPH
701201	Lane Closure, 2L, 2W, Day Only, On-Road to 24" off Road for Speeds \geq 45MPH
701301	Lane Closure, 2L, 2W, Short Term Operations
701326	Lane Closure, 2L, 2W Pavement Widening for Speeds \geq 45 MPH
701421	Lane Closure, Multilane, Day Operations Only, for Speeds \geq 45 MPH to 55 MPH
701422	Lane Closure Multilane for Speeds \geq 45 MPH to 55 MPH
701606	Urban Lane Closure Multilane 2W with Mountable Median
701701	Urban Lane Closure Multilane Intersection
701801	Lane Closure, Multilane, 1W or 2W Crosswalk or Sidewalk Closure
702001	Traffic Control Devices

DETAILS

Per the plan

RECURRING SPECIAL PROVISIONS

"Give em a Brake" Sign
Portable Changeable Message Signs
LRS3: Construction Zone Traffic Control
LRS4: Flaggers in Work Zones

SPECIAL PROVISIONS

"Traffic Control and Protection"
"Maintenance of Roadways"

TRAFFIC CONTROL AND PROTECTION

Specific traffic control plan details and Special Provisions have been prepared for this contract. The "Suggested Construction Procedure & Maintenance of Traffic" plans are suggested staging plans for the Contractor. The Contractor retains responsibility for creating a safe and efficient work zone throughout the construction period. The Contractor shall coordinate all traffic control plans with the Engineer prior to implementation or alteration of the stages of construction.

Basis of Payment. All traffic control and protection (except traffic control pavement markings) indicated on the maintenance of traffic plans and specified in the Special Provisions, and/or required by the Engineer, will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, which price shall be payment in full for all labor, materials, equipment, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required, as indicated on the plans and approved by the Engineer.

PROTECTION OF EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION

Unless otherwise noted on the plans, the existing drainage facilities shall remain in use during the period of construction. Locations of existing drainage structures and sewers as shown on the plans are approximate. Prior to commencing work the Contractor, at his own expense, shall determine the exact locations of existing structures which are within the proposed construction limit.

All existing drainage structures are to be kept free of any debris resulting from the Contractor's 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 in accordance with Section 602 and Article 104.02 of the "Standard Specifications."

The Contractor shall take the necessary precautions when working near or above existing sewers in order to protect these pipes during construction from any damage resulting from his operations. All work and material necessary to replace existing sewers damaged because of noncompliance with this provision shall be as directed by the Engineer in accordance with Section 603 of the "Standards Specifications" and at the Contractor's own expense, and no additional compensation will be allowed.

During construction, if the Contractor encounters or otherwise becomes aware of any sewers, underdrains or field drains within the right-of-way other than those shown on the plans, he shall so inform the Engineer, who 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 the 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 in accordance with Sections 550 and 601, and Article 104.02 of the "Standard Specifications".

REMOVAL OF MISCELLANEOUS ITEMS

Regarding the removal and disposal of any existing fences, gates, signs (except traffic and street name signs) or other miscellaneous items which may interfere with construction operations, the Contractor shall, with the approval of the Engineer, remove and dispose of these items outside of the limits of the right-of-way at locations provided by him and, if payment for such removal is not included in the contract, the work shall be considered incidental to the contract.

However, if any fences, gates, signs (except traffic and street name signs) or other miscellaneous items are to be removed and replaced as directed by the Engineer, the Contractor will be paid in accordance with Article 109.04 of the "Standard Specifications."

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM

This project will result in a disturbance of one acre or more of total land area, and will require compliance with the National Pollution Discharge Elimination System (NPDES) Storm Water Permit.

The Village of Schaumburg is the permittee and the Contractor and all subcontractors will be required to certify that they understand and will comply with all requirements of the permit. The Contractor will be responsible for the permit fee.

A storm water pollution plan shall be cooperatively developed by the Village of Schaumburg and the Contractor using good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges. In addition, the plan shall describe and ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with this project and assure compliance with the terms and conditions of the Storm Water Permit.

The plan will be signed by the Engineer and retained on-site.

CONCRETE BARRIER WALL (SPECIAL)

Description. This item is for the poured-in-place barrier wall on either end of the Meacham Road Bridge over the Northwest Tollway. It is generally to conform to the IDOT Standard Detail 637001-02, but is shown in greater detail in the construction plans. This item is intended to be poured between two curbs. The curb and gutter adjacent to this item is to be paid for separately.

Construction. The Contractor is to construct the adjacent curb and gutter prior to constructing this item. The curb and gutter are to be dowelled into this item, with the cost of the dowels associated with the curb and gutter. The Concrete Barrier Wall is to be formed and poured in place, following Section 503 of the "Standard Specifications." Sawcut control joints per the detail are to be incidental to this item.

The Concrete Barrier Terminal Sections are to be paid for with this item, measured by the same methods. No additional compensation is to be provided for the Concrete Barrier Terminal Sections.

Method of Measurement. This item is to be measured in place in cubic yards.

Basis of Payment. This item is to be paid for at the contract unit price per cubic yard for CONCRETE BARRIER WALL (SPECIAL), which price shall include all labor, material, formwork and equipment to complete the necessary work.

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.

DISPOSAL OF SURPLUS MATERIAL

The Contractor is prohibited from burning any material within or adjacent to the project limits.

All excess or waste material shall be either hauled away from the project site by the Contractor and deposited at locations provided by him, or disposed of within the right-of-way in a manner other than burning, subject to the approval of the Engineer

No extra compensation will be allowed to the Contractor for any expense incurred by complying with the requirements of this Special Provision.

ABANDON STORM SEWER

Description. This work shall consist of abandoning existing concrete storm sewer that is no longer going to be used but is to remain in place.

Construction. The Contractor is to detach the specified sewer from the structures as indicated on the plans. Between structures to be removed, all blind connections to the sewer to be abandoned are to be excavated and exposed. The lateral is to be removed and paid for as "Storm Sewer Removal" of the appropriate size. All openings to the sewer to be abandoned, to include either end and all locations of former lateral connections, are to be permanently sealed with grout or other means approved by the Engineer. The Contractor is to ensure that the method of sealing is permanent and will not settle within the abandoned pipe itself. Other than that filled by the grout or end sealing method, the pipe is not required to be filled. Excavations related to this work is incidental to this item, as is backfill to the level of the proposed subgrade. No additional compensation is to be authorized based on the number of existing laterals or blind connections to be sealed on the pipe to be abandoned.

Method of Measurement. This work is to be measured per foot from the ends of the abandoned piped left in the ground.

Basis of Payment. This work is to be paid for at the contract unit price per foot for ABANDON STORM SEWER, which price shall include all labor, equipment and material necessary to complete the work specified.

ABANDON EXISTING WATER MAIN

This work shall conform with the applicable section of the "Sewer and Water Main Specification", except as described herein.

Description. The Village wishes to abandon and leave in place an existing 12" cast iron water main, the length of which is bounded by existing water valves. Before the Contractor commences with this work, he shall notify the Engineer of the work plan for this task. Prior to commencement of the work, the Contractor shall have a representative of the Village present to confirm that the proper valves are being turned off and to observe all work. The Village has researched all available records to confirm that there are no operation water taps on the water main between the existing valves specified on the plans.

The Contractor shall perform all work related to this pay item at all locations specified in the plans consecutively and without interruption. Once identified and confirmed, all valves to be shut off are to be shut and the existing valve vaults are to be drained of all standing water, should there be any present.

Once the valves are shut off, the water main between the two valves is to be cut within ten feet of the valve vault and ten feet of water main is to be removed. The Contractor shall drain the abandon section of pipe of all water and discharge the water to an approved location.

Both ends of the cut pipe at each location (the end closest to the existing valve and the end remaining on the abandon main) are to be capped with an appropriate cap and secured in a permanent manner.

The riser stem on the valve, if present, is to be removed above the body of the valve, to a level below the bottom of the cone section of the vault. The cone section, the rim and lid and all other vault structure items above the cone section are to be removed. The frame and lid are to be returned to the Village of Schaumburg (location to be specified by the Engineer) by the Contractor. The remaining portion of the vault is to be filled with CA-6 or similar material approved by the Engineer, ensuring all areas are filled. The material inside the vault IS NOT to be compacted by mechanical means.

Once filled, the vault is to be capped with a flat top slab or metal plate, secured to the barrel section of the vault to prevent shifting. Use of wood or other material likely to rot or deteriorate is not authorized. The excavated area is then to be backfilled with an appropriate material.

Method of Measurement. The work described above is to be measured for payment as each location specified in the plans. The intent is that all work and materials necessary to complete the task are inclusive in this pay item.

Basis of Payment. This work shall be paid for at the contract unit price per each location for ABANDON EXISTING WATER MAIN which work shall include all labor, material and equipment necessary to complete the task as specified.

BITUMINOUS BASE COURSE, SUPERPAVE, 8"

This item shall conform to Section 355 of the "Standard Specifications" and applicable specifications related to Superpave materials. This item is to be used for temporary pavement at locations shown in the plans or as directed by the Engineer. No surface course nor aggregate base is required, unless otherwise specified by the Engineer, in which case, the additional specified items are to be paid for separately.

Method of Measurement. This item will be measured in place per square yard.

Basis of Payment. This item shall be paid for at the contract unit price per square yard for BITUMINOUS BASE COURSE, SUPERPAVE, 8", which price shall include all labor, material and equipment to perform the specified work.

BITUMINOUS MATERIALS (PRIME COAT)

Prime coat shall meet the specifications 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 will be required to present a weight ticket of the truckload 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 the 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).

BITUMINOUS SHOULDERS, 6"

This work shall conform to Section 482 of the "Standard Specifications" except as noted herein. This item is to be used in association with Steel Plate Beam Guardrail. The bituminous shoulder is to be constructed PRIOR to the installation of the guardrail.

CLASS D PATCH, SUPERPAVE, TYPE IV, 10"

Description. The Village intends to rehabilitate the existing PCC pavement north of Station 312+00, which is the limits of pavement reconstruction. It is anticipated that this area will be reconstructed under a separate contract in a short period of time and the use of bituminous patching on a PCC pavement is intended to improve the roadway condition for the duration of this period.

Construction. This item is to conform to the Section 442 of the "Standard Specifications" except as noted herein. No additional compensation is authorized for removal of the concrete pavement associated with these bituminous patches.

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (DOWELLED)
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (DOWELLED)
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.12 (DOWELLED)
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.24 (DOWELLED)

This work shall conform to Section 606 of the "Standard Specifications" and the applicable Standard Detail, to be constructed at locations specified on the plans, or as directed by the Engineer. The item shall be dowelled at contraction joints at locations to match the adjacent pavement joints, and at curb inlet locations, per the standard detail. The item is to be tied to the adjacent concrete pavement per the standard detail. The dowel bars and the tie bars, and all associated work with this items and other joints necessary in the curb and gutter are incidental to this item.

Basis of Payment. This item will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER (DOWELLED) of the size and type specified, which price shall include all labor, materials and equipment to perform the work.

CONCRETE FOUNDATION, TYPE E, 36" DIAMETER

This work shall be in conformance with Section 878 of the "Standard Specifications" and constructed in accordance with the plans and details that are part of this contract.

CONCRETE MEDIAN, TYPE SB (SPECIAL)

This work shall conform to Article 606.08 of the "Standard Specifications" except that the curb section varies throughout the median section, as defined in the plans..

Basis of Payment. This work will be paid for at the contract unit price per square foot for CONCRETE MEDIAN, TYPE SB (SPECIAL), which price will include all labor, delivery and materials necessary to complete the work.

CORRUGATED MEDIAN REMOVAL

This work shall conform generally to Section 440 of the "Standard Specifications." This item shall include the removal of the median, bounded by existing joints surrounding the median, or by limits identified by the Engineer. This work will include the removal of any base course below the concrete median. Disposal of the median material shall be the same as the disposal of the material associated with the existing concrete pavement, with said disposal being incidental to this item.

Method of Measurement. Corrugated Median Removal shall be measured for payment in place and the area computed in square feet.

Basis of Payment. This item shall be paid for at the contract unit price per square foot for CORRUGATED MEDIAN REMOVAL, which price shall include all labor, material, disposal and equipment necessary to complete the specified work.

CURB RAMPS FOR SIDEWALKS

Curb ramps for sidewalks shall be constructed in accordance with the Highway Standard 424001-01. 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 CONCRETE CURB AND GUTTER of the type specified.

DRAINAGE STRUCTURES, WITH RESTRICTOR PLATE AND TWO TYPE 1 FRAMES, CLOSED LIDS

Description. This item shall conform to Section 602 of the "Standard Specifications" except as modified herein. This item consists of fabricating the structure specified and installing it in place. A restricted depth 8-foot diameter manhole is to be used for this item, modified to accept a fabricated steel plate.

The restrictor plate is to be made of steel, ½" thick, cut and drilled as shown in the detail in the plans. The plate, when installed, is to be embedded ½" into the walls of the manhole. The plate is to be fabricated such that when installed, the invert elevations of the weir and of the orifice are at the grade elevations specified in the plans.

The manhole is to be modified with a slot to accept the restrictor plate as shown in the plans. When installed, the plate is to be grouted into the manhole.

The manhole is to be cored or pre-cast to correspond to the details, with the restrictor plate between the upstream and downstream pipe openings.

The flat top for this structure is to have two openings to accept type 1 frames, positioned so that when installed, the two openings are on either side of the restrictor plate.

Frame collars are to be used at each opening to provide a minimum of 4" between the bottom of the frame and the top of the flat slab, in order to provide sufficient room for top soil and sod.

Basis of Payment. This item shall be paid for at the contract unit price per each for DRAINAGE STRUCTURES, WITH RESTRICTOR PLATE AND TWO TYPE 1 FRAMES, CLOSED LIDS, which price shall include all labor, material, fabrication, delivery and equipment to assemble and install this item as shown in the plans.

DRAINAGE STRUCTURES TO BE CLEANED

Description. This item consists of the cleaning of each drainage structure within the limits of the project, at the conclusion of the project, after the erosion control measures have been removed. This work can be completed by mechanical suction methods or by hand. Flushing of the material downstream with water is not authorized. Material from the structures is to be disposed of by the Contractor off site at an approved location.

Acceptance of this work shall be made by the Engineer following a visual inspection. Should material be deposited in any structure by the Contractor following the completion of this work, the affected structures shall be re-cleaned by the Contractor at no additional expense to the Village. Any damage to structures or surrounding area caused by the Contractor in the prosecution of this work shall be repaired or replaced by the Contractor, cost of which is the responsibility of the Contractor.

Method of Measurement. This item shall be measured in units of each per drainage structure within the limits of construction.

Basis of Payment. This item shall be paid for at the contract unit price of each for DRAINAGE STRUCTURES TO BE CLEANED, which price shall include all labor, material, equipment and disposal of material necessary to complete this work item.

DRILL AND GROUT DOWEL BARS AND TIE BARS

Work under this item shall be performed in accordance to sections 442, 420, and 1000 of the standard specifications, except as herein modified.

This work shall consist of furnishing and installing 18" long, 1-1/2" epoxy coated dowel bars or 30" long, No. 6 epoxy coated 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 24" centers or as indicated on the plans. 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 COMBINATION CONCRETE CURB AND GUTTER, PORTLAND CEMENT CONCRETE PAVEMENT, and PORTLAND CEMENT CONCRETE BASE COURSE of the size and thickness indicated on the plans.

ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED)

This item shall be in accordance with Article 670.02 of the "Standard Specifications" except for the following. Adequate all-weather parking spaces shall be provided to accommodate a minimum of 8 Vehicles. Electronic security system will not be required. The following shall be furnished and meet the approval of the Engineer.

- (a) 3 desks with minimum working surface 42" x 30" (1060 x 760 mm) each, and 3 non-folding chairs with upholstered seat and back.
- (b) 1 four-post drafting table with minimum top size of 37 1/2" x 48" (950 x 1220 mm) The top shall be basswood or equivalent and capable of being tilted through an angle of 50 degrees. An adjustable height drafting stool with upholstered seat and back shall also be provided.
- (c) 1 free standing legal size file cabinet with lock, and 4 drawers with Underwriters' Laboratories insulated file device, with a 350 degree one hour rating.
- (d) 4 folding chairs.
- (e) 1 equipment cabinet with lock of minimum inside dimension of 44" high x 24" wide x 30" deep (1120 x 600 x 760 mm). The walls shall be of steel with a 3/32" (2.4 mm) minimum thickness with concealed hinges and enclosed lock constructed in such a manner as to prevent entry by force. The cabinet assembly shall be permanently attached to the structural element of the field office in a manner to prevent theft of the entire cabinet.
- (f) 1 electric water cooler dispenser with hot/cold and refrigerator/freezer unit.
- (g) 1 electric desk type tape-printing calculator.
- (h) 1 telephone with touch tone; telephone answering machine for exclusive use by the Engineer with time and date feature; and caller ID service and hardware.
- (I) 1 electric pencil sharpener
- (j) 1 copy machine capable of reproducing by dry process, prints up to legal size (8 1/2" x 14") (216 x 356 mm) from non-transparent master sheets as black or blue lines on white paper, including maintenance reproduction paper, activating agent and power source.
- (k) One plain paper fax machine, complete with a dedicated phone line.

- (l) One first-aid cabinet fully equipped.
- (m) Two additional phone line (in addition to the phone and fax lines) for computer modem and Village's ICORS system.

Penalty - Failure by the Contractor to meet the specified occupancy date for any field office or field laboratory shall be grounds for assessment of a penalty of \$100 per day for each calendar day thereafter that such facility remains incomplete in any respect. Failure by the Contractor to equip, heat, cool, power, supply or clean the field office shall be grounds for assessment of a penalty of \$100 per day for each calendar day that the field office remains incomplete after receipt of written notification from the Engineer. Such penalty shall be deducted from monies due or to become due the Contractor under the Contract. This item will be paid for at the contract unit price per calendar month for ENGINEER'S FIELD OFFICE, TYPE A (MODIFIED).

MONODIRECTIONAL GUARDRAIL MARKERS

Description. This item is generally to conform to section 782 of the "Standard Specifications." They are to be mounted in pairs, one above the other, on the guardrails shown in the plans. The markers are to be mono-directional facing towards oncoming traffic. They are to be spaced at 30 feet on-center. The cost of adhesive and the attachment to the guardrail is incidental to the item.

Basis of Payment. This work will be paid for at the contract unit price per each for MONODIRECTIONAL GUARDRAIL MARKERS, which price will include all labor, material and equipment for completing the work.

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 tile line, and the width of the trench shall be sufficient to allow proper investigation to determine if the tile line needs to be replaced.

The exploration trench shall be backfilled with trench backfill meeting the requirements of the Standard Specifications, the cost of which shall be included in the item of Exploration Trench.

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 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.

FIRE HYDRANT TO BE RELOCATED

This work shall be done in accordance with Section 564 of the "Standard Specifications for Road and Bridge Construction" and Section 46 of the "Standard Specifications of Water and Sewer Main Construction in Illinois" except as modified herein and as shown on the details on the plans. This item includes the removal of an existing fire hydrant as shown on the plans. This item also includes installation of a cap at the tee, removal of the existing auxiliary valve box, pressure connection to the water main, installation of new hydrant lead piping; new fire hydrant and valve box, thrust blocking, backfill and any necessary fittings.

All new piping shall be cement lined, Class 52 Ductile Iron with fittings in accordance with AWWA C104-80, C110-82, and C151-81.

All valve boxes shall be the same size and type as those existing.

All work including the installation of a cap at the tee, new pressure connections, and operation of valves shall be coordinated with the Village.

Disinfecting shall be in accordance with AWWA C601 for Disinfection Procedures when Cutting into or Repairing Existing Mains.

Prior to any work on the water system, the dimensions of the existing main shall be verified to assure proper sizing of new fittings. All water main work shall be coordinated to limit shut-downs and to minimize the duration of a shut-down if necessary.

PRESSURE CONNECTION

This work consists of making a connection from the existing water main to new water main lead piping with a tapping sleeve without halting service to the existing main. The second dimension refers to the diameter of the new water main being connected to the existing water main. The connection shall be constructed in accordance with all applicable portions of Section 561 of the "Standard Specifications" and Section 46 of the "Standard Specifications of Water and Sewer Main Construction in Illinois" with the following materials:

1. The MJ tapping sleeve shall meet or exceed all material specifications as listed below and be suitable for use with standard mechanical joint x mechanical joint resilient wedge gate valves per ANSI/AWWA C509-94. The mechanical joint outlet shall be a one-piece casting having a plain end and a mechanical joint gland TIG and MIG welded a full 360 degrees.
2. The tapping sleeve shall have a Mechanical Joint Outlet Gasket, Branch Sealing Gasket, and complete Circle Gasket attached to the sleeve at the factory.

3. The Branch Sealing Gasket and Complete Circle Gasket shall be contained within stainless steel Retaining Rings.
4. The tapping sleeve shall incorporate Drop-in, Square-Neck, Track-Head bolts with a minimum of two (2) longer starter bolts.
5. A minimum quantity of 16 drop-in bolts and 6 mechanical joint outlet bolts shall be provided.
6. The Branch opening shall be larger in diameter than nominal to allow the use of a full size cutter.
7. All welding shall be passivated so as to return the welded stainless steel to its original corrosion resistant state.
8. There shall be no Paper or Plastic adhesive Labels attached to the tapping sleeve, any information appearing on the sleeve shall be stenciled.
9. The tapping sleeve shall be Factory Hydrostatically Tested on pipe to a minimum of 300 psi to verify proper fit and weld integrity with zero leakage allowed.
10. Sleeves shall be the PowerSeal Model 349OMJ stainless steel tap sleeve with mechanical joint outlet as manufactured by PowerSeal Corporation or an approved equal.

MATERIAL SPECIFICATIONS

1. The shell shall be 304 (18-8) stainless steel.
2. Mechanical joint outlet gland and plain end shall be per ANSI / AWWA- Clio I A21.10 as applicable and cast of 304 (18-8) stainless steel.
3. The Armor Plate shall be 304 (18-8) stainless steel.
4. The Lugs shall be 304 (18-8) stainless steel. The Lugs shall be welded (GMAW) to the shell.
5. The Nuts shall be Heavy-Hex, of 304 (18-8) stainless steel and lubricated to prevent galling or seizing.
6. The Bolts shall be 304 (18-8) Stainless Steel, or equal, 5/8" NC thread.
7. The Gaskets shall be of virgin Nitrile (Buna-N, NBR), or equal, compounded for water service.
8. The gate valve used as part of the Pressure Connection shall be a resilient wedge epoxy coated gate Valve either Mueller A2360, Watrous 2500. All buried hardware shall be non-Ferrous material.

Basis of Payment. This work will be paid for at the contract unit price per each for FIRE HYDRANT TO BE RELOCATED which price shall be payment in full for all labor, equipment, and materials necessary to complete the work specified herein.

FIRE HYDRANTS TO BE REMOVED

Description. This work involves the removal of the fire hydrant, modifying the auxiliary valve and capping the downstream end of the valve at locations noted on the plans. This work is to be accomplished without shutting off the water main to which the fire hydrant is attached. The fire hydrants to be removed are identified on the plans, or as directed by the Engineer.

Construction Requirements. This work item will conform to the applicable sections of the "Standard Sewer and Watermain Specification." The Contractor is to excavate below the existing fire hydrant to be removed to expose the auxiliary valve. The auxiliary valve to be shut off completely and the riser stem is to be removed to an elevation above the valve. The valve box around the valve and riser stem is to be modified to remain around the valve but no higher than the top of the valve or the remaining portion of the riser stem, whichever is higher. The connector pipe from the valve to the fire hydrant is to be detached from the valve and a cap is to be installed at the downstream end of the valve. An alternative is to leave a short section of connector pipe attached to the downstream end of the valve and this short section of pipe is then capped. The cap is to be permanently attached to prevent leakage.

The Contractor shall then remove the connector pipe and the fire hydrant and returned them to the Village of Schaumburg Public Works Department, or elsewhere as directed by the Engineer.

The Contractor is to then backfill the excavation with CA-6 or appropriate backfill, as approved by the Engineer, to the existing grade elevation.

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

FLARED END SECTION REMOVAL

This item shall conform to Article 551.02 of the Standard Specifications, except as it would pertain to a flared end section.

Method of Measurement. Flared end sections to be removed, as identified in the plans or as directed by the engineer, will be measured in units of each, which includes the existing flared end section up to the joint with the existing storm sewer. Length and diameter of the flared end section are not considered in the measurement of this item.

Basis of Payment. This work will be paid for at the contract unit price per each for FLARED END SECITON REMOVAL, which price shall be payment in full for all labor, equipment, and materials necessary to complete the work specified.

GROUND ROD 5/8" DIAMETER X 10 FEET

This item shall conform to the applicable sections of the Standard Specifications and to the Special Provision entitled "Ground Rod" located in the **Roadway Lighting Specifications and Special Provisions** section of this document.

FAU Route 2585 (Meacham Road)
Village of Schaumburg Sec. 00-00068-01-WR
Project M-8003(352)
Contract No. 83785
Cook County

INLET AND OUTLET PROTECTION

This work shall be in conformance with the Special Provision entitled "Inlet Filter" herein. References to "Inlet and Outlet Protection" in the plans are to be substituted for "Inlet Filter." The item in the plans as "Inlet and Outlet Protection" is to be paid for as "Inlet Filter."

INLET FILTER

Description: This work shall consist of the furnishing, installation, and removal of a drainage structure inlet filter assembly, consisting of a frame and filter bag, to collect sediment in surface stormwater runoff at locations shown on the plans or as directed by the Engineer.

The Contractor shall inspect the work site and review the plans to determine the number and dimensions of the various types of drainage structure frames (circular and rectangular) into which the inlet filters will be installed prior to ordering materials.

The drainage structure inlet filter assembly shall be installed under the grate on the lip of the drainage structure frame with the fabric bag hanging down into the structure.

The drainage structure inlet filter assembly shall remain in place until final removal of the assembly is directed by the Engineer. The drainage structure inlet filter shall remain the property of the Contractor.

Final removal of the assembly shall include the disposal of debris or silt that has accumulated in the filter bag at the time of final removal. Periodic cleaning of the filter is paid for separately.

Materials: The drainage structure inlet filter shall be the "Catch-All Inlet & Pipe Protector, as manufactured by marMac Construction Products, Inc., P.O. Box 447, McBee, South Carolina 29101, (847) 962-7622, or approved equal.

The drainage structure inlet filter assembly consists of a steel frame with a replaceable geotextile fabric bag attached with a steel band with locking cap that is suspended from the frame. A clean bag and a used steel frame in good condition, meeting the approval of the Engineer, may be substituted for new materials.

The drainage structure inlet filter assembly shall be rigid steel meeting the requirements of ASTM-A36. The frame shall include an overflow feature that is welded to the frame's ring. The overflow feature shall be designed to allow full flow of water into the structure if the filter bag is filled with sediment. The dimensions of the assembly frame shall allow the drainage structure grate to fit into the inlet filter assembly frame opening. The assembly frame shall rest on the inside lip of the drainage structure frame for the full variety of existing and proposed drainage structure frames that are present on this contract.

The drainage structure inlet filter assembly bag shall be constructed of a polypropylene geotextile fabric with a minimum weight of 4 ounces per square yard, a minimum flow rate of 145 gallon per minute per square foot, and designed for a minimum silt and debris capacity of 2 cubic feet. The filter bag shall be reinforced with an outer layer of polyester mesh fabric with a minimum weight of 4 ounces per square yard. The filter bag shall be suspended from the steel frame with a stainless steel band and locking cap. The inlet filter assembly frame shall not cause the drainage structure grate to extend higher than 1/8 inch above the drainage structure frame.

Basis of Payment: This work shall be paid for at the contract unit price per each for INLET FILTER, which price shall include all costs fair labor, materials, equipment, and incidentals necessary to perform the work.

MODULAR BLOCK RETAINING WALL

Description. This work shall consist of the installation of a low height retaining wall used to limit the grading impacts of an embankment slope, in areas where area is limited or where extending the proposed slope will impact other features. This item is not intended to withhold the structural embankment of a roadway or to be placed immediately adjacent to the roadway.

Construction Requirements. The Contractor will install the modular block retaining wall at locations specified on the plans or as directed by the Engineer. The Contractor shall require the manufacturer to design the wall with the selected products and to provide detailed instructions to the installation of the product. Should the manufacturer recommend inspection or supervision by representatives of the manufacturer, the Contractor shall schedule his work accordingly. The cost of this inspection or supervision is incidental to the material cost and shall not be eligible for consideration of additional compensation.

The Contractor will install the product using appropriate equipment. Should the manufacturer suggest use of specific equipment not readily available to the Contractor, the Contractor will obtain such equipment or determine an alternative acceptable to the manufacturer, at the expense of the Contractor. Purchase, rental or the transportation of such equipment is not eligible for additional compensation.

The Contractor will use only whole, undamaged blocks for this work, to include any block to be below grade upon completion. Should a portion of a block be required per the manufacturers design, the block shall be saw cut with an appropriate concrete saw.

Materials. The Contractor shall use products by Rockwood Retaining Walls, Inc. of Rochester, MN or Keystone Retaining Wall Systems, of Minneapolis, MN, or an approved equal.

All tie backs, aggregate backfills, underdrains and other items recommended by the manufacturer as part of their design is incident to the pay item.

Submittals. The Contractor will present full size samples of the proposed modular block to the Village for selection of color and texture.

Prior to installation of the wall, shop drawings will be provided to the Engineer for approval, specifying all materials to be used, with the samples of the block to be used. Upon delivery of the blocks to the job site and prior to the installation, the Engineer will inspect the product.

Method of Measurement. This item will be measured in place, computed in square foot of exposed wall. Portions of the wall below grade or buried shall be incidental to the cost of the exposed wall.

Basis of Payment. This item will be paid for at the contract unit price per square foot for MODULAR BLOCK RETAINING WALL, which price will include all labor, material, equipment, shop drawing preparation and incidents associated with the completion of this item.

PCC RAMPED MEDIAN TERMINAL

This work shall conform with Section 606 of the "Standard Specifications" as applicable. The PCC Ramped Median Terminal is to be constructed at the locations specified on the plans and per the standard details. The PCC Ramped Median Terminal shall be monolithically poured in a separate pour from the PCC Pavement, framed in such a manner to prevent cracking.

Method of Measurement. This item shall be measured for payment in place and the area computed in square feet for the entire area surrounding the work as defined by the concrete joints.

Basis of Payment. This item shall be paid for at the contract unit price per *each* for PCC RAMPED MEDIAN TERMINAL, which price shall include all labor, materials and equipment necessary to complete the specified work. Should protective coat be needed per Article 420.21 of the "Standard Specifications" will be paid for separately.

PCC SURFACE REMOVAL (COLD MILLING) VARIABLE DEPTH

Description. This work shall consist of partial depth removal of the existing PCC pavement structure, at locations shown on the plans or as directed by the Engineer.

Equipment. The machine used for milling shall be a self-propelled milling machine capable of milling to the specified depth without damaging the adjacent pavement or curb that is to remain in place. The milling machine should be able to mill a width no less than two feet and no more than six feet in a single pass. A wheel saw according to article 442.03(h) of the Standard Specifications may also be used for partial depth pavement removal. When required, the concrete saw shall be according to Article 442.03(g) of the Standard Specifications, except it shall be equipped with a blade of sufficient diameter to saw the pavement to the thickness required in the plans. Cleaning equipment shall be a mechanical sweeper according to article 1101.03 of the Standard Specifications or air equipment capable of applying compressed air, at a minimum of 100 psi, and shall have sufficient flow rate to remove all disturbed pavement debris. Air equipment shall meet the requirements of ASTM D 4285

CONSTRUCTION REQUIREMENTS

General. Disposal of waste materials shall be according to Article 202.03 of the Standard Specifications.

Partial depth removal of the pavement shall be accomplished by the use of a milling machine and/or the wheel saw. Debris from the milling or wheel saw operation shall be removed from the milled area by air equipment or mechanical sweeper and shall remove all disturbed pavement debris and any loose and/or unsound concrete. Exposed reinforcement shall be removed back to the point where the steel is in contact with sound Portland cement concrete. Where high steel is encountered, the depth of milling may be reduced as directed by the Engineer.

Method of Measurement Partial depth removal of the PCC pavement will be measured in square yards, regardless of the depth removed.

Basis of Payment. Partial depth removal of the PCC pavement will be paid for at the contract unit price per square yard for PCC SURFACE REMOVAL (COLD MILLING) VARIABLE DEPTH, which price shall include all labor, equipment, material and disposal of millings.

PIPE UNDERDRAINS, FABRIC LINED TRENCH, 4"

This work shall conform to Section 601 of the "Standard Specifications" except that the underdrain material shall be limited to either (1) perforated polyvinyl chloride (PVC) pipe conforming to Article 1040.09, or (2) perforated corrugated polyvinyl chloride (PVC) pipe with a smooth interior conforming to Article 1040.15.

Both the trench and the pipe shall be wrapped with non-woven geotextile filter fabric, as shown on the detail included in the plans and as approved by the Engineer. The cost of the fabric shall be included in the contract unit price for this item.

Basis of Payment. This work will be paid for at the contract unit price per foot for PIPE UNDERDRAINS, FABRIC LINED TRENCH, 4".

POROUS GRANULAR EMBANKMENT, SUBGRADE

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 of the "Standard Specifications". A 12 inch layer shall be used as sub-base in all pavement widening areas, and additional thickness will be required in undercut areas, where the material shall replace unstable soils. The porous granular material shall conform with Article 1004.06 of the "Standard Specifications" except that 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 inches	97 ± 3
*4 inches	90 ± 10
2 inches	45 ± 25
# 200	5 ± 5

2. Gravel, Crushed Gravel and Pit-Run Gravel

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

*For thicknesses greater than 18 inches, the percent passing the 6 inch sieve may be 90 ± 10 and the 4 inch sieve requirements eliminated.

The porous granular material shall be placed in one lift and rolled with a vibratory roller meeting the requirements of Article 1101.01 of the "Standard Specifications" to obtain the desired keying or interlock and necessary compaction. The Engineer shall verify that adequate keying has been obtained. A 3 inch nominal thickness top lift of capping aggregate having a gradation of CA 6 will be required.

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

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

Undercut and porous granular embankment subgrade placement in addition to plan thickness will be done as field conditions warrant. No adjustment in unit price will be allowed for an increase or decrease in quantities from the estimated quantities shown in the plans.

RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

This work shall be done in accordance with Section 783 of the Standard Specifications, and shall include removal of the raised reflective pavement marker and patching the hole with leveling binder, compacted and leveled to the same elevation as the existing pavement surface. RAISED REFLECTIVE PAVEMENT MARKER REMOVAL will be paid for at the contract unit price per each.

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 for RAISED REFLECTIVE PAVEMENT MARKER.

REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

This work shall conform to Section 895.05 of the Standard Specifications. All removed items shall be moved to a location as specified by the Engineer, or disposed of by the Contractor at the direction of the Engineer.

REMOVE EXISTING HANDHOLE

This work shall conform to Section 895.05 of the Standard Specifications. The Contractor will protect traffic and pedestrians from the remaining hole, as specified in the Standard Specifications.

REMOVE EXISTING CONCRETE FOUNDATION

This work shall conform to Section 895.05 of the Standard Specifications. The Contractor will protect traffic and pedestrians from the remaining hole, as specified in the Standard Specifications.

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.

Basis of Payment: 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.

SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING

Description: This work shall consist of cleaning sediment from each assembled inlet filter. The Engineer will designate the need for cleaning based on the rate of debris and silt collected at each inlet filter location.

Cleaning of the inlet filter 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.

Method of Measurement: Cleaning of the drainage structure inlet filter shall be measured for payment each time that the cleaning work is performed at each of the drainage structure inlet filter locations.

Basis of Payment: The work will be paid for at the contract unit price per each for SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING, which price shall include all costs for labor, materials, equipment, and incidentals necessary to perform the work.

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 FenceArticle 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."

STEEL PLATE BEAM GUARD RAIL, TYPE A (SPECIAL)

This work shall conform to Section 630 of the "Standard Specifications" except it shall be modified to include a wooden rub rail on the back side of the posts, opposite of the beam, as per the detail in the plans.

Basis of Payment. This work will be paid for at the contract unit price per foot for STEEL PLATE BEAM GUARD RAIL, TYPE A (SPECIAL), which price shall include all labor, delivery and materials necessary to complete the work.

STORM SEWER REMOVAL

This work shall consist of the removal of existing storm sewer pipe and pipe culverts as indicated in the plans or as directed by the Engineer. The work shall be performed in accordance with applicable portions of Section 551 of the Standard Specifications except that the storm sewer pipe removed shall not be reused. Trench backfill required due to removal of storm sewer shall be considered part of this work.

The work will be measured and paid for per _____ foot for STORM SEWER REMOVAL of the size indicated in the Plans.

STORM SEWERS (WATER MAIN REQUIREMENTS)

This work consists of constructing storm sewer of the specified diameter adjacent to or crossing a proposed water main, meeting the requirements of the Village of Schaumburg, the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois, and the applicable portions of Section 550 of the "Standard Specifications". This is required in order to meet the separation requirements per the Standard Specifications for Water and Sewer Main Construction in Illinois. The locations are shown in the plans.

Materials shall meet the requirements of Section 40 and 41-2.01 of the Standard Specifications for Water and Sewer Main Construction in Illinois, and shall be constructed of PVC C-900 storm sewers or Ductile Iron storm sewers at these locations. The method of connection and the materials used between dis-similar material pipes shall be approved by the Engineer and such cost for materials and labor are incidental to this pay item.

Basis of Payment: This work will be paid for at the contract unit price per foot for STORM SEWERS (WATER MAIN REQUIREMENTS) of the type and diameter specified including all materials, labor, and equipment necessary to install the storm sewer.

TEMPORARY DITCH CHECKS

This special provision revises Section 280 of the Standard Specifications.

In Article 280.04(a), delete paragraphs 2 and 3. Aggregate Ditch Checks and Hay or Straw Bales are not permitted for use in this contract. Temporary Ditch Checks must be 12 feet or longer in length.

TEMPORARY FENCE

Add the following to the end of Article 201.05(a), Temporary Fencing:

The Contractor shall install temporary barriers necessary for the preservation of existing plant materials (not to be removed) before any work takes place at the project site. The protective fencing shall be installed in accordance with Village Ordinance 154.135(C) (4). Wooden snow fencing or brightly colored plastic construction fencing shall be installed at the periphery of the drip line of the tree or beyond to prevent the storage of vehicles or materials, and the encroachment of grading and construction equipment. All protective fencing shall be maintained to the satisfaction of the Engineer.

In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree of a species listed in Section IX, Item C-2 of the Village of Schaumburg Subdivision Control Ordinance #1639 as specified by the Engineer, and having a diameter not less than the tree destroyed (not to exceed 6 inches, measured at 6 inches above the ground level). Any tree that is replaced out of the neglect of the Contractor shall be replaced at no cost to the Owner. In addition, all tree trimming, liming, root pruning, and tree preservation shall be approved by the Engineer.

TEMPORARY INFORMATION SIGNING

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

Materials shall be in accordance with the following portions of the "Standard Specifications":

	Item	Section/Article
a..	Sign Base (see Notes 1 and 2)	1090
b.	Sign Face (see Note 3)	1091
c.	Sign Legends	1092
d.	Sign Supports	1093
e.	Overlay Panels (see Note 4)	1090.01

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

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

Note 3. All sign faces shall be Type A except that all orange signs shall meet the requirements of Article 1084.02(b).

Note 4. The overlay panels shall be 0.08" thick..

The sign sizes and legend sizes shall be as shown on District One Standard TC-22, included in the plans. Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Articles 702.05 and 720.04 of the "Standard Specifications". The signs shall be 7 feet above the near edge of pavement and a minimum of 2 feet beyond the edge of paved shoulder. A minimum of two posts shall be used.

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

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

This work will be paid for at the contract unit price per square foot for TEMPORARY INFORMATION SIGNING.

TEMPORARY PAVEMENT REMOVAL

This item consists of the removal and disposal of the pavement installed as BITUMINOUS BASE COURSE, SUPERPAVE, 8", for use as temporary pavement during the construction of this project. This item shall generally conform to Section 440 of the "Standard Specifications." The removal of the material shall be complete and the area inspected by the Engineer prior to backfilling the area with embankment or preparation for permanent pavement installation.

Method of Measurement. This item shall be measured for payment prior to the removal of the material in square yards of surface.

Basis of Payment. This item shall be paid for at the contract unit price per square yard for TEMPORARY PAVEMENT REMOVAL, which price shall include all labor, material, equipment, transportation and disposal cost necessary to perform this work.

TERMINAL MARKER - DIRECT APPLIED

This item will be conform to the Standard Detail 635006-02 and applied to the terminal sections per the manufacturer's recommendations.

Basis of Payment. This item will be paid for that the contract unit price per each for TERMINAL MARKER - DIRECT APPLIED, which price will include all labor, material and equipment necessary to complete this work.



Route FAU2585 (Meacham Road)
Section (00) 00068-01-WR
County Cook

Marked
Project No. M-8003 (352)

This plan has been prepared to comply with the provisions of the NPDES Permit Number ILR10, issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Handwritten signature of Robert J. Mackay

Signature

27DEC04

Date

Project Engineer / Ass't Project Manager
Title

1. Site Description

a. The following is a description of the construction activity which is the subject of this plan (use additional pages, as necessary):

The reconstruction of Meacham Road, from north of Tower Road to south of Algonquin Road, a length of 4,139 feet. The removal of the existing concrete pavement and subsequent widening of the road and replacement with PCC pavement. Additional storm sewers will be installed, as well as new roadway lighting and traffic signals. Bituminous bike paths / sidewalks will be constructed adjacent to the new road. Landscaped medians will be part of this project where sufficient room is provided.

b. 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 (use additional pages, as necessary):

Initially, roadway embankment will be added to the east of the road to allow for the widening, followed by reconstruction of the roadway on the east side of the project. Next, traffic will shift to the east side while the west side of the project is reconstructed. The new storm sewers on the west side of the road will be installed during this phase. Lastly, the landscaped medians will be installed and planted, along with the parkways and disturbed areas.

c. The total area of the construction site is estimated to be 17.9 acres.

The total area of the site that it is estimated will be disturbed by excavation, grading or other activities is 17.9 acres.

- d. The estimated runoff coefficients of the various areas of the site after construction activities are completed are contained in the project drainage study which is hereby incorporated by reference in this plan. Information describing the soils at the site is contained either in the Soils Report for the project, which is hereby incorporated by reference, or in an attachment to this plan.
- e. The design/project report, hydraulic report, or plan documents, hereby incorporated by reference, contain site map(s) indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of major soil disturbance, the location of major structural and nonstructural 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 a surface water.
- f. The names of receiving water(s) and areal extent of wetland acreage at the site are in the design/project report or plan documents which are incorporated by reference as a part of this plan.

2. Controls

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b. above. For each measure discussed, the contractor that will be responsible for its implementation is indicated. Each such contractor has signed the required certification on forms which are attached to, and a part of, this plan:

a. Erosion and Sediment Controls

- (i) **Stabilization 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: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided in 2.a.(i).(A) and 2.b., 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 ceased on all disturbed portions of the site where construction activity 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.

Description of Stabilization Practices (use additional pages, as necessary):

Erosion control blanket and temporary seeding are to be used in exposed areas prior to permanent planting. Trees to remain are to be protected at the trunk as well as surrounded by fencing to limit exposure of the tree to construction equipment. Sodding, salt tolerant, is to be used beyond the proposed curb. The medians are to be either solid or planted, with the median plantings designed by the Village of Schaumburg and is contained within the plans.

- (ii) **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 silt fences, earth dikes, drainage swales, sediment traps, check dams, 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.

Description of Structural Practices (use additional pages, as necessary):

Sedimentation control, Silt Fence is to be used at the limits of the construction. Inlet filters are to be used at all active inlets during construction, with the filters being maintained during construction. Ditch checks are to be used in existing ditches receiving stormwater discharge during construction. At the conclusion of construction, all inlets are to be cleaned as part of this contract, to limit future downstream discharges. The Contractor is obligated to maintain erosion control measures during the duration of the project and to remove all items upon the conclusion of the construction or the establishment of permanent plantings, whichever occurs later.

b. 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.

(i) Such practices may include: 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 10-300 (Design Considerations) in Chapter 10 (Erosion and Sedimentation Control) of the Illinois Department of Transportation Drainage Manual. If practices other than those discussed in Section 10-300 are selected for implementation or if practices are applied to situations different from those covered in Section 10-300, the technical basis for such decisions will be explained below.**

(ii) 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 (use additional pages, as necessary):

Storm water detention is being provided for the increased impervious area with two areas. Within the Schaumburg Convention Center, currently under construction, detention is being provided for a portion of the project and water is being diverted from the road, onto the site and carried to the detention pond via open ditches.

Within the Motorola property, two large pipes, (42" & 48" diameters) are being used to detain water from the road. This water will be discharged at a controlled rate into an existing ditch within the Motorola property. This ditch leads to an existing detention pond within the Motorola property. Although this pond does not provide any detention for Meacham Road, together with the ditch, water quality will be provided for the roadway discharges through these facilities. The existing detention pond within Motorola discharges into a tributary of the Salt Creek.

c. Other Controls

- (i) Waste Disposal. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
- (ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

d. Approved State or Local Plans

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 or site permits or 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:

Plans and specifications for the Meacham Road project have been reviewed by the Village of Schaumburg, who has jurisdiction over these issues. The plans and specifications have also been reviewed by the Illinois Department of Transportation.

3. Maintenance

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan (use additional pages, as necessary):

The Contractor is responsible to maintain silt fencing, ditch checks and inlet filters per the Special provision of the contract. These actions are to be monitored by the Resident Engineer, who represents the Village on these matters.

4. Inspections

Qualified personnel shall inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures, and locations where vehicles enter or 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 and areas used for storage of materials that are exposed to precipitation 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. Where discharge locations or points are accessible, they 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 1 above and pollution prevention measures identified in section 2 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 7 calendar days following the inspection.
- 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 4.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 or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician 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 report of noncompliance 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

5. 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. (Use additional pages as necessary to describe non-storm water discharges and applicable pollution control measures).

Not Applicable.



This certification statement is a 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 14, 1998.

Project Information:

Route FAU2585 (Meacham Road)
Section (00) 00068-01-WR
County Cook

Marked _____
Project No. M-8003 (352)

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.

Signature

Date

Title

Name of Firm

Street Address

City State

Zip Code

Telephone Number

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
NOTICE OF INTENT (NOI)
GENERAL PERMIT TO DISCHARGE STORM WATER
CONSTRUCTION SITE ACTIVITIES**

OWNER INFORMATION

NAME:	LAST Village of Schaumburg	FIRST	MIDDLE	(OR COMPANY NAME)	OWNER TYPE:	CITY
MAILING ADDRESS:	101 West Schaumburg Court					
CITY:	Schaumburg	STATE:	Illinois	ZIP:	60193	
CONTACT PERSON:	Ms. Margo Killian, P.E.			TELEPHONE NUMBER:	AREA CODE 847	NUMBER 923-4744

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 checked="" type="checkbox"/> New Site <input type="checkbox"/> CHANGE OF INFORMATION TO PERMIT NO. ILR10 _____								
FACILITY NAME:	Meacham Road Project No. M-8003 (352)			OTHER NPDES PERMIT NOS.:					
FACILITY LOCATION:	North of Tower Rd to South of Algonquin Rd				TELEPHONE NUMBER:	AREA CODE	NUMBER		
CITY:	Schaumburg	ST:	IL	ZIP:	60173	LATITUDE:	42 03 43	LONGITUDE:	88 02 42
COUNTY:	Cook	SECTION:	12	TOWNSHIP:	41N, 42N	RANGE:	10E		
APPROX. CONST. START DATE:	5/10/05	APPROX. CONSTRUCTION END DATE:	7/1/06	TOTAL SIZE OF CONSTRUCTION SITE IN ACRES:			0018		
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

TRANSPORTATION	TYPE BRIEF DESCRIPTION OF PROJECT: Roadway reconstruction, roadway lighting & traffic signals, storm sewer
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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: Village of Schaumburg
NAME OF CLOSEST RECEIVING WATER:	Tributary to Salt Creek

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

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GENERAL ELECTRICAL REQUIREMENTS

Effective: March 1, 2003

Add the following to Article 801 of the Standard Specifications:

"Maintenance transfer and Preconstruction Inspection:

General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction period.

Establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The party responsible for maintenance of any existing lighting and/or traffic control systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the State. A project may involve multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 304.8 mm (one (1) foot) to either side.. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. **NOTE THAT THE CONTRACTOR SHALL BE ENTITLED TO ONLY ONE REQUEST FOR LOCATION MARKING OF EXISTING SYSTEMS AND THAT MULTIPLE REQUESTS MAY ONLY BE HONORED AT THE CONTRACTOR'S EXPENSE. NO LOCATES WILL BE MADE AFTER MAINTENANCE IS TRANSFERRED, UNLESS IT IS AT THE CONTRACTOR'S EXPENSE.**

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken. The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record,

all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition.”

Delete the last paragraph of Article 801.06 of the Standard Specifications.

Revise the 7th and 8th paragraphs of Article 801.08 of the Standard Specifications to read:

“Engineer's Stamp. 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.~~”

Resubmittals. All submitted items reviewed and marked ‘APPROVED AS NOTED’, or ‘DISAPPROVED’ are to be resubmitted in their entirety with a disposition of previous comments to verify contract compliance at no additional cost to the state unless otherwise indicated within the submittal comments.”

Revise Article 801.12 of the Standard Specifications to read:

“Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance the of existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein.”

Add the following to Section 801.12 of the Standard Specifications:

“Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in service, whether the system has passed final acceptance or not, (such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.”

Add the following to Section 801 of the Standard Specifications:

Splicing of Lighting cables. Splices above grade, such as in poles and junction boxes, shall have a waterproof sealant and a heat-shrinkable plastic cap. The cap shall be of a size suitable for the splice and shall have a factory-applied sealant within. Additional seal of the splice shall be assured by the application of sealant tape or the use of a sealant insert prior to the installation of the cap. Either method shall be assured compatible with the cap sealant. Tape sealant shall be applied in not less than one half-lapped layer for a length at least 6.35 mm (1/4-inch) longer than the cap length and the tape shall also be wrapped into the crotch of the splice. Insert sealant shall be placed between the wires of the splice and shall be positioned to line up flush or extend slightly past the open base of the cap.

Lighting Cable Identification. Each wire installed shall be identified with its complete circuit number at each termination, splice, junction box or other location where the wire is accessible.

~~Lighting Cable Fuse Installation.~~ Standard fuse holders shall be used on non-frangible (non-breakaway) light pole installations and quick-disconnect fuse holders shall be used on frangible (breakaway) light pole installations. Wires shall be carefully stripped only as far as needed for connection to the device. Over-stripping shall be avoided. An oxide inhibiting lubricant shall be applied to the wire for minimum connection resistance before the terminals are crimped-on. Crimping shall be performed in accordance with the fuse holder manufacturer's recommendations. The exposed metal connecting portion of the assembly shall be taped with two half-lapped wraps of electrical tape and then covered by the specified insulating boot. The fuse holder shall be installed such that the fuse side is connected to the pole wire (load side) and the receptacle side of the holder is connected to the line side.

Grounding of Lighting Systems. All electrical systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC, even though every detail of the requirements is not specified or shown. Good ground continuity throughout the electrical system shall be assured. All electrical circuit runs shall have a continuous equipment grounding conductor. **IN NO CASE SHALL THE EARTH BE CONSIDERED AS AN ADEQUATE EQUIPMENT GROUNDING PATH.** Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point and serrated connectors or washers shall be used. Where metallic conduit is utilized as the equipment grounding conductor, extreme care shall be exercised to assure continuity at joints and termination points. No wiring run shall be installed without a suitable equipment ground conductor. Where no equipment ground conductor is provided for in the plans and associated specified pay item, the Contractor is obligated to bring the case to the attention of the Engineer who will direct the Contractor accordingly. Work which is extra to the contract will be paid extra. All connections to ground rods, structural steel, reinforcing steel or fencing shall be made with exothermic welds. Where such connections are made to insulated conductors, the connection shall be wrapped with at least 4 layers of electrical tape extended 152.4 mm (six inches) onto the conductor insulation. Where a ground field of "made" electrodes is provided, the exact locations of the rods shall be documented by dimensioned drawings as part of the Record Drawings. Equipment ground wires shall be bonded, using a splice and pigtail connection, to all boxes and other metallic enclosures throughout the wiring system.

Lighting Unit Identification. Each pole, light tower and underpass light shall be labeled as indicated in the plans to correspond to actual circuiting, and as designated by the Engineer. They shall be installed by the Contractor on each lighting unit pole shaft and on the underpass walls, or piers, as shown in the details. Median-mounted poles shall have two sets of identification labeling oriented to allow visibility from travel in either direction. Lighting Controllers shall also be identified by means identification decals as described herein. Identification shall be in place prior to placing the equipment in service. Identification of weathering steel poles shall be made by application of letters and numerals as specified herein to an appropriately sized 3.175 mm (1/8-inch) thick stainless steel plate which shall be banded to the pole with two stainless steel bands. Identification of painted poles shall be made by application of letters and numerals as specified herein via an adhesive approved by the paint manufacturer for the application. Identification of luminaires which are not pole mounted, such as underpass luminaires, shall be done using identification brackets. In general, the brackets shall be mounted adjacent to and within one foot of their respective luminaires. The brackets shall be fabricated from 3.175 mm (one-eighth (1/8)) inch aluminum alloy sheet according to the dimensions shown on the plans. The bracket shall be bent so as to present the luminaire identification numbers at a sixty (60) degree angle to the wall. The bracket shall be attached to concrete walls with three (3) 6.35 mm (1/4 inch), self drilling, snap-off type galvanized steel concrete anchors set flush with the wall, or power driven fasteners approved by the Engineer. The brackets shall be offset from the wall with 12.7 mm (1/2") aluminum bushings. The structural steel shall not be drilled to attach the brackets. The luminaire identification numbers shall be applied to the bracket using the method described for identification applied to poles.

ELECTRIC UTILITY SERVICE CONNECTION

Effective: January 1, 2002

Description. This item shall consist of payment for work performed by the Electric Utility Company in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE.

CONSTRUCTION REQUIREMENTS

General. It shall be the Contractor's responsibility to contact the utility. The Contractor shall coordinate his work fully with the electric utility both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement.

The Contractor should make particular note of the need for the earliest attention to arrangements with the utility for service. In the event of delay by the utility, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

Method Of Payment. The Contractor will be reimbursed to the exact amount of money as billed by the Electric Utility Company for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$2000.00.

Basis Of Payment. This work will be paid for at the contract lump sum price for **ELECTRIC UTILITY SERVICE CONNECTION** which shall be reimbursement in full for electric utility service charges.

GROUND ROD

Effective: ~~January 1, 2002~~

Description. This item shall consist of furnishing, installing and connecting ground rods for the grounding of service neutral conductors and for supplementing the equipment grounding system via connection at poles or other equipment throughout the system. All materials and work shall be in accordance with Article 250 of the NEC.

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

Item	Article/Section
(a) Ground Rod.....	1087.01(b)
(b) Copper Ground Wire.....	1087.01(a)
(c) Access Well.....	1087.01(c)

CONSTRUCTION REQUIREMENTS

General. All connections to ground rods, structural steel or fencing shall be made with exothermic welds. Where such connections are made to insulated conductors, the connection shall be wrapped with at least 4 layers of electrical tape extended 152.4 mm (six inches) onto the conductor insulation.

Ground rods shall be driven so that the tops of the rod are 609.6 mm (24 inches) below finished grade. Where indicated, ground wells shall be included to permit access to the rod connections.

Where indicated, ground rods shall be installed through concrete foundations.

Where ground conditions, such as rock, preclude the installation of the ground rod, the ground rod may be deleted with the approval of the Engineer.

Where a ground field of "made" electrodes is provided, such as at control cabinets, the exact locations of the rods shall be documented by dimensioned drawings as part of the Record Drawings.

Ground rod connection shall be made by exothermic welds. Ground wire for connection to foundation steel or as otherwise indicated shall be stranded uncoated bare copper in accordance the applicable requirements of ASTM Designation B-3 and ASTM Designation B-8 and shall be included in this item. Unless otherwise indicated, the wire shall not be less than No. 2 AWG.

Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate the exothermic weld.

Method Of Measurement. Ground rods shall be counted, each. Ground wires and connection of ground rods at poles shall be included in this pay item.

Basis Of Payment. This item shall be paid at the contract unit price each for **GROUND ROD**, of the diameter and length indicated which shall be payment in full for the material and work described herein.

UNDERGROUND RACEWAYS

Effective: January 1, 2002

Revise Article 810.03 of the Standard Specifications to read:

"Installation. All underground conduit shall have a minimum depth of 700 mm (30-inches) below the finished grade."

Add the following to Article 810.03 of the Standard Specifications:

"All metal conduit installed underground shall be Rigid Metal Conduit unless otherwise indicated on the plans."

WIRE AND CABLE

Effective: January 1, 2002

Revise the second sentence of the first paragraph of Article 1066.02(a) to read:

"The cable shall be rated at a minimum of 90°C dry and 75°C wet and shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals."

Revise the second paragraph of Article 1066.02(b) to read:

"Uncoated conductors shall be according to ASTM B3, ICEA S-95-658/NEMA WC70, and UL Standard 44. Coated conductors shall be according to ASTM B 33, ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44."

Revise the third paragraph of Article 1066.02(b) to read:

"All conductors shall be stranded. Stranding meeting ASTM B 8, ICEA S-95-658/NEMA WC70 and UL Standard 44. Uncoated conductors meeting ASTM B 3, ICEA S-95-658/NEMA WC70 and UL Standard 44."

Revise the first sentence of Article 1066.03(a)(1) to read:

"General. Cable insulation designated as XLP shall incorporate cross-linked polyethylene (XLP) insulation as specified and shall meet or exceed the requirements of ICEA S-95-658, NEMA WC70, U.L. Standard 44."

-----Add the following to Article 1066.03(a)(1) of the Standard Specifications:

"The cable shall be rated 600 volts and shall be UL Listed Type RHH/RHW/USE."

Revise the Aerial Electric Cable Properties table of Article 1066.03(a)(3) to read:

Aerial Electric Cable Properties

Phase Conductor		Messenger wire			
Size AWG	Stranding	Average Insulation Thickness		Minimum Size AWG	Stranding
		mm	mils		
6	7	1.1	(45)	6	6/1
4	7	1.1	(45)	4	6/1
2	7	1.1	(45)	2	6/1
1/0	19	1.5	(60)	1/0	6/1
2/0	19	1.5	(60)	2/0	6/1
3/0	19	1.5	(60)	3/0	6/1
4/0	19	1.5	(60)	4/0	6/1

Revise the first paragraph of Article 1066.03(b) to read:

"EPR Insulation. Cable insulation shall incorporate ethylene propylene rubber (EPR) as specified and the insulation shall meet or exceed the requirements of ICEA S-95-658, NEMA Standard Publication No. WC70, and U.L. Standard 44, as applicable."

Add the following to Article 1066.03(b) of the Standard Specifications:

"Cable sized No. 2 AWG and smaller shall be U.L. listed Type RHH/RHW and may be Type RHH/RHW/USE. Cable sized larger than No. 2 AWG shall be U.L. listed Type RHH/RHW/USE."

Revise Article 1066.04 to read:

"Aerial Cable Assembly. The aerial cable shall be an assembly of insulated aluminum conductors according to Section 1066.02 and 1066.03. Unless otherwise indicated, the cable assembly shall be composed of three insulated conductors and a steel reinforced bare aluminum conductor (ACSR) to be used as the ground conductor. Unless otherwise indicated, the code word designation of this cable assembly is "Palomino". The steel reinforced aluminum conductor shall conform to ASTM B-232. The cable shall be assembled according to ANSI/ICEA S-76-474."

Revise the second paragraph of Article 1066.05 to read:

"The tape shall have reinforced metallic detection capabilities consisting of a woven reinforced polyethylene tape with a metallic core or backing."

Revise Article 1066.08 to read:

"Electrical Tape. Electrical tape shall be all weather vinyl plastic tape resistant to abrasion, puncture, flame, oil, acids, alkalies, and weathering, conforming to Federal Specification MIL-I-24391, ASTM D1000 and shall be listed under UL 510 Standard. Thickness shall not be less than 0.215 mm (8.5 mils) and width shall not be less than 20 mm (3/4-inch)."

LUMINAIRE

Effective: March 1, 2003

Add the following to first paragraph of Article 1067.01(a)(3) of the Standard Specifications:

"The reflector shall not be altered by paint or other opaque coatings which would cover or coat the reflecting surface. Control of the light distribution by any method other than the aforementioned clear protective coating that will alter the reflective properties of the reflecting surface is unacceptable"

Add the following to Article 1067.01(a)(5)a. of the Standard Specifications:

"The ballast shall be a High Pressure Sodium, high power factor, constant wattage auto-regulator, lead type (CWA) for operation on a nominal 240 volt system."

Revise the second sentence of the second paragraph of Article 1067.01(a)(5)c. of the Standard Specifications:

"The ballast shall be designed to ANSI Standards and shall be designed and rated for operation on a nominal 240 volt system. The ballast shall provide positive lamp ignition at the input voltage of 216 volts. It shall operate the lamp over a range of input voltages from 216 to 264 volts without damage to the ballast. It shall provide lamp operation within lamp specifications for rated lamp life at input design voltage range. Operating characteristics shall produce output regulation not exceeding the following values:

Nominal Ballast Wattage	Maximum Ballast Regulation
750	25%
400	25%
310	26%
250	22%
150	22%

For this measure, regulation shall be defined as the following:

$$\text{Ballast Regulation} = \frac{W_{LampH} - W_{LampL}}{W_{LampN}} \times 100$$

where:

W_{LampH} = lamp watts at +10% line voltage (264v)

W_{LampL} = lamp watts at - 10% line voltage (216v)

W_{lampN} = lamp watts at 240v"

Revise the third sentence of the second paragraph of Article 1067.01(a)(5)c. of the Standard Specifications to read:

"Ballast losses, based on cold bench tests, shall not exceed the following values:

Nominal Ballast Wattage	Maximum Ballast Losses
750	16.0%
400	16.0%
310	19.0%
250	17.5%
150	26.0%

Ballast losses shall be calculated based on input watts and lamp watts at nominal system voltage as indicated in the following equation:

$$\text{Ballast Losses} = \frac{W_{Line} - W_{Lamp}}{W_{Lamp}} \times 100$$

where:

W_{line} = line watts at 240v

W_{lamp} = lamp watts at 240v

Add the following to Article 1067.01(a)(5)c. of the Standard Specifications:

"Ballast output to lamp. At nominal system voltage and a lamp voltage of 100v, the ballast shall deliver a lamp wattage within $\pm 2\%$ of the nominal lamp wattage. Example: *For a 400w luminaire, the ballast shall deliver 400 watts $\pm 2\%$ at a lamp voltage of 100v for the nominal system voltage of 240v.*"

Add the following to Article 1067.01(a)(5)c. of the Standard Specifications:

"Ballast output over lamp life. Over the life of the lamp the ballast shall produce an average output wattage of the nominal lamp rating $\pm 3\%$. Lamp wattage readings shall be taken at 5-volt increments throughout the ballast trapezoid. The lamp wattage values shall then be averaged within the trapezoid and shall be within $\pm 3\%$ of the nominal ballast rating. Submittal documents shall include a tabulation of the lamp wattage vs. lamp voltage readings. Example: *For a 400w luminaire, the averaged lamp wattage reading shall not exceed the range of 388 to 412 watts*"

Revise the first paragraph of Article 1067.01(a)(7) of the Standard Specifications to read:

"Independent testing of luminaires shall be required whenever the quantity of luminaires of a given wattage and distribution, as indicated on the plans, is 50 or more. For each luminaire type to be so tested, one luminaire plus one luminaire for each 50 luminaires shall be tested i.e. 75 luminaires would dictate that 2 to be tested; 135 luminaires would dictate that three be tested."

Add the following to Article 1067.01(a)(7) of the Standard Specifications:

"The Contractor shall be responsible for all costs associated with the specified testing, including but not limited to shipping, travel and lodging costs as well as the costs of the tests themselves, all as part of the bid unit price for this item. Travel, lodging and other associated costs for travel by the Engineer shall be direct-billed to or shall be pre-paid by the Contractor, requiring no direct reimbursement to the Engineer or the independent witness, as applicable"

Add the following to Article 1067.01(a)(7) of the Standard Specifications:

"d. Engineer Factory Selection and Witness of Manufacturer Testing: At the Manufacturer's facility, the Engineer shall select the luminaires to be tested and shall be present during the testing process. The Contractor shall schedule travel by the Engineer to and from the Manufacturer's laboratory to witness the performance of the required tests."

Revise Article 1067.02(a)(1) of the Standard Specifications to read:

"The lamps shall be of the clear type and shall have a color of 2050° to 2100° Kelvin."

Add the following table(s) to Article 1067 of the Standard Specifications:

<< SEE DETAILED LUMINAIRE SPECIFICATION FOR TABLES >>

LAMPS

Effective: January 1, 2002

Revise Article 1067.02(a)(1) of the Standard Specifications to read:

"The lamps shall be of the clear type and shall have a color of 2050° to 2100° Kelvin."

LIGHT POLES

Effective: March 1, 2003

Revise the fifth sentence of Article 1069.01(b)(2)d of the Standard Specifications to read:

"A 9.525 mm (3/8 in.) – 16 tapped hole shall be provided in the frame for attaching a mechanical grounding connector."

Revise the third sentence of Article 1069.01(c)(2)b5 of the Standard Specifications to read:

"A 9.525 mm (3/8 in.) – 16 tapped hole shall be provided in the frame for attaching a mechanical grounding connector."

STAINLESS STEEL JUNCTION BOX

Effective: January 1, 2002

Revise the second sentence of the seventh paragraph of Article 1088.04 of the Standard Specifications to read:

"The gasket shall be extruded directly onto the junction box cover."

UNIT DUCT

Effective: October 1, 2002

Revise the second paragraph of Article 816.03(b) to read:

"The unit duct shall be installed at a minimum depth of 760 mm (30-inches) unless otherwise directed by the Engineer."

Revise Article 1066.01 to read:

"1066.01 Unit Duct. The unit duct shall be an assembly of insulated conductors which are factory pre-installed in a coilable nonmetallic conduit. The polyethylene duct shall be extruded directly over the cable at the factory in long continuous lengths. The unit duct shall be according to NEC Article 354 and be UL Listed."

Revise Article 1088.01(c) to read:

"(c) Coilable Nonmetallic Conduit.

Polyethylene Duct. The duct shall be a plastic duct which is intended for underground use and can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance.

The duct shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethylene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

Duct dimensions shall conform to the following table:

Nom. Duct Diameter		Nom. Outside Diameter		Min. Wall Thickness	
mm	in	mm	in	mm	in
27	1	33.4	1.315	3.4	0.133
35	1.25	42.2	1.660	3.6	0.140
41	1.5	48.3	1.900	3.7	0.145
53	2.0	60.3	2.375	3.9	0.154

Performance Tests. Polyethylene Duct testing procedures and test results shall meet the requirements of ASTM D 3485. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	lbs
27	1	5337	1200
35	1.25	4937	1110
41	1.5	4559	1025
53	2.0	3780	850

MAINTENANCE OF LIGHTING SYSTEMS

Effective: March 1, 2003

Replace Article 801.12 of the Standard Specifications with the following:

Effective the date the Contractor's activities (electrical or otherwise) at the job site begin, the Contractor shall be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by the work until final acceptance or as otherwise determined by the Engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. The request for the maintenance preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained.

Maintenance of Existing Lighting Systems

Existing lighting systems. Existing lighting systems shall be defined as any lighting system or part of a lighting system in service prior to this contract. The contract drawings indicate the general extent of any existing lighting, but whether indicated or not, it remains the Contractor's responsibility to ascertain the extent of effort required for compliance with these specifications and failure to do so will not be justification for extra payment or reduced responsibilities.

Extent of Maintenance.

Partial Maintenance. Unless otherwise indicated, if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work, the Contractor needs only to maintain the affected circuits. The affected circuits shall be isolated by means of in-line waterproof fuse holders as specified elsewhere and as approved by the Engineer.

Full Maintenance. If the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work, the Contractor shall maintain the entire controller and all associated circuits.

Maintenance of Proposed Lighting Systems

Proposed Lighting Systems. Proposed lighting systems shall be defined as any lighting system or part of a lighting system which is to be constructed under this contract.

The Contractor shall be fully responsible for maintenance of all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, or other means. The potential cost of replacing or repairing any malfunctioning or damaged equipment shall be included in the bid price of this item and will not be paid for separately.

Maintenance of Temporary Lighting Systems

Temporary Lighting Systems. Temporary lighting systems shall be defined as any lighting system or part of a lighting system which is to be installed under this contract as shown on the temporary lighting plan and described in these specifications as TEMPORARY LIGHTING SYSTEM.

The Contractor shall be fully responsible for maintenance of all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, or other means. The potential cost of replacing or repairing any malfunctioning or damaged equipment shall be included in the bid price of this item and will not be paid for separately.

Lighting System Maintenance Operations

The Contractor's responsibility shall include all applicable responsibilities of the Electrical Maintenance Contract, State of Illinois, Department of Transportation, Division of Highways, District One. These responsibilities shall include the maintenance of lighting units (including sign lighting), cable runs and lighting controls. In the case of a pole knockdown or sign light damage caused by normal vehicular traffic, the Contractor shall promptly clear the lighting unit and circuit discontinuity and restore the system to service.

Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected within 24 hours of the patrol. Patrol reports shall be presented on standard forms as designated by the Engineer. Uncorrected deficiencies may be designated by the Engineer as necessitating emergency repairs as described elsewhere herein.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar

			days
Radio problem	1 hour	4 hours	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey or reported to EMC	na	na	7 Calendar days
Navigation light outage	na	na	24 hours

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.
- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)
- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

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. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Maintenance Contractor being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

Operation of Lighting

The lighting shall be operational every night, dusk to dawn. Duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Lighting systems shall not be kept in operation during long daytime periods. The contractor shall demonstrate to the satisfaction of the Engineer that the lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request.

Basis of Payment. Maintenance of lighting systems shall be paid for at the contract unit price per calendar month or fraction thereof for **MAINTENANCE OF LIGHTING SYSTEMS**, which shall include all work as described herein.

SERVICE INSTALLATION, TYPE C

Description. This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

SERVICE INSTALLATION, TYPE C shall include one weatherproof enclosure, one circuit breaker, one weather-head, one ground rod, galvanized steel conduit, conduit clamps, lag screws, electric cables of the type and size specified by the local utility company, and other miscellaneous items. The Contractor shall make connections to the side of the circuit breaker and coil the remainder of cable above the junction box for installation by the utility company. No separate grounding of the weatherproof enclosure will be installed, unless it is required by the utility company.

Materials. Materials shall be according to Article of Section 1000 - Materials

Item	Article/Section
(a) Electric Service Installation – Lighting	1086.01

CONSTRUCTION REQUIREMENTS

General. The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

Method Of Measurement. Service Installation, Type C shall be counted, each.

Basis Of Payment. This work will be paid for at the contract unit price each for **SERVICE INSTALLATION, TYPE C** which shall be payment in full for the work specified herein.

UNIT DUCT, WITH 3-1/C NO. 4 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE) 1 ¼" POLYETHYLENE

UNIT DUCT, WITH 5-1/C NO. 4 AND 1/C NO. 6 GROUND, 600V (XLP-TYPE USE) 1 ½" POLYETHYLENE

This work shall consist of furnishing and installing a duct of the size specified and the number, size and type of electrical conductors specified in accordance with Section 816 of the Standard Specifications except as herein modified.

CONDUCTORS

All electrical cables shall be color-coded. Four wire runs of cable shall be color-coded one black, one red, one white and one green. Six wire runs of cable shall be color-coded one black, one red, one orange, one blue, one white and one green.

INSTALLATION

Directional boring shall be used to install all unit ducts.

The directional boring unit shall be equipped with a guide head with multiple transmitter frequencies to ensure tracking accuracy.

The directional boring technique used shall be capable of detecting voltage.

The boring machine engine should be capable of being idled from the operator's station in order to reduce engine noise when possible.

The boring machine utilized at any given point in the installation of the unit duct shall be the smallest possible for the job. The Contractor shall provide the Engineer with proposed locations for the boring machine and approximate size of the boring machine to be used before commencing. Depending on the specific location, the Engineer may call for a specific placement of the boring machine to minimize interference with pedestrian and vehicular traffic. Public alleys and parkways are available for placement of the boring machine. If placement precludes the safe passage of pedestrians the sidewalk shall be closed per I.D.O.T. Standard 701801. The Engineer shall give final determination on any boring machine set-up as to whether the proximity is safe and appropriate for pedestrian passage.

The Contractor may, at his/her option, install short runs of unit duct by means of a trenching method at locations approved by the Engineer. Trenching will not be permitted at locations where it will be an inconvenience or hazard to the public. No extra payment will be allowed for any additional labor, materials, or equipment but shall be paid for as specified below.

Basis Of Payment. This work shall be paid for at the contract unit price per FOOT of UNIT DUCT, for the number of conductors indicated which price shall include all labor, material and equipment necessary to install the unit duct in a manner described herein.

LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 150 WATT

DESCRIPTION

This item shall consist of furnishing and installing a pendant mounted ornamental luminaire, bracket, and lamp as specified herein and shown on the plans. The luminaire shall be Lumec part number 250HPS-TR20-SCB3M-240-BKTX-LMS12296D or approved equivalent. The luminaire bracket shall be Lumec part number UN16-1A-BKTX-LMS12296D or approved equivalent.

MATERIALS

Housing

- Optical housing shall be spun sheet aluminum, certified as pure A356 alloy, 99.9% free of any porosity, foreign materials or cosmetic materials.
- The optical housing system shall be a sealed chamber with an ingress protection rating of IP66 or better. The optical housing system shall be sealed with a one piece, continuous memory retentive silicone gasket.
- The door frame shall be provided with a stainless steel aircraft cable tether.
- Access to the optical chamber and lamp shall be done without tools.
- The threading for all hardware used to access electronic equipment within the assembly shall be treated with "never seez" or equal.
- The luminaire shall have integral slip fit, which can slip into a 2" horizontal schedule 40 steel pipe arm. Slip fit shall have 6 stainless steel 1/4" - 20 UNC set screws and two anchoring screws (1/4 - 20 UNC) treated with Loc-tite.

Lens

- Lens shall be one piece clear injection molded polycarbonate.
- Manufacturer shall furnish a guarantee in writing in lens, which shall state that the polycarbonate lens will not yellow or become brittle over time.

Reflector Module

- The upper reflector shall be made of hydro-formal sheet aluminum that is chemically brightened.
- Reflector module shall be positioned within the luminaire housing.
- The reflector module shall be rotatable on 90 degree increments.
- Reflectors shall meet the ANSI IES standard for full cut-off reflectors.

Ballast

- Ballast shall be a 90% high power factors auto transformer type rated for 40 degrees F starting capable of regulating the lamp power within 10% + of the rated voltage.
- The ballast shall be integral to the luminaire and manufactured by Advanced Transformer Company.
- Ballast wiring and lamp socket wiring shall be connected by means of a plug.
- Ballast shall be for a high pressure sodium lamp designed to ANSI standards.
- Ballast shall be designed and rated for operation on a 240 volt, phase to neutral system within the ANSI trapezoidal limits.
- All electrical components shall meet UL and C.S.A. approval for the specified usage.

Lamp Socket

- The lamp socket shall be mogul base type, porcelain enclosed, pulse rated.
- Sockets for horizontal lamps are oriented and include a lamp stabilizer.
- Socket shall be provided with grips or other suitable means to hold the lamp against vibration.

PHOTOMETRIC PERFORMANCE

The light distribution shall be an I.E.S. Type III distribution as defined in the "American National Standard Practice for Roadway Lighting" as approved July 21, 1983 by the "American National Institute" (ANSI).

The beam of maximum candlepower for luminaires specified or shown to have "medium" distribution shall be at 69 degrees from horizontal +/- 2 degrees. Submittal information shall identify this angle.

PAINT

- Prior to the application of the primer paint coat, luminaire housing shall be immersion cleansed, degreased and rinsed.
- A protective chromated primer shall be applied to the housing.
- Housing shall be deionized water rinsed and then oven dried.
- A thermoset polyester powder coat finish paint with a minimum thickness of 2.5 mills shall be applied on the housing.
- Paint color shall be Textured Bronze, or approved equal. Furnish color sample prior to painting for approval. Refer to plans for additional information.

DELIVERY

Wood blocking or other supports and appurtenant items required for proper storage shall be included in this item.

Luminaire information submitted for approval shall include any recommendations of the Manufacturer for storage as provided under this contract. The packaging of luminaires shall incorporate the provisions recommended by the Manufacturer to accommodate storage. However, as a minimum, luminaires shall have individual protective wrapping and be bundled to prevent scratching of the luminaire finishes.

CERTIFICATION AND GUARANTEE

The submittal information shall include a written certification of compliance with the contract requirements from the Manufacturer. The certification shall specifically identify the project route, location, section number, and contract number, as applicable and shall identify specifically the equipment covered by the certification. The certification shall be made of the Manufacturer's corporate stationery and it shall be dated and signed by a responsible officer of the company, with the signee's title listed.

The Contractor shall obtain and deliver to the Owner a written guarantee assigned to the Owner from each of the manufacturers of the pay item equipment that the manufacturer will repair, replace, or otherwise make good any defects in materials or workmanship for a period not less than six (6) months FROM THE DATE OF FINAL ACCEPTANCE. ANY COST FOR THE GUARANTEE AS SPECIFIED SHALL BE INCIDENTAL TO THE ASSOCIATED PAY ITEM. Should compliance with this item require the Contractor to purchase the extended guarantee coverage from the equipment manufacturer, such coverage will be considered as a required part of the pay item. Guarantees shall accompany submittal information.

INSTALLATION

Luminaires shall be carefully installed in accordance with the luminaire manufacturer's recommendations and in accordance with the design requirements represented on the plans.

Unless otherwise indicated, luminaires shall be installed parallel to the plane of the roadway. After installation, if a night-time check of the lighting indicates that any luminaires are misaligned, by visual inspection or other means, by the Engineer, the misaligned luminaires shall be corrected by the Contractor at no additional cost to the contract. Also, should the photometric results of the luminaire be such that, in the judgment of the Engineer, a tilt adjustment is warranted on selected luminaires, this adjustment shall be made by the Contractor at no additional cost to the Contract.

Luminaires should not be installed before they are fully approved. Where independent testing is required, full approval is not attained until complete test results, demonstrating compliance with specified requirements, have been reviewed and accepted by the Engineer. No payment shall be made for luminaires installed without approval.

This item shall be complete with lamps, pole wire, fuse holders and fusing, as specified under Basic Materials and Methods, elsewhere herein.

BASIS OF PAYMENT

This item will be paid for at the contract unit price each for LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 150W HPS, which shall be payment in full for the material and work described herein.

LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT

LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT

This item shall consist of furnishing and installing a pole/mast arm-mounted luminaire in accordance with Section 821 of the Standard Specifications and as described herein.

The luminaire shall have a separate access door for the installation and service of the ballast and electrical components.

Unless otherwise indicated, the light distribution shall be full-cutoff Type III, as defined in the "American National Standard Practice for Roadway Lighting" as approved July 21, 1983 by the "American National Standards Institute" (ANSI).

The luminaires shall have a grey finish.

The luminaire photometric performance shall produce results equal to or better than those listed in the applicable Luminaire Performance Table or tables included in these Special Provisions or shown on the plans. Submittal information shall include computer calculations based on the controlling given conditions, which demonstrate achievement of all listed performance requirements. The computer calculations shall be done in accordance with I.E.S. recommendations and the submitted calculations shall include point-by-point illuminance, luminance and veiling luminance as well as listings of all indicated averages and ratios. The program used to perform the calculations shall be identified on the submittal.

In addition to computer printouts of photometric performance, submittal information shall include:

- Descriptive literature.
- Isofootcandle chart of horizontal foot-candles.
- Utilization curve.
- Isocandela diagram.
- Luminaire classification per ANSI designation.
- Candlepower values at every 2.5 degree intervals.
- Candlepower tables are to be provided on 88.90 mm (3 1/2") diskette in the I.E.S. format.

This item shall consist of furnishing, installing, and connecting the pole wire to the underground distribution system. The pole wire shall be (three) 3-1/C No. 10 AWG 600 volt insulated copper

conductor, USE/XLP, stranded in conformance with ASTM B-8. It shall be installed from the luminaire terminal blocks to the pole handhole, as applicable, per Sections 822 and 1085.06 for Roadway Lighting pole wire between the underground distribution system and the luminaire in a moisture-proof manner. The colors shall be black, red, and green. The wire is to run inside the pole and mast arm. The pole wire and all necessary connections of pole wire to the terminals including the use of splices as described in the details shall be included in the unit cost of the this item.

The Contractor shall furnish and install In-line fuse holder(s) and fuse(s) on all leads shall be in accordance with Article 1085.03 of the standard specifications and as follows:

Fuse holders of the in-line quick disconnect breakaway type shall be used on all light pole installations in the base of each lighting standard. The fuse holder shall have a minimum rating of 30 amps and be sized for 13/32" x 1 1/2" fuses. Fuse holder shall be Edison HEB-AW-RLC-A 30A 600V for load/line and HET-AW-RLC-A for neutral or equal as approved by Engineer.

Wires shall be carefully stripped only as far as needed for connection to the device. Over-stripping shall be avoided. An oxide inhibiting lubricant shall be applied to the wire for minimum connection resistance before the terminals are crimped-on. Crimping shall be performed in accordance with the fuse holder manufacturer's recommendations. The exposed metal connecting portion of the assembly shall be taped with two half-lapped wraps of electrical tape and then covered by the specified insulating boot. The fuse holder shall be installed such that the fuse side is connected to the pole wire (load side) and the receptacle side of the holder connected to the line side.

In-line fuse holder(s) shall be provided on all neutral conductors with a solid slug in place of the fuse in the base of each lighting standard.

Fuses for fuse holders on line/load cable to pole wire connection shall be Type MEQ or MEM equal 12 ampere rating.

BASIS OF PAYMENT

This item shall be paid for at the contract unit price EACH for LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, of the type specified, which shall be payment in full for the work as described herein.

MEASUREMENT PARAMETERS

- 1) Observer eye height: 1.45 meters (4.75 ft.) above grade.
- 2) Line of sight of observer: Downward one degree below horizontal; parallel to
- 3) Lighting system to be measured: Smooth and level, at least 10 mounting heights long.
- 4) Number of points per line: At least 10, not more than 5 meters (16.4 Ft.) apart.
- 5) Area covered by calculation: All points between two luminaires on one side of
- 6) Calculation point location to: At least one luminaire behind, and at least three ahead of contributing luminaires: calculation point (P).
- 7) Unless otherwise indicated, luminaire tilt shall be zero degrees.
- 8) Calculations shall be performed in conformance with I.E.S. RP-8 recommended procedures

**LUMINAIRE PERFORMANCE TABLE
400 WATT LUMINAIRE**

GIVEN CONDITIONS		
ROADWAY DATA	Pavement Width	120 (ft)
	Number of Lanes	9-12' lanes w10' median
	I.E.S. Surface Classification	R3
	Q-Zero Value	.07
LIGHT POLE DATA	Mounting Height	45 (ft)
	Mast Arm Length	15 (ft)
	Pole Set-Back From Edge of Pavement	7 (ft)
LUMINAIRE DATA	Lamp Type	50,000
	Lamp Lumens	Full Cutoff
	I.E.S. Vertical Distribution	Medium
	I.E.S. Control Of Distribution	Type 3
	I.E.S. Lateral Distribution	0.70
	Total Light Loss Factor	0.70
LAYOUT DATA	Spacing	215 (ft)
	Configuration	Opposite
	Luminaire Overhang over edge of pavement	8 (ft)

NOTE: Variations from the above specified I.E.S. distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS		
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NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

ILLUMINATION	Average Horizontal Illumination, E_{AVE}	13.0 Lux
	Uniformity Ratio, E_{AVE}/E_{MIN}	3.0
LUMINANCE	Average Luminance, L_{AVE}	0.9 Cd/m ²
	Uniformity Ratio, L_{AVE}/L_{MIN}	3.0
	Uniformity Ratio, L_{MAX}/L_{MIN}	5.0
	Max. Veiling Luminance Ratio, L_V/L_{AVE}	0.3

LIGHTING CONTROLLER TYPE CB-RCS, 100AMP - 480VOLT

This work shall consist of furnishing, delivering and installing a lighting controller per Section 825 of the Standard Specifications and as modified in this special provision.

The cabinet shall have a single door with external dimensions of 30 inches wide by 17 inches deep by 50 inches tall. The cabinet shall be cleaned and painted as specified. The color of the finish paint shall be Satin Black. The electric meter enclosure and any exposed conduit shall also have a Satin Black painted finish.

The concrete foundation as shown on the plans and the installation of a $\frac{3}{4}$ " by 10 feet ground rod at the controller and at the service connection shall be included in the cost of this item.

The controller cabinet should include a warning label to indicate that energized circuits existing within the controller even when the main breaker is in the off position.

PHOTO-CELL: Photo-electric control must meet or exceed the following requirements:

- ANSI C136.10-1988.
- Line voltage Operating Range of 105 to 300 VAC at 60 Hz
- Load Rating of 1000 watts tungsten and 1800 VA ballast
- Failure mode (per ANSI) shall be to "on" mode
- Photosensor shall be Cadmium Sulfide shall be sealed to prevent moisture and contamination damage. This is to be accomplished by a conformal coating, epoxy encapsulation, or a glass to metal hermetic seal.
- Turn "on" mode calibrated at 1.6+ or - 0.3 foot-candles of natural illumination. The turn "off" setting shall be adjusted to a maximum ratio to turn "on" of 1.5:1.
- Time delay: Control shall have a delay "on" response. Operating temperature shall have a minimal effect on time delay duration.
- Surge protection shall be in the form of a Metal Oxide Varistor (MOV) wired line to neutral. MOV shall be a minimum of 160 joules. Secondary surge protection across the electronic circuit is required.
- Calibration: Each unit shall be calibrated in production using a photometer whose accuracy is traceable to the NIST. A quality control inspection shall be performed after calibration and final assembly.
- Contact "Chatter" on opening of contacts (TURN OFF of photoelectric control) shall not exceed 6 milliseconds.

The installation of feeder cables and branch circuit cables shall be performed in a neat and workmanlike manner with all cable trained around the cabinet, secured to the proper terminals and identified either by tagging of the cables, or by identification of the branch breakers, for future addition as indicated on the plans. All as part of the controller installation and not as a separate pay item.

The main circuit breaker and the contactor shall each have a 100-ampere rating, and the branch circuit breakers shall be as indicated on the plans. Circuit breakers furnished under this specification shall include the following design and construction features: (1) molded insulating housing, (2) thermal magnetic trip mechanism, (3) silver alloy contacts, (4) corrosion resistant internal parts, (5) trip free, indicating handle, and (6) pressure type terminals.

Circuit breakers furnished under this specification shall be listed and approved by Underwriter's Laboratories, Inc. hereinafter cited as U.L. Where reference is made to applicable requirements of U.L., Bulletin #489, entitled "Standard for Branch Circuit and Service Circuit Breakers," the most recently published revision shall govern. Each circuit breaker shall have the thermal magnetic trip installed, calibrated and sealed within its insulated housing. Circuit breakers furnished under this specification shall be guaranteed against defects in materials or workmanship for a period of one year after installation. During this period, should a failure occur, repair or replacement shall be made without cost to the Village of Schaumburg. The Contractor shall install an approved CECHA electrical meter housing attached to the side of the controller cabinet.

The electrical connection at the service point shall be performed by ComEd personnel. The Contractor shall provide an adequate length of electrical cable to make the connection to the service, approximately 40 feet. This electrical cable shall be coiled at the base of the pole where the service point is located. The cost of the electrical cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, 600 VOLT (XLP-TYPE USE) 1/C NO. 2/0.

Basis Of Payment. This work shall be paid for at the contract unit price per EACH for LIGHTING CONTROLLER, Type CB-RCS, 100AMP - 480VOLT, which price included all labor, material, and equipment necessary to complete this work.

LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET

This work shall consist of the installation of an offset light pole foundation as directed by the Engineer. The detail for the offset foundation shall meet the IDOT standard for "Offset Foundation". It shall include all labor, material, and equipment to perform the work.

Basis Of Payment. The cost of the LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET shall be paid for at the Contract Unit Price per foot, measured along the centerline of the foundation, which price includes all labor, material, and equipment necessary to complete this work.

TEST HOLE

This item shall consist of excavation to locate existing utilities at locations where conflict is possible within the proposed construction.

Test holes will be dug at locations authorized by the Engineer. The Contractor shall be responsible for notifying the utilities concerned.

The test hole shall be of a size and depth sufficient to identify and establish the location of the existing utilities. Utility damage by the Contractor shall be repaired at the expense of the Contractor.

The limits of the test hole shall be one foundation width either side of the excavated utility. If the Contractor is required to expand the test hole beyond one foundation width of the original excavated utility to find a suitable foundation location, the Contractor will be paid for two (2) test holes.

After the Contractor has verified the location of the utility, the test hole shall be backfilled with either the excavated material or Trench Backfill, as directed by the Engineer. Any excess material shall be disposed of in accordance with Article 202.03 of the Standard Specifications.

Basis Of Payment. This work will be paid for at the contract unit price EACH for TEST HOLE which price shall include all labor and equipment necessary to complete the work as specified. Trench backfill will not be paid for separately, but shall be incidental to TEST HOLE.

TEMPORARY LIGHTING SYSTEM

Description: This item shall consist of installing a complete temporary lighting system as shown on the plans. Work shall include, but not limited to, laying out the proposed temporary pole locations, erecting temporary poles, mast arms, luminaires, and controller, installing aerial cables, guy wires, ground rods, and all other appurtenances required to make the system operational.

The Contractor will be responsible to coordinate the installation of this equipment with others working on the jobsite. No additional payment will be made for relocation of any of the temporary lighting equipment.

Basis Of Payment. This work will be paid for at the contract unit price LUMP SUM for TEMPORARY LIGHTING SYSTEM, which price shall include all labor and equipment necessary to complete the work as specified.

RELOCATE EXISTING LIGHTING CONTROLLER

Description: This item shall consist of relocating an existing lighting controller to a new foundation at the location shown on the plans. Work shall include, but not limited to,

disconnecting existing service and circuit cables, removing anchor bolts and associated hardware, relocating the cabinet, attaching to new foundation (paid as LIGHTING CONTROLLER FOUNDATION), and reconnecting the service and circuit cables.

The Contractor will be responsible for any damaged incurred to the equipment during the relocation. Therefore, the Contractor shall make a complete inspection of the existing equipment, documenting any damage in writing to the Engineer and Village of Schaumburg Public Works before the relocation work begins.

The relocation of the controller should be started and completed during daytime hours of one day so there will be no disruption in operation of the lighting circuits operated by this controller.

Incidental materials, such as but not limited to duct seal and replacement hardware shall be included in the unit cost for this work.

Basis Of Payment. This work will be paid for at the contract unit price EACH for RELOCATE EXISTING LIGHTING CONTROLLER, which price shall include all labor and equipment necessary to complete the work as specified.

LIGHT POLE, ORNAMENTAL

DESCRIPTION

This item shall consist of furnishing and installing a round, tapered aluminum ornamental light pole complete with aluminum mast arm, wrap around two piece cast aluminum base, banner bracket, festoon outlet and all required hardware and wiring as specified herein and as shown on the contract drawings.

The design, style and dimensions of the cast aluminum base, capitol at post top and arm shall be as shown on the contract drawings.

The welds shall be smooth, and thoroughly cleaned of flux and spatter and shall conform to the standards of the American Welding Society.

The pole assembly shall be designed and manufactured to withstand loadings of up to and including a 35 pound pendant luminaire having an effective projected area of 1.61 square feet and a sidewalk bracket mounted 45 pound post top luminaire having an EPA of 1.32 with 25 pound bracket of EPA of 1.09 meeting the criteria of AASHTO for 80 mph wind loading with 104 mph gusts.

The pole shall be Lumec part number VSPA-LMS12296D-38-BAS31-PSS-GFI-BRTX or approved equivalent. The pole base shall be Lumec part number R92-BAS30(2)-GFI-BRTX-LMS14632A or approved equivalent.

MATERIALS

Cast Aluminum Base

- The design, style and dimension shall be as shown on the drawings.

- The base shall be in two (2) pieces, wrap around. The base shall be held securely together by four (4) stainless steel tamper proof bolts ½" - 13 X 1" long. Furnish six (6) tools for tamper proof bolts.
- The base shall be heavy wall cast aluminum per certified as pure A356 or Sr319.1 alloy.
- The wall thickness of the base shall not be less than 3/8".
- Access door in base shall be cast aluminum. The door and interface casting shall be properly machined to insure even bearing and mating. The door shall be secured to the base by stainless steel tamper resistant hex head bolts.
- All casting shall be done in a workmanlike manner per ASTM B26/B26M-92A. Specifications which shall result in uniform casting.
- All decorative detail and marking shall be sharp and clearly defined.
- All casting shall be free from abnormal physical qualities - pouring faults, porosity, cracks, blow holes, warping, shrinkage defects of flaws.
- Each casting shall be cleaned and ground to eliminate sand, burrs, machine marks and imperfections.
- Base dimensions and proportions shall be in accordance with the details shown on the plans.
- Bolts and screw holes shall be drilled in casting. Coring will not be permitted.
- The base aluminum casting shall be heat treated to final temper T6.

Base Plate

- The base plate shall be fabricated from aluminum.
- The base plate shall be 3/4" thick and 11.5" square.
- The base plate shall be welded to post shaft with a complete circumferential weld both inside and out.
- The base plate shall accept four (4), 1" diameter anchor bolts with a 12" bolt circle.
- Anchor bolts template shall be furnished with each post.

Aluminum Shaft

- Shaft shall be fabricated from Aluminum.
- Shaft shall consist of a 0.250" monotube with a single longitudinal 70% penetration (minimum) weld with a base diameter of 7-1/2" and 0.14"/ft taper.
- Shaft shall have 12 evenly spaced sharp flutes without kink or visible appearance of

weld.

- Handhole shall be provided in shaft. Handhole opening 4" X 10" shall be reinforced. Access door located in cast iron base shall coincide with handhole opening in shaft.
- A ½" - 13 tapped hole shall be provided in the handhole frame for attaching a mechanical grounding connector.
- Stepped tenon, 4" diameter, and 2-7/8" dia. (outside diameters), Schedule 40 pipe, shall be welded to the top of the pole shaft.

Cast Aluminum Capitol

- The design, style and dimensions of the capitol shall be as shown on the drawings.
- The capitol casting material shall be per certified as pure A356 or Sr319-1 alloy.
- The capitol shall slip fit on the 4" diameter tenon section and be held in place with stainless steel set screws.
- The capitol shall be one piece casting.
- All casting shall be done in a workmanlike manner per ASTM B26/B26M-92A specifications which shall result in uniform casting.
- All ornamentation and marking shall be sharp and clearly defined.
- All casting shall be free from abnormal physical qualities - pouring faults, porosity, cracks, blow holes, warping, shrinkage defects or flaws.
- Each casting shall be cleaned and ground to eliminate sand, burrs, machine marks, and imperfections.
- Aluminum casting shall be heat treated to T-6.

Mast Arm

- Mast arm shall be either ornamental aluminum casting, as shown on the drawings.
- Mast arm shall be level and oriented as shown in the schedule on the lighting detail sheets.
- The arm assembly shall have integral slip fit which can slip over 2-7/8" diameter tenon, attached to the top of the pole shaft.
- The cast aluminum shall be certified as pure A356 alloy.

Banner Brackets

Clamp on banner brackets shall be provided with the poles, but not installed. The banner brackets should remain packaged and be delivered to the Village of Schaumburg Public Works.

Festoon Outlet

The aluminum shaft light pole shall have festoon outlet opening for a vertical GFCI duplex receptacle. The opening shall be reinforced. The opening and height from the light pole base is as shown on the drawing. All poles shall be supplied with a finished cover mounted over the opening. This cover shall be in compliance with NEC Article 406.8 for use in wet locations. Outlet shall be furnished with pole. Outlet mounted at factory. A Hubbell GFCI Model No. GF 5352, 20A, 120V AC shall be provided.

Hardware

- All hardware supplied with ornamental light pole shall be stainless steel. All exterior hardware shall be treated with "never seez" or equal.
- Anchor bolts shall be 48" heavy duty galvanized along with flats, locks and nuts as indicated on the plans.

Paint

- Prior to the application of the primer paint coat, pole shall be immersion cleansed, degreased and rinsed.
- A protective chromated primer shall be applied to the pole.
- Pole shall be deionized water rinsed and then oven dried.
- A thermoset polyester powder coat finish paint with a minimum thickness of 2.5 mils shall be applied on the pole.
- Paint color shall be Textured Bronze or approved equal. Furnish color sample prior to painting for approval. Refer to plans for additional information.

DELIVERY

- The ornamental light pole: aluminum shaft, cast aluminum base, capitol, mast arm, etc., and hardware shall be packaged during shipment to protect all surfaces from being scratched, marred, chipped, or damaged in any way. Any minor damage to the ornamental light pole surfaces shall be repaired at the manufacturer's place of business or it shall be replaced. The Owner will be the sole judge of the extent of any such damage and the adequacy of repair.
- Wood blocking or other supports and appurtenant items required for proper storage shall be included in this item.
- Ornamental light pole information submitted for approval shall include any recommendations of the Manufacturer for storage provided under this contract.
- The packaging of the ornamental light pole shall incorporate the provisions recommended by the Manufacturer to accommodate storage.

- As a minimum, each pole and its associated hardware shall be individually provided with protective wrapping and be stacked and bundled in a fashion to allow for unloading, without damage, using a heavy duty fork lift.

CERTIFICATION AND GUARANTEE

The submittal information shall include a written certification of compliance with the contract requirements from the Manufacturer. The certification shall specifically identify the project route, location, section number, and contract number, as applicable and shall identify specifically the equipment covered by the certification. The certification shall be made of the Manufacturer's corporate stationery and it shall be dated and signed by a responsible officer of the company, with the signee's title listed.

The Contractor shall obtain and deliver to the Owner a written guarantee assigned to the Owner from each of the manufacturers of pay item equipment that the manufacturer will repair, replace, or otherwise make good any defects in materials or workmanship for a period not less than six (6) months FROM THE DATE OF FINAL ACCEPTANCE. ANY COST FOR THE GUARANTEE AS SPECIFIED SHALL BE INCIDENTAL TO THE ASSOCIATED PAY ITEM. Should compliance with this item require the Contractor to purchase extended guarantee coverage from the equipment manufacturer, such coverage will be considered as a required part of the pay item. Guarantees shall accompany submittal information.

BASIS OF PAYMENT

This item shall be paid for at the contract unit price each for LIGHT POLE, ORNAMENTAL, which shall be payment in full for the work described herein.

LIGHTING CONTROLLER FOUNDATION

Description: This item shall consist of installing a lighting controller foundation at the location shown on the plans. This work shall include all concrete, raceways, anchor bolts, ground rod. The dimensions should follow the detail included in the plans, with the anchor bolts configured to be compatible with the existing lighting controller along Meacham Road.

Excavated material shall be disposed of in accordance with Article 202.03 of the Standard Specifications.

Basis Of Payment. This work will be paid for at the contract unit price EACH for LIGHTING CONTROLLER FOUNDATION, which price shall include all labor and equipment necessary to complete the work as specified.

LANDSCAPING DETAILED SPECIFICATIONS

GENERAL

The following Landscaping Special Provisions and Detailed Specifications supplement the "Standard Specifications for Road and Bridge Construction", Adopted January 1, 2002 and the "American Standard for Nursery Stock ANSI Z60.1-1996", Approved November 6, 1996 in effect on the date of invitation of bids. In case of conflict with any part or parts of said Specifications, the said Special Provisions or Detailed Specifications shall take precedence and shall govern.

Approval at place of growth does not preclude inspection and right of rejection at the site. Rejected plants or materials shall be removed immediately from the site and promptly replaced with plants and materials meeting the specified requirements, as determined by the Engineer.

The Contractor shall deliver all standard products in the manufacturer's original containers with seals unbroken, labeled with manufacturer's names, product names, and analysis where applicable.

All work shall be performed by a firm specializing in landscaping. The Contractor shall use an adequate number of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

Nomenclature: The botanical and common name of all plant materials shown on the drawings and required under this section are in conformance with the approved names given in "Standardized Plant Names" prepared by the American Committee on Horticultural Nomenclature. Names and varieties not included therein shall conform generally with names accepted in the nursery trade. In all cases, botanical names take precedence over common names.

Durable, legible labels stating in weather resistant ink or in an embossed process, the correct plant name, and plant size shall be securely attached to at least 1 plant from each bundle or lot.

All tags, seals, and other markers shall not be removed by the Contractor until after the final inspection and acceptance is made by the Engineer. Once the project is accepted, the Contractor shall remove all tags, seals, and other markers.

Submittals: The Contractor shall submit the following samples with copies of the manufacturer's specifications to the Engineer for approval prior to installation of any plants or materials.

- Specified Soil Mixes
- Soil Mixture Additives
- Hardwood Bark Mulch
- Topsoil

LANDSCAPING DETAILED SPECIFICATIONS

Materials for Planting: Add the following to the end of Article 1081.01(c), Inspection of Plant Material:

All plant materials shall be subject to inspection and approval at the place of growth, and upon delivery for conformity to specification requirements. Approval at the place of growth shall not impair the right of the inspection and rejection upon delivery at the site or during the progress of the work for size and condition of ball, roots, canopy, diseases, insects, and latent defects or injuries. Rejected plants shall be removed immediately from the site.

Upon award of this Contract, the Contractor shall inform the Engineer of his intended sources of plant material. The Contractor shall provide the Engineer 30 calendar days advance notice of the plant material to be inspected. The Engineer will visit these sources with the Contractor to select and identify all woody plants for the project. All trees (deciduous, evergreen) and shrubs will be selected and tagged by the Engineer. The selection of materials by the Engineer shall in no way relieve the Contractor from his obligation to provide healthy plants as specified herein.

Add the following to the end of Article 1081, Materials for Planting:

Before commencing the work, all plant material shall be on order and the Contractor shall examine the site to determine that it is free of conditions which might be detrimental to proper and timely completion of the work. Start of work shall indicate acceptance of all the site conditions.

Protection During Work and Maintenance: The Contractor shall provide adequate protection during the construction period for planted areas against trespassing, erosion, and damage. Protect adjacent surfaces from damage and soiling during the work.

TREE PRESERVATION

Add the following to the end of Article 201.05(a), Temporary Fencing:

The Contractor shall install temporary barriers necessary for the preservation of existing plant materials (not to be removed) before any work takes place at the project site. The protective fencing shall be installed in accordance with Village Ordinance 154.135(C)(4). Wooden snow fencing or brightly colored plastic construction fencing shall be installed at the periphery of the drip line of the tree or beyond to prevent the storage of vehicles or materials, and the encroachment of grading and construction equipment. All protective fencing shall be maintained to the satisfaction of the Engineer.

In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree of a species listed in Section IX, Item C-2 of the Village of Schaumburg Subdivision Control Ordinance #1639 as specified by the Engineer, and having a diameter not less than the tree destroyed (not to exceed 6 inches, measured at 6 inches above the ground level). Any tree that is replaced out of the neglect of the Contractor shall be replaced at no cost to the Owner. In addition, all tree trimming, liming, root pruning, and tree preservation shall be approved by the Engineer.

LANDSCAPING DETAILED SPECIFICATIONS

TOPSOIL AND COMPOST

Add the following to Article 211, Topsoil and Compost:

The Contractor shall inform the Engineer of his intended source for topsoil. The Engineer will inspect the topsoil to ensure that it meets with the requirements of the specifications.

Add the following to Article 211.03, Furnishing and Excavating Topsoil:

Median Soil Mix: Work under this item shall be performed in accordance with Section 200 of the Standard Specifications for Road and Bridge Construction except as modified herein.

Description: This work shall consist of testing, preparing, furnishing, and placing median soil including finish grading.

General Requirements: In general, the Median Soil Mix shall be 2 parts pulverized top soil and 1 part coarse sand. The sand shall be added and mixed during the pulverization process only. The sand shall be of an F2 gradation.

Submittals: Soil Testing: No median soil mix shall be delivered to the site until the Engineer has reviewed test results and has accepted the median soil mix. The Contractor shall employ a soil testing agency, acceptable to the Engineer, which uses methods approved by the Association of Agricultural Chemists. A minimum of 3 samples shall be taken from different locations of the proposed median soil source.

The median soil test report shall include the following, and the appropriate ranges are as follows:

Chemical Analysis:	HIGH	LOW
• pH	7.0	6.5
Mechanical Analysis		
• % clay	25%	0%
• % silt	77%	45%
• % sand	33%	25%

Additionally, the following variables are required:

- cation exchange capacity (CEC)
- soluble salts
- organic matter
- phosphorous
- available potassium
- nutrients
- residual chemicals
- recommendations to mitigate any issues from the results in items 3a through 3g.

The mechanical analysis should show that the % sand, % silt, and the % clay must yield a silt loam soil. See the attached Textural Classes diagram. To determine the class, plot a line parallel to the % clay axis starting the line at the value of the % silt. Plot another line parallel to the % sand axis starting the line at the value of the % clay. The intersection of these lines should be in the silt loam region.

LANDSCAPING DETAILED SPECIFICATIONS

Inspections: The Engineer retains the right to visually inspect the Median Soil Mix on site before placement. The Engineer may ask that the material suspected of not meeting specification be removed from the site.

The Engineer will take samples of the Median Soil Mix after it has been placed. A sample will be taken every 300' or every median. The same chemical and mechanical test will be performed. If the Median Soil Mix in place does not meet specification, then that area or median will not be paid for. The Contractor shall remedy any discrepancies per the soil test recommendations, so that full payment can be made.

Preparation and Placement: Structure Adjustments: perform or coordinate final adjustments of any utility structure.

- Clean medians of all trash and debris before placement of the Median Soil Mix. Remove and legally dispose of debris off site. Repair to the satisfaction of the Engineer any portion of the sand pre-filter under drainage fabric or layers prior to installation of the Median Soil Mix.
- Place, spread, and rough grade specified Median Soil Mix to depths specified in all areas to be planted. Place the Median Soil Mix in 2 level lifts. The first lift shall contain 2/3 of the median soil depth. After placing each lift, moisten the surface at a rate of 1 gallon of water per square foot. Allow the water to thoroughly percolate through the soil before placing the next lift. Allow for settling, and place additional planting soil as necessary. Allow for placement and mixing of compost in perennial planting areas, but place enough soil mix to meet finish grades within specified tolerances.
- Rake smooth and finish grade all planted areas. The removal of excess material or the addition of median soil may be required prior to landscaping. This shall be included in the unit price for MEDIAN SOIL MIX. Grading will be to a tolerance of +/- .10 foot of design grades. Grade disturbed by irrigation installation shall be restored to finish grade and raked smooth.
- All debris, litter, tire tracks, dirt, and unintended materials shall be removed, raked, swept or washed off all landscape, hard median surfaces, and pavement on a daily basis.

Method of Measurement: Median Soil Mix Furnish and Place will be measured for payment in cubic yards at the locations shown in the plans and as directed by the Engineer.

Basis of Payment: Median Soil Mix Furnished will be paid for at the Contract Unit Price per cubic yard for **MEDIAN SOIL MIX FURNISH AND PLACE**.

COMPOST FURNISH AND PLACE? Omit the first paragraph of Article 211.01, and replace with the following:

Description: This work shall consist of furnishing, transporting, spreading, and incorporating landscape compost into soil in areas shown on the plans and as directed by the Engineer. The Contractor shall submit a sample of the compost for approval prior to installation.

Materials: Add the following to Article 1081.05(b) Topsoil and Compost:

The Contractor shall inform the Engineer of his intended source for the landscape compost. The Engineer will inspect the landscape compost to ensure that it meets with the requirements of the

LANDSCAPING DETAILED SPECIFICATIONS

specifications. The compost shall be a mixture of decomposed grass clippings, small branches, and leaves. Said mixture shall be screened and free of refuse, stone, clumps, roots, large branches, clay, and other foreign material. The compost shall be of such consistency that it can be readily incorporated with the topsoil.

Compost shall not be placed until the area designated has been shaped, trimmed, and finished in accordance with Section 212 of the Standard Specifications, and any required placement of topsoil has been completed. Prior to compost placement, the area shall be disked or raked to a minimum depth of 2" and all debris and loose stones removed. The grades and condition of the area must be approved by the Engineer prior to Compost Placement.

The compost shall be placed in the planting beds to the depth specified and shall meet finish grades within specified tolerances. After the Engineer verifies that the proper compost depth has been applied, the Contractor shall completely incorporate the sand into the soil to a minimum depth of 6" by raking, disking or rototilling to amend the existing topsoil.

After the compost has been incorporated into the soil, any debris or piles of unincorporated material shall be immediately removed from the finished area to the lines and grades shown on the plan and approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

Method of Measurement: Compost Placement will be measured in square yards at the locations shown in the plans and as directed by the Engineer prior to incorporation into the soil.

Basis of Payment: This work will be paid for at the Contract Unit Price per square yard for **COMPOST FURNISH AND PLACE** 2" of the thickness specified. Payment shall include all costs for materials, equipment, and labor required to complete the work specified herein, including the cost of removing and disposing of any debris.

GYPSUM PLACEMENT

Scope: This work shall consist of furnishing, transporting, spreading, and incorporating Gypsum into the soil in areas shown on the plans and as directed by the Engineer.

Materials: The Gypsum shall be an approved commercial grade.

Gypsum soil conditioner shall not be placed until the area designated has been shaped, trimmed, and finished in accordance with Section 212 of the Standard Specifications and any required placement of Topsoil has been completed. Prior to Gypsum placement, the area shall be disked or raked to a minimum depth of 4" and all debris and loose stones removed. The grades and condition of the area must be approved by the Engineer prior to Gypsum Placement.

The Gypsum shall be used in accordance with the manufacturer's direction on the package. Apply the Gypsum using a rotary-type spreader designed to apply granular products. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the Gypsum at the rate of 30 lbs.

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per 100 square feet. After the Engineer verifies that the proper amount of Gypsum has been applied, the Contractor shall completely incorporate the Gypsum into the soil to a minimum depth of 6" by raking, disking, or rototilling to amend the existing topsoil.

After the Gypsum has been incorporated into the soil, any debris or piles of unincorporated material shall be immediately removed from the right-of-way and the area finished to the lines and grades shown of the plan and approved by the Engineer. Disposal of material shall be done in accordance with Article 202.03.

Method of Measurement: Gypsum Placement will be measured by weight of actual product used at the locations shown in the plans, and as directed by the Engineer prior to incorporation into the soil.

Basis of Payment: This work will be paid for at the Contract Unit Price per pound for **GYPSUM PLACEMENT**. Payment shall include all costs for materials, equipment, and labor required to complete the work specified herein, including the cost of removing and disposing of any debris.

SEEDING

Add the following to Article 250.04, Fertilizer and Agricultural Ground Limestone Application:

- All existing turf and ground cover vegetation shall be cut out 2" below the existing soil line, and disposed of as specified in Article 202.03, or killed using RoundUp at the manufacturer's suggested rate 14 days prior to planting.
- Seeding will be conducted after all existing ground cover vegetation is dead or removed. Removal of dead accumulated grass and other litter will be required before seeding. No seeds shall be sown until the seed bed has been approved by the Engineer.

Add the following to Article 250, Seeding:

Maintenance of Seeded Areas: Maintenance of seeded areas by the Contractor shall consist of watering, weeding, 3 mowings, repair of erosion, spraying the seeded areas to keep them free of insects and diseases, and overseeding with a slit seeder as necessary to establish a uniform stand of the specified turf and seed mixes. The Contractor shall provide general care for seeded areas until a uniform stand of the specified mix is established, or a period of not less than 6 weeks. Prior to acceptance, turf areas shall be mowed at least 3 times by the Contractor to maintain healthy vigorous growth. Debris encountered during the mowing and/or overseeding operation shall be removed and disposed of in accordance with Article 250.05. Damage to the seeded areas, such as ruts or wheel tracks more than 2" in depth, shall be repaired by the Contractor to the satisfaction of the Engineer. If noxious weeds start growth which threatens to smother the plants included in the specified mix, they shall be removed or sprayed as directed by the Engineer, and the vacant spots overseeded, if necessary. All necessary weed control applications and overseeding due to poor germination are included in the cost for seeding.

Add the following to Article 250.09, Method of Measurement:

Payment for maintenance of seeded areas shall be included in the Contract Unit Price of **SEEDING**.

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EROSION CONTROL BLANKET

Add the following to Article 251.04, Erosion Control Blanket:

The staples shall be made from No. 11 gauge or heavier unlocated black carbon steel wire of sufficient stiffness for soil penetration. They shall be of the "T" or "U" configuration with pointed ends, 1-2" wide at the top and a minimum overall length of 6" from top to bottom.

SODDING

Add the following to Article 1081.03, Sod:

Sod shall be cleanly cut, either by hand or machine, to a minimum uniform thickness of 1" but of not more than 2", to a uniform width of 18", and in strips of not less than 3'-0" nor more than 6'-0" in length. Edges of sod shall be straight.

Add the following to Article 252.04, Sodding Time:

Sod shall be delivered to the site within 24 hours of harvest at the sod nursery. All sod installation shall be complete within 36 hours of harvest from the sod nursery. The Contractor shall submit a ticket from the sod nursery clearly stating the date and time of day that harvest took place.

Add the following to Article 252.05, Transportation:

Care shall be taken to retain the native soil on the roots during the process of stripping, transporting, and placing sod. Sod shall be cut and transported only when moisture conditions are favorable for correct handling, and shall be protected by a suitable canvas or other wind-resistant material while in transit. Dumping of sod from vehicles on the areas of delivery will not be permitted. Sod shall be delivered within 24 hours from time of cutting. Sod which has been damaged in transit or in handling, including drying out, shall be rejected and removed from the site immediately.

Delete paragraph 1 of Article 252.06, Placing Sod and substitute the following:

Sod shall be of type specified, laid smoothly, edge to edge in close contact on the prepared surface, with joints staggered. Sod shall be pressed into setting bed immediately by tamping or rolling with approved equipment to eliminate air pockets and to produce an even surface. Where grades are such that the flow of water will be over sodded areas and onto paved areas, after compaction, the sod shall be placed flush with the pavement or drainage structures.

Add the following to article 252.11, Inspection:

Sod shall have been grown on a well-drained, fertile, sandy loam (not peat) soil. Sod shall be cut or stripped from living thickly matted turns of firmly rooted specified turf type. The consistency of adherent soil shall be such that it will not break, crumble, or tear during handling and placing of the sod.

LANDSCAPING DETAILED SPECIFICATIONS

Maintenance of Sodded Areas: Add the following to Article 252, Sodding:

Maintenance of sodded areas by the Contractor shall consist of watering, weeding, 3 mowings, repair of erosion, spraying the sodded areas to keep them free of insects and diseases, and re-sodding as necessary to establish a uniform stand of turf. The Contractor shall provide general care for sodded areas until the time of knitting, or a period of not less than 6 weeks. Prior to acceptance, sodded areas shall be mowed at least 3 times by the Contractor to maintain healthy vigorous growth. At no time shall the turf be mowed shorter than 2" or the average height allowed to become more than 4". Debris encountered during the mowing and/or overseeding operation shall be removed and disposed in accordance with Article 250.05. Damage to the seeded areas, such as ruts or wheel tracks more than 2" in depth, shall be repaired by the Contractor to the satisfaction of the Engineer. If noxious weeds start growth which threatens to smother the species grass, they shall be removed or sprayed as directed by the Engineer, and the vacant spots filled with new sod, if necessary. All necessary weed control applications and re-sodding are included in the cost for sodding.

Add the following to Article 252.12, Method of Measurement:

Payment for maintenance of sodded areas shall be included in the Contract Unit Price of **SOD** or **SOD, SALT TOLERANT**.

SPECIFIC PLANTING SPECIAL PROVISIONS

MORUS ALBA 'CHAPARRAL'

This item conforms to all applicable articles contained in the "Standard Specifications" and herein. The variety 'Chaparral' is to be used without substitution unless otherwise authorized by the Engineer. Additionally, the size of this plant is 2 ½" diameter and is to be delivered balled and burlapped. The Contract Unit Price for this item shall include the above requirements.

CALAMAGROSTIS ARUNDINACEA 'KARL FORESTER'

This item conforms to all applicable articles contained in the "Standard Specifications" and herein. The variety 'Karl Forester' is to be used without substitution unless otherwise authorized by the Engineer. Additionally, the size of this plant is a 3 Gallon Container. The Contract Unit Price for this item shall include the above requirements.

HERMROCALLIS 'CHICAGO ORCHID' DAYLILY (1 GAL CONT)

This item conforms to all applicable articles contained in the "Standard Specifications" and herein. The variety 'Chicago Orchid' is to be used without substitution unless otherwise authorized by the Engineer. Additionally, the size of this plant is a 1 Gallon Container. The Contract Unit Price for this item shall include the above requirements.

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LANDSCAPING DETAILED SPECIFICATIONS

PLANTING WOODY PLANTS

Layout of Planting: Add the following to Article 253.07, Layout of Planting:

The configuration of all plant beds shall be staked or layed out by the Contractor and verified by the Engineer prior to commencing with plant bed preparation.

Planting Procedures: Add the following to Article 253.10, Planting Procedures:

When planting shrubs and trees in bed areas as shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

- All existing ground cover vegetation shall be cut out 2" below the existing soil line and disposed of as specified in Article 202.03, or killed using RoundUp at the Manufacturer's suggested rate 14 days prior to planting.
- compost shall be placed on the planting beds to a depth of 2" then tilled into the soil to a depth of 6" to amend the existing topsoil.
- Fertilizer nutrients shall be added and tilled into the soil to a depth of 6" in the following 5:3:2 ratio:
 - Nitrogen Fertilizer Nutrients 90 lbs./acre
 - Phosphorus Fertilizer Nutrients 54 lbs./acre
 - Potassium Fertilizer Nutrients 36 lbs./acre
- All plant beds and individual tree saucers with a minimum diameter of 5' shall receive a hand tooled edge. Using a garden spade, the edge shall be cleanly trenched to a minimum depth of 3" with one vertical side toward the lawn areas.

Mulch Cover: Omit Article 253.11, Mulch Cover and substitute with the following:

Within 48 hours after planting, shredded hardwood bark mulch shall be placed around all plants in the entire mulched bed or saucer area specified to a depth of 3". The shredded hardwood bark shall be: free of leaf material, standard size with a minimum particle size of 1/4" and a maximum size of 1 1/4". In all areas within the project limits where there is existing plant material, all trees, shrubs, and planting beds shall be mulched according to the specifications for new plant material, incidental to Contract. No weed barrier fabric will be required for tree and shrub planting. Pre-emergent herbicide will be used instead of weed barrier fabric. The pre-emergent herbicide shall be applied according to the Special Provision for Weed Control, Pre-emergent Granular Herbicide.

Wrapping of Tree Trunks: Delete Article 253.12 of the Standard Specifications and substitute the following:

Wrapping of all deciduous trees (shade trees and ornamentals) shall be done immediately after planting. Trees shall be inspected for injury to trunks, disease insect infestation, and improper pruning before wrapping. The Contractor shall be responsible for the condition of this wrapping throughout the life of this Contract. Any damage resulting from the improper installation or maintenance of this wrapping shall be the responsibility of the Contractor and such damaged trees shall be replaced by the Contractor at his expense.

LANDSCAPING DETAILED SPECIFICATIONS

Period of Establishment: Delete the second and third paragraphs of Article 253.14, Period of Establishment.

Method of Measurement: Add the following to Article 253.16, Method of Measurement:

- Disposal of sod, vegetative ground cover, and debris (rock, stones, concrete, etc.) removed from the planting bed as specified in Article 202.03.
- Fertilizer nutrients will be measured for payment in place as specified in Article 250.08.
- Compost will be measured in square yards placed and incorporated into the soil as specified in Article 211.08.
- Gypsum will be measured in pounds placed and incorporated into the soil.

Basis of Payment: Add the following to Article 253.17, Basis of Payment:

- Fertilizer will be paid as specified in Article 250.09.
- Pre-emergent herbicide will be paid for as specified in Weed control, Pre-Emergent Granular Herbicide at the Contract Unit Price per pound for **PRE-EMERGENT GRANULAR HERBICIDE**.
- Gypsum will be paid for at the Contract Unit Price per pound for **GYPSUM PLACEMENT**, of the rate specified.
- Payment for shredded hardwood bark mulch shall be included in the Contract Unit Price of the woody plant pay item.

PERENNIAL PLANTS

Layout of Planting: Add the following to Article 254.06, Layout of Planting:

The configuration of all plant beds shall be staked or layed out by the Contractor and verified by the Engineer prior to commencing with plant bed preparation.

Planting Procedures: Add the following to Article 254.07, Planting Procedures:

When planting perennials in bed areas shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

- All existing turf shall be cut out 2" below the existing soil line, and disposed of as specified in Article 202.03, or killed using RoundUp at the manufacturer's suggested rate 14 days prior to planting.
- Compost shall be placed on the planting beds to a depth of 2" then tilled into the soil to a depth of 6" to amend the existing topsoil.
- Fertilizer nutrients shall be added and tilled into the soil to a depth of 6" in the following 5:3:2 ratio:
 - Nitrogen Fertilizer Nutrients 90 lbs./acre
 - Phosphorus Fertilizer Nutrients 54 lbs./acre
 - Potassium Fertilizer Nutrients 36 lbs./acre
- Gypsum shall be placed on the planting beds at the rate specified then tilled into the soil to a depth of 6" to amend the existing soil.

LANDSCAPING DETAILED SPECIFICATIONS

Mulching: Add the following to Article 254.08, Mulching:

- Within 24 hours, the entire perennial plant bed shall be mulched with 2" of fine grade shredded hardwood bark mulch. A mulch sample shall be submitted to the Engineer for approval 72 hours prior to placing. Care shall be taken to place the mulch so as not to smother the plants.
- Pre-emergent Herbicide shall be used in the perennial beds after the mulch has been properly installed. See specification for Weed Control, Pre-emergent Granular Herbicide.

Method of Measurement: Delete Article 254.10, Method of Measurement and add the following:

Perennials, Ground Cover, Ornamental Grasses, and Bulbs shall be measured for payment in place as individual plants.

- Disposal of sod, vegetative ground cover, and debris (rock, stones, concrete, etc.) removed from the perennial planting bed as specified in Article 202.03.
- Fertilizer nutrients will be measured for payment as specified in Article 250.08.
- Compost will be measured in square yards placed and incorporated into the soil.
- Gypsum will be measured in pounds placed and incorporated into the soil.

Basis of Payment: Add the following to Article 254.11, Basis of Payment:

- Fertilizer will be paid for as specified in Article 250.09.
- Pre-emergent herbicide will be paid for as specified in Weed control, Pre-Emergent Granular Herbicide at the Contract Unit Price per pound for **PRE-EMERGENT GRANULAR HERBICIDE**.
- Gypsum will be paid for at the Contract Unit Price per pound for **GYPSUM PLACEMENT**, of the rate specified.
- Payment for shredded hardwood bark mulch shall be included in the Contract Unit Price of the perennial plant pay item.
- Payment for the perennials, ground covers, and bulbs shall be made at the Contract Unit Price in place of the perennial plant pay item.

WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE

Scope: This work shall consist of spreading a pre-emergent granular herbicide in areas as shown on the plans or as directed by the Engineer. This item will be used in mulched plant beds and individual tree saucers.

Materials: The pre-emergent granular herbicide (Snapshot 2.5 TG or equivalent) shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least 72 hours prior to application.

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Method: The pre-emergent granular herbicide shall be used in accordance with the manufacturer's directions on the package. The granules will be applied within 4 days after planting or mulching. If the herbicide is applied 5 days after planting or mulching, it is considered ineffective and shall not be measured and/or paid for.

Apply the granular herbicide using a rotary-type spreader designed to apply granular herbicides or insecticides. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the granular herbicide at the rate of 2.3 lbs. /1000 square feet.

Method of Measurement: Pre-emergent granular herbicide will be measured in place in pounds of Pre-emergent Granular Herbicide applied. Areas treated 5 days or more after planting or placing mulch shall not be measured for payment.

Basis of Payment: This work will be paid for at the Contract Unit Price per pound of **PRE-EMERGENT GRANULAR HERBICIDE** which price shall include all materials, equipment, and labor necessary to complete the work as specified.

SUPPLEMENTAL WATERING

Scope: This work will include watering turf, trees, shrubs, and perennial plants at the rates specified and as directed by the Engineer.

Watering must be completed in a timely manner. When the Engineer directs the Contractor to do supplemental watering, the Contractor must begin the watering operation within 48 hours and must apply the minimum units of water per day based on the specified rates of application until the watering directed is complete. Damage to plant material that is a result of the Contractor's failure to water in a timely way must be repaired or replaced at the Contractor's expense.

Source of Water: The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth.

Rate of Application: The normal rates of application for watering are as follows. The Engineer will adjust these rates as needed depending upon weather conditions.

- Turf and Perennial Plants: 3 gallons per square yard.
- Trees: 10 gallons per tree.
- Shrubs: 3 gallons per shrub.

Method of Application: A spray nozzle that does not damage small plants must be used when watering perennial plants or turf. An open hose may be used to water trees and shrubs if mulch and soil are not displaced by watering. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

LANDSCAPING DETAILED SPECIFICATIONS

Method of Measurement: Supplemental watering will be measure in units of 1,000 gallons of water applied as directed.

Basis of Payment: This work will be paid for at the Contract Unit Price per unit of **SUPPLEMENTAL WATERING**, measured as specified. Payment will include the cost of all water, equipment, and labor needed to complete the work as specified.

GUARANTEE AND ACCEPTANCE

The Contractor shall guarantee that all plants shall be in a healthy and vigorous condition 1 full year after final acceptance of the Maintenance Bond. Delay in completion of the planting operations, which extends planting into more than 1 planting season, will extend the guarantee period in accordance with the date of acceptance of the Maintenance Bond.

During this 1 year period, the Contractor shall maintain all plant material as specified and shall guarantee against defects including death, disease, and unsatisfactory growth except for defects resulting from neglect by the Owner, and abuse or damage by others, or unusual phenomena for incidents which are beyond the Landscape Contractor's control. Partial acceptance of plantings will not be permitted unless authorized by the Engineer. Any request for partial acceptance shall be submitted in writing to the Engineer. Plants which, in the opinion of the Engineer, are dead or in an unhealthy condition during the 1 year Maintenance Bond period shall be replaced immediately upon written notice (dependent upon weather conditions and season permitting), without cost to the Owner.

The Contractor shall contact the Engineer to arrange for a site inspection 10 months from the date of final acceptance, and the Owner shall specify all unsatisfactory plant material to be replaced at no cost to the Owner. All replacements shall be complete prior to the close of the 1 year Maintenance Bond period.

ALL dead or diseased materials shall be replaced with plants of the same kind and size as specified in the plant list. The planting procedure shall meet all original requirements.

LANDSCAPE IRRIGATION SYSTEM

GENERAL

Scope

Furnish all work and materials, appliances, tools, equipment, facilities, transportation, and services necessary for and incidental to performing all operations in connection with the installation of underground sprinkler irrigation system complete, as shown on drawings and/or specified herein. When the term "Contractor" is used in this section, it shall refer to the irrigation Contractor.

Quality Assurance

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

Warranty and Maintenance

The Contractor shall warranty material and workmanship for 1 year after final acceptance including repair and replacement of defective materials, workmanship, and repair of backfill settlement.

Maintenance during warranty shall include, but not necessarily be limited to, the following:

1. Backfilling of all trenches.
2. Adjustment of sprinkler height and plumb to compensate for settlement and/or plant growth.
3. Adjustment of head coverage (arc of spray) as necessary.
4. Unstopping heads plugged by foreign material.
5. Adjustment of controller as necessary to insure proper sequence and watering time.
6. All maintenance necessary to keep the system in good operating order. Repair of damage caused by vandals, other contractors, or weather conditions shall be considered extra to these specifications.

Warranty and maintenance after final acceptance does not include alterations as necessitated by landscaping, regrading, addition of trees or the addition, and/or changes in sidewalks, walls, driveways, etc.

Submittals

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

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

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"Approved Equal" Substitutions

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

Codes/Permits

All work under this section shall comply with the provisions of these Specifications, as illustrated on the accompanying drawings, or as directed by the Engineer and shall satisfy all applicable local codes, ordinances, or regulations of the governing bodies and all authorities having jurisdiction over this Project.

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

The Contractor shall give all necessary notices, obtain all permits, and pay all costs in connection with his work; file with all governmental departments having jurisdiction; obtain all required certificates of inspection for his work and deliver to the Engineer.

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

Existing Utilities Location and Elevation

Locations and elevations of various utilities included with the scope of this work have been obtained from the most reliable sources available and should serve as a general guide without guarantee to accuracy. The Contractor shall examine the site and verify to his own satisfaction the locations and elevation of all utilities and availability of utilities and services required. The Contractor shall inform himself as to their relation to the work and the submission of bids shall be deemed as evidence thereof. The Contractor shall repair, at his own expense, and to the satisfaction of the Engineer, for damage to any utility shown or not shown on the plans.

Should utilities not shown on the plans be found during excavations, the Contractor shall promptly notify the Engineer for instructions as to further action.

The Contractor shall make necessary adjustments in the layout as may be required to connect to existing stub outs, should such stub outs not be located exactly as shown and as may be required

LANDSCAPE IRRIGATION SYSTEM

to work around existing work, at no increase in cost to the Owner. All such work will be recorded on record drawings and turned over to the Engineer prior to final acceptance.

Record Drawings

Record dimensioned locations and depths for each of the following:

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

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

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

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

Reproducible mylars will be furnished by the Engineer at cost for printing and handling.

Controller Charts

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

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

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

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

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Operating and Maintenance Manuals

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

Provide the following in each manual:

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

Checklist

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

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

Excavation and Trenching

The Contractor shall perform all excavation to the depth indicated in these Specifications and Contract drawings. The banks of trenches shall be kept as nearly vertical as practicable. Trenches shall be wide enough to allow a minimum of 4" between parallel pipelines or electrical wiring. Where rock excavation is required, or where stones are encountered in the bottom of the trench that would create a concentrated pressure on the pipe, the rock or stones shall be removed to a depth of 6" minimum below the trench depth indicated. The overdepth rock excavation and all excess trench excavation shall be backfilled with loose, moist earth or sand, thoroughly tamped. Whenever wet or otherwise unstable soil that is incapable of properly supporting the pipe is encountered in the trench bottom, such shall be removed to a depth and length required, and the trench backfilled to trench bottom grade as hereinafter specified, with course sand, fine gravel, or other suitable material.

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

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

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

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

Hydrostatic Tests

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

Water For Testing

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

Backfill and Compaction

After system is operating and required tests and inspections have been made, the irrigation trenches shall be carefully backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, gravel, soft shale, or other approved materials, free from large clods of earth or stone. Rock, broken concrete, or pavement, and large boulders shall not be used as backfill material. The backfill shall be thoroughly compacted and evened with the adjacent soil level.

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

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

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

Final Adjustment

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

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

1. Remove last head on section and install a temporary riser above grade. Install tee with pressure gauge attached on top of riser and reinstall head with nipple onto tee.
2. Correct operating pressure at last head of each section to match manufacturer's specifications.
3. After replacing head, at grade, tamp thoroughly around head.

Valve and Valve Box Placement

All manual, electric, and quick coupling valves shall be in boxes, and shall be set with a minimum of 6" of space between their top surface and the bottom of the valve box. Valves shall be fully opened and fully closed to ensure that all parts are in operating condition. Valve boxes shall be set plumb, vertical, and concentric with the valve stem. Any valve box which has moved from this required position so as to prevent the use of the operating wheel of the valve shall be reset by the Contractor at his own expense. A minimum of 9" of gravel shall be placed below all valve boxes, as detailed in the plans. Cut-sheets of all valve boxes styles must be supplied to the Village Engineer for review and approval. All valve boxes are incidental to the Contract.

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Cleanup

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

WATER SERVICE CONNECTION, 1.5

This work shall consist of installing new water service line for the future irrigation system from the proposed/existing water main, including the tapping of the proposed main, installation of the corporation stop, curb stop, quick coupling valve, and up to 10' of Type K Copper Water Piping, as shown on the detail in the plans. The size of the water main to be tapped needs to be verified by the Contractor.

Water service connections shall be Type K Copper Water Piping meeting specifications of ASTM B-88 and B-251. Water service connections over 1 ½" in diameter shall be copper and shall comply with all specifications for water mains, fittings, valve vaults, and appurtenances. All taps made into cast iron water main shall incorporate an approved tapping clamp. All copper connections shall be made with flared joints. Compression type joints shall be allowed underground off the corporation stop and roadway key stop. At the time of construction, all water services shall be left completely exposed until a representative of the Village of Schaumburg has inspected same.

Twenty-four hours notice is required for such inspection. At the time the inspection is made, a representative of the Contractor shall be present. The Contractor shall give 24 hours notice to the Water Department of the Village, before any water main is to be tapped. At the time the tap is made, a representative of the Contractor shall be present. All water services shall be subjected to a hydrostatic pressure test of 50 psi gauged for a period of not less than 1 hour. Such hydrostatic test shall be witnessed by an authorized representative of the Village of Schaumburg.

When a water service is installed beneath existing roadways, sidewalks, and driveways which are not being reconstructed, the pipe shall be installed by pushing or augering a hole beneath said roadway, sidewalk, and driveway and installing the water service pipe through the hole. Steel or PVC sleeving of water service may be required under the direction of the Director of Public Works or his authorized representative.

Corporation Stop

The corporation stop shall be Mueller Company H-1500, Oraseal, Ford F-600, or approved equal and shall be installed by tapping the water main with an approved tapping machine. The tap shall be made in the upper third of the main, as close to 45° angle as is practical. A tap into the top of the main will not be permitted. The service box shall be made in the United States.

Curb Stop (Buffalo Box)

The curb stop shall be Mueller Company M-15154, Ford B44-444, or approved equal with a Mueller H-10302 cast iron service box. Only cast iron buffalo style boxes and lids are allowed.

Quick Coupling Valve

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Quick coupling valves shall be composed of a bronze cast body with a weighted metal cover. The valve shall accept a single lug 3/4 inch bronze valve key for operation. Provide 1 Western AG 1", #4V100-R-Y, coupler and 1 No. 10 hose swivel elbow, or approved equal, for each water service connection shown on the plans.

Quick coupling valves shall be installed with the underside of flange flush with the finished grade. Quick coupling valves shall be installed on a swing joint assembly. Under the warranty, the Contractor shall return and adjust valves and valve boxes to proper grade after any settling has occurred.

Curb Stop and Quick Coupling Valve Location

The round way key stop and quick coupling valve shall be located within the parkway in a plastic valve box and approved by the Director of Public Works or his authorized representative. The cover of the buffalo box shall have the word "Water" cast therein. The Contractor shall record the location of each buffalo box and tap in relation to the nearest corner lot line. Two copies of this record shall be filed with the Village prior to final inspection.

Valve Boxes

A box shall be provided for all valves. Valve boxes shall be made of high strength plastic suitable for turf irrigation purposes. Boxes shall be suitable in size and configuration for the operability and adjustment of the valve. Extension sections will be used as appropriate to the depth of piping. All valve box covers shall bolt down or have locking mechanisms and shall be colored green or brown as selected by the Village Engineer.

The Contractor shall contact the Water Superintendent of the Village of Schaumburg, when water service installations are completed and installed, in conformance with the specifications, to set up final inspection for the Village acceptance and future maintenance of the installation. Prior to the final inspection, the Contractor shall see that all on-surface water appurtenances are clearly visible, locatable, and operable.

Method of Measurement: The Water Service Connection, 1.5, will be measured for payment per each at the locations shown in the plans and as directed by the Engineer.

Basis of Payment: Water Service Connection, 1.5, will be paid for at the Contract Unit Price per each for **WATER SERVICE CONNECTION, 1.5**.

COPPER WATER SERVICE, 1-1/2", IN TRENCH

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

The Contractor shall excavate a trench to the required depth as provided by the standard detail, avoiding any existing utilities that may be present and making any necessary adjustments to the route of the water service, as approved by the Engineer. The Contractor then shall place Type K Copper Water Piping in the trench. Any required copper water fittings also shall be considered included as part of this work. Once the pipe is in place and any fittings have been tightened, the

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trench shall be backfilled. Existing excavated material may be used in open areas; however, if under an improved surface or utility or within 2 feet of the roadway, the Engineer may require trench backfill. The Contractor shall demonstrate to the Engineer that the system piping is without leak.

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

Method of Measurement: Copper Water Service in Trench, 1-1/2" shall be paid for at the Contract Unit Price per lineal foot at the locations shown in the plans and as directed by the Engineer. Trench backfill shall be paid separately for the Contract Unit Price per cubic yard
TRENCH BACKFILL.

Basis of Payment: Copper Water Service in Trench, 1-1/2" will be paid for at the Contract Unit Price per lineal foot for **COPPER WATER SERVICE IN TRENCH, 1-1/2"**.

COPPER WATER SERVICE, 1-1/2", DIRECTIONAL BORE

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

The Contractor shall install the water service via directional bore, avoiding any existing utilities that may be present and making any necessary adjustments to the route of the water service, as approved by the Engineer. The Contractor then shall bore and pull Type K Copper Water Piping through a 3" PVC sleeve in the proposed route as directed by the Engineer. Any required copper water fittings also shall be considered included as part of this work. The Contractor shall demonstrate to the Engineer that the system piping has no leaks.

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

Method of Measurement: Copper Water Service, 1-1/2", Directional Bore will be measured for payment in linear feet at the locations shown in the plans and as directed by the Engineer.

Basis of Payment: Copper Water Service, 1-1/2", Directional Bore will be paid for at the Contract Unit Price per linear foot for **COPPER WATER SERVICE, 1-1/2", DIRECTIONAL BORE.**

BACKFLOW PREVENTER, COMPLETE 1-1/2"

This work shall consist of installing a new backflow preventer for the future irrigation system from the water service, including the backflow preventer, backflow preventer enclosure, quick connect valve, and up to 10' of Type K Copper Water Piping, as shown on the detail in the plans.

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Backflow Preventer (RPZ)

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

Backflow Preventer Enclosure

The Backflow Preventer, Complete shall include an enclosure constructed of fiberglass to completely cover and protect the backflow preventer and associated plumbing. The enclosure shall be sized appropriately to allow for additional space around backflow preventer for routine maintenance. The backflow preventer enclosure shall be Hot Box, model HB1, color green, per Village Standards. The enclosure shall be mounted on a 4" concrete pad poured with expansion joints around the piping. Concrete pad shall be installed such that the top of the pad is level with the adjacent grade. The enclosure shall be attached to the pad using stainless steel anchor bolts. The cost of labor and material to install the backflow preventer enclosure shall be included in the cost of the backflow preventer.

Quick Coupling Valve

Quick coupling valves shall be composed of a bronze cast body with a weighted metal cover. The valve shall accept a single lug 3/4" bronze valve key for operation. Provide 1 Western AG 1", #4V100-R-Y, coupler and 1 No. 10 hose swivel elbow, or approved equal, for each backflow preventer shown on the plans.

Quick coupling valves shall be installed with the underside of flange flush with the finished grade. Quick coupling valves shall be installed on a swing joint assembly. Under the warranty, the Contractor shall return and adjust valves and valve boxes to proper grade after any settling has occurred.

Method of Measurement: Backflow Preventer, Complete, will be measured for payment per each at the locations shown in the plans and as directed by the Engineer.

Basis of Payment: Backflow Preventer, Complete 1-1/2", will be paid for at the Contract Unit Price per each for **BACKFLOW PREVENTER, COMPLETE, 1-1/2"** of the size specified.

ELECTRIC VALVE, 1"

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

Operation shall be accomplished by means of integrally mounted 9V TBOS latching AC solenoid. Solenoid coil shall be potted in epoxy resin within a plastic coated stainless steel housing. Solenoids shall be completely waterproof, suitable for direct underground burial. A flow stem adjustment shall be included in each valve.

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

Method of Measurement: Electric Valves, 1", will be measured for payment per each at the locations shown in the plans and as directed by the Engineer.

Basis of Payment: Electric Remote Control Valves will be paid for at the Contract Unit Price per each for **ELECTRIC VALVE 1"**.

ELECTRIC CONTROLLER

The electric irrigation controllers shall be capable of operating the number of stations as indicated on the drawings. The system is designed to operate only 1 section valve at a time, unless otherwise noted. Electric controllers shall be Rain Bird Control Units with latching solenoids and rain shutoffs, per Village standards. Power source shall be a standard 9V alkaline battery for the TBOS controller. The 9V battery shall be furnished by the Contractor. Operation of the controller shall be full automatic, incorporating 1- 24 hour clock and 14 day calendar per controlled number of electric valves shown on the plan to start the sprinkling cycle any hour or hours of the day or night of any day or days over a repeating 14 day period. The controller shall be capable of repeating watering cycles as required with a maximum delay between the ending of 1 cycle and the beginning of the next not to exceed 2 hours. Control shall provide optional semiautomatic operation whereby the automatic cycle may be started independent of the clock and manual operation whereby any station may be operated by hand independent of all timing mechanism. The choice of automatic day or hour programming shall be available to the operator on the face of the control panel without the use of tools. The automatic controller shall be equipped with rain proof housing.

Electric controller shall be located as shown on the plans and shall be capable of operating the number of stations indicated. The system is designed to operate only 1 section at a time, unless otherwise noted on the plans in strict accordance with the manufacturer's published installation instructions.

The controller shall be mounted on the side of the vault so that it is above the expected water level. The controller and all associated valves shall be placed in the same vault.

Method of Measurement: Electric Controller, will be measured for payment per each at the locations shown in the plans and as directed by the Engineer.

Basis of Payment: Electric Controller will be paid for at the Contract Unit Price per each for **ELECTRIC CONTROLLER**.

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LOW VOLTAGE WIRE

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

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

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

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

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

Method of Measurement: Low Voltage Wire, will be measured for payment in linear feet at the locations shown in the plans and as directed by the Engineer.

Basis of Payment. Low Voltage Wire will be paid for at the Contract Unit Price per linear foot for **LOW VOLTAGE WIRE**.

FIELD TRANSMITTER

The field transmitter shall be a handheld remote transmitting unit capable of operating the number and kind of stations indicated. The transmitter shall be Rain Bird TBOS, per Village standards.

Method of Measurement: Field Transmitter, will be measured for payment per each and as directed by the Engineer.

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Basis of Payment: Field Transmitter will be paid for at the Contract Unit Price per each for **FIELD TRANSMITTER**.

1-1/2" PVC, SCHEDULE 40 IPS PLASTIC PIPE

POLYETHYLENE PIPE, (PE PIPE), 1-1/4"

POLYETHYLENE PIPE, (PE PIPE), 1"

PVC pipe manufactured in accordance with ASTM Standards noted herein.

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

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

- **Mainline PVC Pipe:** Shall be Schedule 40 for all sizes 1 1/2" and greater.

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

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

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

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

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

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

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

LANDSCAPE IRRIGATION SYSTEM

Pipe Installation

- **Sprinkler Mains:** Sprinkler mains are that portion of piping from water source to electric valves. This portion of piping is subject to surges since it is a closed portion of the sprinkler system. Sprinkler mains shall be installed in a trench with a minimum of 18" of cover.
- **Lateral Piping:** Lateral piping is that portion of piping from electrical valve to sprinkler heads. This portion of piping is not subject to surges since it is an "open end" portion of the sprinkler system. Lateral piping shall be installed in a trench with a minimum of 12" of cover.

Where the Contract plans call for continuous irrigation pipe to be placed beneath the roadway, the Contractor shall furnish and install by directional bore, a continuous 3" PVC Schedule 40 pipe or IDOT approved jointed pipe under the roadway structure. The irrigation pipe shall also be approved by the Engineer prior to installation.

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

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

PVC Pipe and Fitting Assembly

- **Solvent:** Use only solvent recommended by manufacturer to make solvent welded joints following standards noted herein. Thoroughly clean pipe and fittings of dirt, dust, and moisture with an approved PVC primer before applying solvent.
- **PVC to Metal Connection:** Work metal connections first. Use a non hardening pipe dope such as Permatex No. 2 or "Teflon" tape on threaded PVC to metal joints. Use only light wrench pressure.
- **Threaded PVC Connections:** Where required, use threaded PVC adapters into which pipe may be welded.

Method of Measurement: All irrigation piping will be measured for payment in linear feet at the locations shown in the plans and as directed by the Engineer for each of the following:

- 1-1/2" PVC, Schedule 40 IPS Plastic Pipe
- Polyethylene Pipe, (PE Pipe), 1-1/4"
- Polyethylene Pipe, (PE Pipe), 1-1/4"

Basis of Payment: Polyvinyl Chloride Pipe, PVC Pipe will be paid for at the Contract Unit Price per linear foot for each of the following:

- 1-1/2" PVC, SCHEDULE 40 IPS PLASTIC PIPE**

LANDSCAPE IRRIGATION SYSTEM

POLYETHYLENE PIPE, 1.25"
POLYETHYLENE PIPE, , 1"

POP-UP SPRAY HEADS

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

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

Method of Measurement: Pop-up Spray Heads, will be measured for payment each at the locations shown in the plans and as directed by the Engineer for the following:

Rain Bird 1804-12H
Rain Bird 1812-12H
Rain Bird 1804-12HV
Rain Bird 1812-12HV
Rain Bird 1804-10H
Rain Bird 1812-10H
Rain Bird 1804-8H
Rain Bird 1804-8HV
Rain Bird 1812-8H
Rain Bird 1804-EST
Rain Bird 1812-15H
Rain Bird 1812-15SST
Rain Bird 1804-15SST
Rain Bird 1804-CST

Basis of Payment: Pop-up Spray Heads will be paid for at the Contract Unit Price per each for the following:

SPRAY HEAD RAIN BIRD 1804-12H
SPRAY HEAD RAIN BIRD 1812-12H
SPRAY HEAD RAIN BIRD 1804-12HV
SPRAY HEAD RAIN BIRD 1812-12HV
SPRAY HEAD RAIN BIRD 1804-10H
SPRAY HEAD RAIN BIRD 1812-10H
SPRAY HEAD RAIN BIRD 1804-8H
SPRAY HEAD RAIN BIRD 1804-8HV
SPRAY HEAD RAIN BIRD 1812-8H
SPRAY HEAD RAIN BIRD 1804-EST

LANDSCAPE IRRIGATION SYSTEM

**SPRAY HEAD RAIN BIRD 1812-15H
SPRAY HEAD RAIN BIRD 1812-15SST
SPRAY HEAD RAIN BIRD 1804-15SST
SPRAY HEAD RAIN BIRD 1804-CST**

TRAFFIC SIGNAL SPECIFICATIONS

Effective: January 1, 2002

Revised: May 22, 2002

These Traffic Signal Special Provisions and the "District 1 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.

SECTION 800 ELECTRICAL

INSPECTION OF ELECTRICAL SYSTEMS.

Add the following to Section 802.01 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.

Revise Section 802.02 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 802 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 incidental to the contract without any extra compensation allowed to the Contractor.

SUBMITTALS.

Revise Section 802.04 of the Standard Specifications to read:

The Contractor shall provide:

- a. All material approval requests shall be submitted a minimum of seven (7) days prior to the delivery of equipment to the job site, or within 30 consecutive calendar days after the contract is awarded, or within 15 consecutive calendar days after the preconstruction meeting, whichever is first.
- b. Seven (7) copies of a letter from the Traffic Signal Contractor listing the 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. The letters will be stamped as approved or not approved accordingly and returned to the Contractor.
- c. One (1) copy of material catalog cuts.
- d. Seven (7) copies of mast arm poles and assemblies.
- e. 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 as required in items b, c and d.
- f. 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 Section 802.07 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) 705-4139 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) 705-4139 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 Section 802.10 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) 705-4139 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 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 (280 mm X 430 mm) 11" x 17" of the cabinet wiring diagrams.
7. The controller manufacturer shall provide a printer at the turn-on to supply a printed form, not to exceed (280 mm X 430 mm) 11" x 17" 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 803.00 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 1 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 805.00 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 1 Standard Traffic Signal Design Details" and applicable portions of the Specifications.

Materials.

- a. General. The completed control panel shall be constructed in accordance with UL Std. 508, Industrial Control Panel, and carry the UL label. Wire terminations shall be UL listed.

b. Enclosures.

1. Pole Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 2.03 mm (0.080-inch) 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 350 mm (14-inches) high, 225 mm (9-inches) wide and 200 mm (8-inches) 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 3.175 mm (0.125-inch) thick, the top 6.350 mm (0.250-inch) thick and the bottom 12.70 mm (0.500-inch) 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 1.91 mm (.075-inch) 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 1000 mm (40-inches high), 400 mm (16-inches) wide and 375 mm (15-inches) 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 $5n$ seconds and operate within a range of $-40C$ to $+85C$. The surge protector shall be UL 1449 Listed.
- d. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type 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, otherwise noted on the plans, 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 3.0 meters (10') in length, and 20mm (3/4") 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 20mm (3/4") grounding conduit, ground rod, and pole mount assembly. Any changes by the utility companies shall be approved by the engineer and paid for as an addition to the contract according to Article 109.05 of the Standard Specifications.

GROUNDING OF TRAFFIC SIGNAL SYSTEMS.

Revise Section 807.00 of the Standard Specifications to read:

General. All traffic signal systems, equipment and appurtenances shall be properly grounded in strict conformance with the NEC. See IDOT District 1 Traffic Signal detail plan sheet 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 paid item and will not be paid for separately.

Testing shall be according to Section 801.11.

- 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 Section 801.14 of the Standard Specifications.
 - 1) Equipment grounding conductors shall be XLP insulated No. 6, unless otherwise noted on the plans, and bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The 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. 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.
- 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 814.00 of the Standard Specifications:

All handholes shall be concrete, poured in place, with inside dimensions of 549 mm (21-1/2") 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 15.875 mm (7/16") 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 300 mm (12 inches).

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

Steel cable hooks shall be coated with hot-dipped galvanization in accordance with AASHTO Specification M111. Hooks shall be a minimum of 9.525 mm (3/8") diameter and extend into the handhole at least 150 mm (6 inches). Hooks shall be placed a minimum of 300 mm (12 inches) 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 to Section 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. 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 (100 mm) 4" and with a minimum (25 mm) 1" coverage over the XLP insulation, underwater grade.

Revise Section 817.05 of the Standard Specifications to read:

Basis of Payment: The tracer cable shall be paid for separately as ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C per (meter) foot, 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 Section 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 XLP jacket.

The traffic signal grounding conductor shall be bonded, using a Listed grounding connector (Burdny 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.

Revise Section 817.05 of the Standard Specifications to read:

Basis of Payment. Grounding cable shall be measured in place for payment in (meter) foot. 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/other Listed connectors and hardware.

RAILROAD INTERCONNECT CABLE.

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

Add to Section 817.02 of the Standard Specifications:

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

Revise Section 817.05 of the Standard Specifications to read:

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

MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

Revise Section 850.00 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, telephone service installations, communication cables and conduits to adjacent intersections.

The maintenance shall be according to District 1 revised Article 802.07 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. At approaches where a yellow flashing indication is necessary, as directed by the Engineer, stop signs will not be required. The Contractor shall furnish and equip all their 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 State. 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 Section 857.00 of the Standard Specifications:

Controllers shall be NEMA TS2 Type 1, Econolite ASC/2S-1000 or Eagle M41 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District 1 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.

By December 31, 2002, the controller shall provide a background timer which will prevent phases from being skipped during program changes.

MASTER CONTROLLER.

Revise Sections 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 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.

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.

The cabinet shall be provided with a Siecor CAC 3000, or equivalent, 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. The CAC 3000 shall be equipped with a standard Three-Electrode Heavy Duty Gas Tube Surge Arrestor.

The cabinet shall provide a caller identification unit with 50 number memory.

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.

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 suitable media (CD, 3 1/2" or 5 1/4" floppy disks as requested 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 his use in monitoring the system.

The Contractor shall be required to setup graphic displays and all software parameters for every intersection to be interconnected under this Contract, including complete viewing and control capabilities from IDOT remote monitor.

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 1 staff.

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 1 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.

Revise Section 871.00 of the Standard Specifications to read:

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 3M Model 8173 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 (4m) 13.0' of slack cable shall be provided for the controller cabinet. The controller cabinet slack cable shall be stored as directed by the Engineer.

Fiber Optic cable may be gel filled or 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 (meter) foot for the cable in place, including distribution enclosure and all connectors.

CONCRETE FOUNDATIONS.

Add the following to Section 878.03 of the Standard Specifications:

All anchor bolts shall be according to Section 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 1 Standard Traffic Signal Design Details." All Type "A" foundations shall be a minimum depth of 1.22 m (48").

Concrete Foundations, Type "D" for Traffic Signal Cabinets shall be a minimum of 1.22 m (48") long and 790 mm (31") wide. All Type "D" foundations shall be a minimum depth of 1.22 m (48"). The concrete apron shall be 910 mm X 1220 mm X 130 mm (36"x48"x5"). 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:

DESIGN TABLE FOR 750 mm (30-INCH) DIAMETER FOUNDATION
FOR ALL MAST ARMS 4.26M (14 FEET) TO 16.76M (55 FEET)
AND ALL COMBINATION POLES (DESIGN DEPTH IS 4.57 m [15 FEET])

	TYPE OF SOIL DESCRIPTION	DESIGN DEPTH OF FOUNDATION		TYPE OF SOIL DESCRIPTION	DESIGN DEPTH OF FOUNDATION
1.	SOFT CLAY	5.33 m(17' - 6")	*4.	LOOSE SAND	3.05 m(10' - 0")
2.	MEDIUM CLAY	3.81 m(12' - 6")	*5.	MEDIUM SAND	2.74 m(9' - 0")
3.	STIFF CLAY	2.59 m(8' - 6")	*6.	DENSE SAND	2.44 m(8' - 0")

* WATER TABLE ASSUMED BELOW DEPTHS SPECIFIED

No foundation is to be poured until the Resident Engineer gives his/her approval as to the depth of the foundation. Foundations used for Roadway Lighting shall provide an extra 65 mm (2-1/2 inch) duct.

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) 705-4139 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 1 Standard Traffic Signal Design Details". Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement 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 6.3 mm (1/4") deep x 100 mm (4") 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 3 mm (1/8") 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 incidental to the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be incidental to 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 protected to the satisfaction of the Engineer.

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

Preformed detector loops shall be factory assembled. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 17.2 mm (11/16") outside diameter (minimum), 9.5 mm (3/8") inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 1,720 kPa (250 psi) internal pressure rating. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns or interconnects to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. The wire used shall be #16 THWN 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.

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

EMERGENCY VEHICLE PRIORITY SYSTEM.

Revise Section 887.00 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 1 Standard Traffic Signal Design Details." The Confirmation Beacon shall consist of a 150 watt Par 38 flood lamp 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 4E-5 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 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 incidental to 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.

TEMPORARY TRAFFIC SIGNAL INSTALLATION.

Revise Section 890.00 of the Standard Specifications to read:

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.

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.

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) 100 mm (4 inch) diameter holes to run the electric cables through. The 100 mm (4 inch) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.

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".

All traffic signal sections and pedestrian signal sections shall be 300 mm (12 inches). 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 cable slack to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

The existing system interconnect is 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 incidental to the item Temporary Traffic Signal Installation.

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 incidental to the item Temporary Traffic Signal Installation.

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. Minor cross streets shall have vehicular detection provided by Microwave Vehicle Sensors or 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.

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.

The 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.

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.

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 incidental 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 incidental 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) 705-4139 for an inspection of the installation(s).

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 5.5m (18 feet), on temporary wood poles (Class 5 or better) of 13.7 m (45 feet), minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection may be used in place of the detector loops as approved by the Engineer.

Basis of Payment: This work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL INSTALLATION. 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 Section 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 by them outside the right-of-way at their 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.

SECTION 1000 MATERIALS

PEDESTRIAN PUSH-BUTTON.

Add the following to Section 1074.02 (b) and (d) of the Standard Specifications to read:

(b) Push-button assemblies shall be a cast aluminum alloy Pelco Push-button station, or an approved equivalent.

(d) The assembly shall provide ADA push-buttons with one of the following signs: SF-1017, 1018 or 1020 - 5" x 7 $\frac{3}{4}$ " (127 mm x 197 mm).

CONTROLLER CABINET AND PERIPHERAL EQUIPMENT.

Revise Section 1074.03 of the Standard Specifications to read:

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.

- 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.
- Controller Harness – Provide a TS2 Type 2 "A" wired harness in addition to the TS2 Type 1 harness.
- Surge Protection – EDCO Model 1210 IRS with failure indicator.
- BIU – Containment screw required.
- Transfer Relays – Solid state or mechanical flash relays are acceptable.
- Switch Guards – All switches shall be guarded.
- Heating – Two (2) porcelain light receptacles with cage protection controlled by both a wall switch and a thermostat.
- Plan & Wiring Diagrams – 12" x 16" (3.05mm x 4.06mm) moisture sealed container attached to door.
- Detector Racks – Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channel (16) of vehicular operation.
- Field Wiring Labels – All field wiring shall be labeled.
- Field Wiring Termination – Approved channel lugs required.
- Power Panel – Provide a nonconductive shield.
- Circuit Breaker – The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.
- Police Door – Provide wiring and termination for plug in manual phase advance switch.
- Railroad Pre-Emption Test Switch – Eaton 8830K13 SHA 1250 or equivalent.

TRAFFIC ACTUATED CONTROLLER AND CABINET INTERCONNECTED WITH RAILROADS.

Add the following to Section 1074.03 of the Standard Specifications to read:

Cabinets shall be new and NEMA TS2 Type 1 design. In addition to the aforementioned District One equipment specifications, the following shall apply to railroad interconnected equipment:

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 suppliers District One facility prior to field installation.

Pedestrian clearance during railroad pre-emption shall be limited to a flashing don't walk interval in length to the vehicle yellow clearance interval and shall time concurrently with the vehicle yellow clearance.

The controller shall provide for immediate track clearance green re-service upon receipt of each subsequent pre-empt demand. During this re-service all normal vehicle clearance intervals, including red revert, will be respected.

The terminal facility shall be wired so as to provide supervision of all essential pre-emption components. This wiring shall cause the facility to transfer to or remain in flashing operation in the event any critical component is missing, not connected or failed. Interface relays shall be wired so as to be in the energized state during normal (non-pre-empt) operation. Failure of a relay coil shall open the supervision loop and cause the intersection to transfer to flashing operation. Each critical element such as controller harnesses and interface relays shall be wired to form a series loop which must be complete for normal operation.

A method of supervising the 3 conductor cable interconnecting the traffic and railroad facilities shall provide flashing operation during failed cable conditions. Upon detection of a failed railroad interconnect the controller shall provide one (1) track clearance green interval and shall enter flashing operation at end of track clearance yellow interval. Such flashing operation must be manually reset. The supervision circuit shall, within reason, be capable of detecting failure of the supervision circuit components themselves, and shall provide fail-safe operation upon such failure.

The interconnect to railroad facility shall be such that demand for pre-emption begins when the railroad flashers begin to flash and ends when railroad gates begin to rise.

An IDOT approved method of controller security shall be implemented to assure data integrity and to preclude changes to critical data. The method shall include a means for the controller to continuously verify controller/cabinet CRC match. The CRC will be developed based on pre-emptor entries, unit data (including phases in use, sequence and ring structure, etc.), overlap assignment and timing, firmware version, and any special memory content necessary to proper operation. Where data is stored in a data module a spare data module shall be provided to the Engineer.

A test switch shall be provided in the railroad circuit to initiate pre-emption. See cabinet specifications.

ELECTRIC CABLE.

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

MAST ARM ASSEMBLY AND POLE.

Add the following to Section 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 1 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 manifestation of insects or critters. 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 Section 1077.03 (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) or galvanized. A corrosive resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on. 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 1 Standard Traffic Signal Design Details."

SIGNAL HEAD, BACKPLATE.

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

INDUCTIVE LOOP DETECTOR.

Add the following to Section 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.

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.

Display. 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.

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.

All LEDs shall be T-1 $\frac{3}{4}$ (5mm) and have an expected lamp life 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).

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.

Housing. 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.

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 1 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.

RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM

This work shall consist of providing a revised Signal Coordination and Timing (SCAT) Report and implementing optimized timings to an existing previously optimized closed loop traffic signal system. This work is required due to the addition of a signalized intersection to an existing system or a modification of an existing signalized intersection which affects the quality of an existing system's operation. MAINTENANCE OF THE SUBJECT INTERSECTION SHALL NOT BE ACCEPTED BY THE DEPARTMENT UNTIL THIS WORK IS COMPLETED.

After the new signalized intersection is added or the existing signal is modified, the traffic signal system shall be re-optimized by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District 1 of the Illinois Department of Transportation. The Contractor shall contact the Area Traffic Signal Operations Engineer at (708) 705-4139 for a listing of approved Consultants.

A listing of existing signal equipment, interconnect information and existing phasing/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 floppy disks, copies containing software runs for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall consult with the Area Traffic Signal Operations 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 re-optimization.

Traffic counts shall be taken at the subject intersection a minimum of 30 days after the traffic signals are approved for operation by the Area Traffic signal Operations Engineer. Seven day/twenty-four hour automatic traffic recorder counts will be required and 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 typical weekday from midday Monday to midday Friday, and if necessary, on the weekend. Additional manual turning movement counts may be necessary if heavy traffic flows exist during off peak hours. The turning movement counts shall identify cars, heavy vehicles, buses, and pedestrian movements.

A Capacity Analysis shall be conducted at the subject intersection to determine its level of service and degree of saturation. 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 with minor adjustments if necessary. Changes to the cycle lengths and offsets for the entire system may be required due to the addition/modification of the subject intersection. Both volume and occupancy shall be considered when developing the re-optimized timing program. Signal system optimization analyses shall be conducted utilizing SYNCHRO, PASSER II, TRANSYT 7F, SIGNAL 2000 or other appropriate approved computer software.

If the system is being re-optimized due to the addition of a signalized intersection, all the intersections shall be re-addressed according to the current standard of District One. The proposed signal timing plan shall be forwarded to IDOT for review prior to implementation. The timing plan shall include a traffic responsive program and a time-of-day program which may be used as a back-up system. After downloading the system timings, the Consultant shall make fine tuning adjustments to the timing in the field to alleviate observed adverse operating conditions and to enhance operations.

The Consultant shall furnish to IDOT an original and two copies of the revised SCAT Report for the re-optimized system. The report shall contain the following: turning movement and automatic traffic recorder counts, capacity analyses for each count period, computer optimization analysis for each count period, proposed implementation plans and summaries including system description, analysis methodology, method of effectiveness comparison results and special recommendations and/or observations. The new report shall follow the format of the old report and shall incorporate all data from the old report which remains unchanged. Copies of the entire database including intersection displays and any other displays which the system software allows shall be furnished to IDOT and to IDOT's Traffic Signal Maintenance Contractor.

Basis of Payment. This work shall be paid for at the contract unit price per lump sum for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, which price shall be payment in full for performing all work described herein.

UNIT DUCT.

All installations of Unit Duct shall be incidental to 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 (3 m) 10' up the wood pole, unless otherwise shown on the plans. Unit duct shall meet the requirements of NEC Article 343.

SIGNAL HEAD, LIGHT EMITTING DIODE.

a) General:

- 1) Signal Head, Light Emitting Diode (LED), 1 Face, (All Section Quantities), (All Mounting Types) shall meet 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, 2002, with the following modifications:
- 2) All signal and pedestrian heads shall be 300 mm (12") glossy black polycarbonate. Connecting hardware and mounting brackets shall be polycarbonate (black) or galvanized. A corrosive resistant anti-seize lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on. Post top mounting collars are required on all posts, and shall be constructed of the same material as the brackets.
- 3) The optical unit of all traffic signal and pedestrian head sections shall be light emitting diodes (LEDs) instead of incandescent bulbs. Each signal head shall conform fully to the "Interim Purchase Specification of the Institute of Transportation Engineers (ITE) for LED Vehicle Traffic Signal Modules" published July, 1998, or applicable successor ITE specification.
- 4) The lens of each signal indication 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 applied to provide abrasion resistance.
- 5) Each pedestrian signal LED module shall provide the ability to actuate the outlined upraised hand and the outlined walking person on one 12-inch (300mm) section. Two (2) 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. "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).
- 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) In the event of a power outage, light output from the LED modules shall cease instantaneously.
- 8) In addition to conforming with the requirements for circular LED signal modules, LED arrow indication modules shall meet existing specifications stated in the ITE Standard: "Vehicle Traffic Control Signal Heads," section 9.01. 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. The LEDs shall be spread evenly across the illuminated portion of the arrow area.
- 9) 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 Section 4.1.1 of the Interim Purchase Specification of the ITE for LED Vehicle Traffic Signal Modules 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.

- 10) 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.
- 11) 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.
- 12) 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.

b) Electrical

- 1) Maximum power consumption for LED modules is per Table 1.
- 2) LED modules will have EPA Energy Star compliance ratings, if applicable to that shape, size and color.
- 3) The modules shall operate from a 60 HZ \pm 3 HZ AC line over a voltage ranging from 95 volts to 135 volts. The fluctuations of line voltage shall have no visible effect on the luminous intensity of the indications.
- 4) Operating voltage of the modules shall be 120 VAC. All parameters shall be measured at this voltage.
- 5) The LED signal module shall have a power factor of 0.90 or greater.
- 6) Total harmonic distortion (current and voltage) induced into an AC power line by a LED signal module shall not exceed 20 percent.
- 7) The signal module on-board circuitry shall include voltage surge protection to withstand high-repetition noise transients as stated in Section 2.1.6 of NEMA Standard TS-2, 1992.
- 8) The LED circuitry shall prevent perceptible flicker to the unaided eye over the voltage range specified above.
- 9) All wiring and terminal blocks shall meet the requirements of Section 13.02 of the ITE Publication: Equipment and Material Standards, Chapter 2 (Vehicle Traffic Control Signal Heads).
- 10) The modules shall be operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).
- 11) 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.
- 12) The modules and associated on-board circuitry must meet Class A emission limits referred in Federal Communications Commission (FCC) Title 47, SubPart B, Section 15 regulations concerning the emission of electronic noise.

c) Photometric Requirements

- 1) The minimum initial luminous intensity values for the modules shall be as stated in Table 2 and/or Table 4 at 25°C.
- 2) The modules shall meet or exceed the illumination values as shown in Table 3 and/or Table 4, 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 Table 5, throughout the useful life over the operating temperature range.

d) Environmental Requirements

- 1) The LED signal module shall be rated for use in the operating temperature range of -40°C (-40°F) to +74°C (+165°F). The modules shall meet all specifications throughout this range.
- 2) The LED signal module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991 for Type 4 enclosures to protect all internal components.

e) Construction

- 1) The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation. The power supply for the module shall be integral to the unit.
- 2) The circuit board and power supply shall be contained inside the module.
- 3) The assembly and manufacturing process for the LED signal assembly shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

f) Materials

- 1) Material used for the lens and signal module construction shall conform to ASTM specifications for the materials.
- 2) Enclosures containing either the power supply or electronic components of the signal module shall be made of UL94VO flame retardant materials. The lens of the signal module is excluded from this requirement.

g) Traffic Signal and Pedestrian LED Module Identification

- 1) Each module shall have the manufacturer's name, trademark, model number, serial number, date of manufacture (month-year), and lot number as identification permanently marked on the back of the module.
- 2) The following operating characteristics shall be permanently marked on the back of the module: rated voltage and rated power in Watts and Volt-Ampere.

- 3) 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 25.4 mm (one inch) in diameter. Additionally, the color shall be written out in 12.7mm (½ in) letters next to the symbol.
- 4) If a specific mounting orientation is required, each module shall have prominent and permanent marking(s) for correct indexing and orientation within a signal housing. The markings shall consist of an up arrow, or the word "UP" or "TOP".

h) Traffic Signal LED Module

- 1) Modules can be manufactured under this specification for the following faces:
 - a 300 mm (12-inch) circular, multi-section
 - b 300 mm (12-inch) arrow, multi-section
 - c 300 mm (12-inch) pedestrian, 2 sections
- 2) The maximum weight of a module shall be 1.8 kg (4 lbs.).
- 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.~~

i) Retrofit Traffic Signal Module

- 1) The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superceded in this section.
 - 2) Retrofit modules can be manufactured under this specification for the following faces:
 - a 300 mm (12-inch) circular, multi-section
 - b 300 mm (12-inch) arrow, multi-section
 - c 300 mm (12-inch) pedestrian, 2 sections
 - 3) The module shall fit into existing traffic signal section housings built to the specifications detailed in ITE Publication: Equipment and Material Standards, Chapter (Vehicle Traffic Control Signal Heads).
 - 4) 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.
 - 5) The maximum weight of a Retrofit module shall be 1.8 kg (4 lbs.).
 - 6) 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.
 - 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.
- j) Two secured, color coded, 600 V, 20 AWG minimum, jacketed wires, conforming to the National Electric Code, rated for service at +105°C, are to be provided for electrical connection for each LED signal module. Conductors for modules, including Retrofit modules, shall be 39.4-inches (1m) in length, with quick disconnect terminals attached.

k) Lens

- 1) The lens of the module shall be tinted and integral to the unit, convex with a smooth outer surface and made of plastic.
- 2) 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.
- 3) The LED signal module lens shall be UV stabilized and shall be capable of withstanding ultraviolet (direct sunlight) exposure for a minimum period of 60 months without exhibiting evidence of deterioration.
- 4) The polymeric lens shall have a surface coating or chemical surface treatment to provide front surface abrasion resistance.

l) The following specification requirements apply to the 12-inch (300 mm) arrow module only. All general specifications apply unless specifically superceded in this section.

- 1) The arrow module shall meet specifications stated in Section 9.01 of the ITE Publication: Equipment and Material Standards, Chapter 2 (Vehicle Traffic Control Signal Heads) for arrow indications.
- 2) The LEDs shall be spread evenly across the illuminated portion of the arrow area.

m) The following specification requirements apply to the 12-inch (300 mm) PV module only. All general specifications apply unless specifically superceded in this section.

- 1) The module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.
- 2) The LEDs shall be spread evenly across the module.

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 1 Maximum Power Consumption (in Watts)

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

Table 2 Minimum Initial Intensities for Circular Indications (in cd)

Angle(v,h)	300 mm (12-inch)		
	Red	Yellow	Green
2.5, ±2.5	399	798	798
2.5, ±7.5	295	589	589
2.5, ±12.5	166	333	333
2.5, ±17.5	90	181	181
7.5, ±2.5	266	532	532
7.5, ±7.5	238	475	475
7.5, ±12.5	171	342	342
7.5, ±17.5	105	209	209
7.5, ±22.5	45	90	90
7.5, ±27.5	19	38	38
12.5, ±2.5	59	119	119
12.5, ±7.5	57	114	114
12.5, ±12.5	52	105	105
12.5, ±17.5	40	81	81
12.5, ±22.5	26	52	52
12.5, ±27.5	19	38	38
17.5, ±2.5	26	52	52
17.5, ±7.5	26	52	52
17.5, ±12.5	26	52	52
17.5, ±17.5	26	52	52
17.5, ±22.5	24	48	48
17.5, ±27.5	19	38	38

Table 3 Maintained Minimum Intensities for Circular Indications (in cd)

Angle(v,h)	300 mm (12-inch)		
	Red	Yellow	Green
2.5, ±2.5	339	678	678
2.5, ±7.5	251	501	501
2.5, ±12.5	141	283	283
2.5, ±17.5	77	154	154
7.5, ±2.5	226	452	452
7.5, ±7.5	202	404	404
7.5, ±12.5	145	291	291
7.5, ±17.	89	178	178
7.5, ±22.5	38	77	77
7.5, ±27.5	16	32	32
12.5, ±2.5	50	101	101
12.5, ±7.5	48	97	97
12.5, ±12.5	44	89	89
12.5, ±17.5	34	69	69
12.5, ±22.5	22	44	44
12.5, ±27.5	16	32	32
17.5, ±2.5	22	44	44
17.5, ±7.5	22	44	44
17.5, ±12.5	22	44	44
17.5, ±17.5	22	44	44
17.5, ±22.5	20	41	41
17.5, ±27.5	16	32	32

Table 4 Minimum Initial & Maintained Intensities for Arrow and Pedestrian Indications (in cd/m²)

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

Table 5 Chromaticity Standards (CIE Chart) Section 8.04 of

Red	Y: not greater than 0.308, or less than 0.998 - x
Yellow	Y: not less than 0.411, nor less than 0.995 - x,
Green	Y: Not less than 0.506 -.519x, nor less than 0.150 + 1.068x, nor more than 0.730 - x

CONFIRMATION BEACON

This item shall consist of furnishing and installing a Traffic Signal Emergency Confirmation Beacon separate from an emergency vehicle light detector at the locations specified on the plans.

Confirmation Beacon, Single Channel - Where the light detector is used to detect a single direction of traffic, one lamp for only that direction shall be provided. If the detector covers opposing directions of traffic and has a single output, a separate lamp for each direction shall be provided but they shall have identical indications.

The Confirmation Beacon shall be "Opticom" brand as manufactured by 3M Company. The Confirmation Beacon shall consist of a 150 watt Par 38 flood lamp 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. No new holes may be drilled into signal poles, mast arms, or posts. 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 signalized by a flashing indication at the rate specified by Section 4K.01 of the **Manual on Uniform Traffic Control Devices**. The stopped pre-empted movements shall be signalized by a continuous indication.

Basis of Payment. This work will be paid for at the contract unit price each for CONFIRMATION BEACON, which shall be payment in full for furnishing and installing the confirmation beacon and all other equipment and connectors required for proper operation.

Special Provision

FULL-ACTUATED CONTROLLER AND CABINET, SPECIAL

Effective: January 1, 2002

This work shall consist of furnishing and installing a(n) "Econolite" brand traffic actuated solid state digital controller in the controller cabinet of the type specified, meeting the requirements of the current District One Traffic Signal Special Provisions.

Basis of Payment. This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND CABINET, SPECIAL of the type specified, which price shall be payment in full for furnishing and installing the controller complete including conflict monitor, load switches and flasher relays, with necessary connections for proper operation.

The type specified will indicate the type of cabinet. For example, FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL.

Special Provision

PEDESTRIAN PUSH-BUTTON SPECIAL

This work shall consist of furnishing and installing a Progressive Traffic Products brand Bumblebee Model pedestrian push-button, or approved equal. This work shall be done in accordance with section 888 of the Standard Specifications and page TS-20 of the District 1 Traffic Signal Specifications, revised 5/22/02.

Basis of Payment. This work will be paid for at the contract unit price each for PEDESTRIAN PUSH-BUTTON SPECIAL, which price shall be payment in full for furnishing and installing the push-button and sign and making all electrical connections.

Special Provision

REMOVE EXISTING JUNCTION BOX

Effective: January 1, 1997

This work shall consist of removing the cover and existing junction box completely, being careful not to damage those existing conduits which will be reused in the new signal system. In case an existing conduit designated to be reused is damaged, the unsuitable portion will be cut off and a new conduit furnished and spliced in its place. The repair work will not be paid for separately, but will be incidental to this bid item. The junction box and cover will be disposed of as directed by the Engineer and all debris removed beyond the right-of-way.

Basis of Payment. This work will be paid for at the contract unit price each for REMOVE EXISTING JUNCTION BOX, which price shall be payment in full for all labor and materials necessary to complete the work as described above.

Special Provision

TEMPORARY TRAFFIC SIGNAL SYSTEM

This work consists of installing and maintaining a temporary traffic signal system. Communication with the existing system shall be maintained throughout the duration of construction except when the interconnect cable is being removed and reinstalled.

Wood poles shall be installed at the locations specified on the project plans. The existing interconnect cable shall be removed from the existing conduit and reinstalled on the temporary wood poles. The existing interconnect cable shall be supported aerially to the temporary traffic signal controller cabinet. Should additional cable be required, all splices are to take place above ground on the wood poles, or as directed by the engineer.

Basis of Payment. All work described above shall be paid for each as "TEMPORARY TRAFFIC SIGNAL SYSTEM."

Special Provision

SIGNAL HEAD

PEDESTRIAN SIGNAL HEAD

TRAFFIC SIGNAL POST

STEEL MAST ARM ASSEMBLY AND POLE

All proposed Traffic Signal Posts and Mast Arm Assembly and Poles shall be factory powder coated black. All other traffic signal equipment and associated brackets, bolts, etc. covered under the specifications listed below shall be painted black.

- 1078.01 (g) Traffic Signal Head
- 1078.02 (f) Pedestrian Signal Head
- 1077.01 (d) Traffic Signal Post, including Post Base
Mast Arm Assembly and Pole
- 1077.02 (b) Pedestrian Push Button Post, including Post Base

The cost of painting or powder coating the required traffic signal equipment shall be incidental to the costs of materials and installation of such items.

BITUMINOUS CONCRETE SURFACE COURSE (BDE)

Effective: April 1, 2001

Revised: April 1, 2003

Replace the fourth paragraph of Article 406.23(b) of the Standard Specifications with the following:

"Mixture for cracks, joints, flangeways, leveling binder (machine method), leveling binder (hand method) and binder course in excess of 103 percent of the quantity specified by the Engineer will not be measured for payment.

Surface course mixture in excess of 103 percent of adjusted plan quantity will not be measured for payment. The adjusted plan quantity for surface course mixtures will be calculated as follows:

Adjusted Plan Quantity = C x quantity shown on the plans or as specified by the Engineer.

where C = metric: $C = \frac{G_{mb} \times 24.99}{U}$ English: $C = \frac{G_{mb} \times 46.8}{U}$

and where:

G_{mb} = average bulk specific gravity from approved mix design.

U = Unit weight of surface course shown on the plans in kg/sq m/25 mm (lb/sq yd/in.), used to estimate plan quantity.

24.99 = metric constant.

46.8 = English constant.

If project circumstances warrant a new surface course mix design, the above equations shall be used to calculate the adjusted plan quantity for each mix design using its respective average bulk specific gravity."

80050

COARSE AGGREGATE FOR TRENCH BACKFILL, BACKFILL AND BEDDING (BDE)

Effective: April 1, 2001
Revised: November 1, 2003

Revise Article 208.02 of the Standard Specifications to read:

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

- (a) Fine Aggregate (Note 1)..... 1003.04
- (b) Coarse Aggregate (Note 2) 1004.06

Note 1. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 2. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first sentence of the second paragraph of subparagraph (b) in Article 208.03 of the Standard Specifications to read:

"Any material meeting the requirements of Articles 1003.04 or 1004.06 which has been excavated from the trenches shall be used for backfilling the trenches."

Add the following to the end of Article 542.02 of the Standard Specifications:

- "(bb) Fine Aggregate (Note 1)..... 1003.04
- (cc) Coarse Aggregate (Note 2) 1004.06

Note 1. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 2. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first and second sentences of the second paragraph of subparagraph (a) of Article 542.04 of the Standard Specifications to read:

"The unstable and unsuitable material shall be removed to a depth determined by the Engineer and for a width of one diameter (or equivalent diameter) of the pipe on each side of the pipe culvert, and replaced with aggregate. Rock shall be removed to an elevation 300 mm (1 ft) lower than the bottom of the pipe or to a depth equal to 40 mm/m (1/2 in./ft) of ultimate fill height over the top of the pipe culvert, whichever is the greater depth, and for a width as specified in (b) below, and replaced with aggregate."

Revise the second paragraph of subparagraph (c) of Article 542.04 of the Standard Specifications to read:

"Well compacted aggregate, at least 100 mm (4 in.) in depth below the pipe culvert, shall be placed the entire width of the trench and for the length of the pipe culvert, except well compacted impervious material shall be used for the outer 1 m (3 ft) at each end of the pipe. When the trench has been widened by the removal and replacement of unstable or unsuitable material, the foundation material shall be placed for a width not less than the above specified widths on each side of the pipe. The aggregate and impervious material shall be approved by the Engineer and shall be compacted to the Engineer's satisfaction by mechanical means."

Revise subparagraph (e) of Article 542.04 of the Standard Specifications to read:

"(e) Backfilling. As soon as the condition of the pipe culvert will permit, the entire width of the trench shall be backfilled with aggregate to a height of at least the elevation of the center of the pipe. The aggregate shall be placed longitudinally along the pipe culvert, except at the outer 1 m (3 ft) at each end of the culvert which shall be backfilled with impervious material. The elevation of the backfill material on each side of the pipe shall be the same. The space under the pipe shall be completely filled. The aggregate and impervious material shall be placed in 200 mm (8 in.) layers, loose measurement. When using PVC, PE, or corrugated metal pipe, the aggregate shall be continued to a height of at least 300 mm (1 ft) above the top of the pipe and compacted to a minimum of 85 percent of standard lab density by mechanical means. When reinforced concrete pipes are used and the trench is within 600 mm (2 ft) of the pavement structure, the backfill shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

When using PVC, PE, or corrugated metal pipe a minimum of 300 mm (1 ft) of cover from the top of the pipe to the top of the subgrade will be required.

The installed pipe and its embedment shall not be disturbed when using movable trench boxes and shields, sheet pile, or other trench protection.

The remainder of the trench shall be backfilled with select material, from excavation or borrow, free from large or frozen lumps, clods or rock, meeting the approval of the Engineer. The material shall be placed in layers not exceeding 200 mm (8 in.) in depth, loose measurement and compacted to 95 percent of the standard laboratory density. Compaction shall be obtained by use of mechanical tampers or with approved vibratory compactors. Before compacting, each layer shall be wetted or dried to bring the moisture content within the limits of 80 to 110 percent of optimum moisture content determined according to AASHTO T 99 (Method C). All backfill material shall be deposited in the trench or excavation in such a manner as not to damage the culvert. The filling of the trench shall be carried on simultaneously on both sides of the pipe.

The Contractor may, at his/her expense, backfill the entire trench with aggregate in lieu of select material. The aggregate shall be compacted to the satisfaction of the Engineer by mechanical means.

The backfill material for all trenches and excavations made in the subgrade of the proposed improvement, and for all trenches outside of the subgrade where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder, or sidewalk shall be according to Section 208. The trench backfill material shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

~~The Contractor may, at his/her expense, backfill the entire trench with controlled low strength material meeting the approval of the Engineer.~~

When the trench has been widened for the removal and replacement of unstable or unsuitable material, the backfilling with aggregate and impervious material, will be required for a width of at least the specified widths on each side of the pipe. The remaining width of each layer may be backfilled with select material. Each 200 mm (8 in.) layer for the entire trench width shall be completed before beginning the placement of the next layer."

Revise subparagraph (b) of Article 542.05 of the Standard Specifications to read:

"(b) Embankment. Embankment extending to an elevation of 300 mm (1 ft) over the top of the pipe shall be constructed according to Article 542.04(f), except the material up to the elevation of the center of the pipe and extending to a width of at least 450 mm (18 in.) on each side of the pipe, exclusive of the outer 1 m (3 ft) at each end of the pipe, shall consist of aggregate. At the outer 1 m (3 ft) at each end of the culvert, impervious material shall be used."

Add the following paragraph after the first paragraph of Article 542.10 of the Standard Specifications:

"Trench backfill will be measured for payment according to Article 208.03."

Add the following paragraph after the third paragraph of Article 542.11 of the Standard Specifications:

"Trench backfill will be paid for according to Article 208.04."

Add the following to of Article 550.02 of the Standard Specifications:

"(m) Fine Aggregate (Note 2).....	1003.04
(n) Coarse Aggregate (Note 3)	1004.06

Note 2. The fine aggregate shall be moist to the satisfaction of the Engineer.

Note 3. The coarse aggregate shall be wet to the satisfaction of the Engineer."

Revise the first two sentences of the third paragraph of Article 550.04 of the Standard Specifications to read:

~~Well-compacted, aggregate bedding material~~ at least 100 mm (4 in.) in depth below the pipe, shall be placed for the entire width of the trench and length of the pipe. The aggregate shall be compacted to the satisfaction of the Engineer by mechanical means."

Revise Article 550.07 of the Standard Specifications to read:

"550.07 Backfilling. As soon as the condition of the pipe will permit, the entire width of the trench shall be backfilled with aggregate to a height of at least the elevation of the center of the pipe. The aggregate shall be placed longitudinally along the pipe. The elevation of the backfill material on each side of the pipe shall be the same. The space under the pipe shall be completely filled. The aggregate backfill material shall be placed in 200 mm (8 in.) layers, loose measurement and compacted to the satisfaction of the Engineer by mechanical means. When using PVC pipe, the aggregate shall be continued to a height of at least 300 mm (12 in.) above the top of the pipe.

The installed pipe and its embedment shall not be disturbed when using movable trench boxes and shields, sheet pile, or other trench protection.

The remainder of the trench and excavation shall be backfilled to the natural line or finished surface as rapidly as the condition of the sewer will permit. The backfill material shall consist of suitable excavated material from the trench or of trench backfill as herein specified. All backfill material shall be deposited in the trench or excavation in such a manner as not to damage the sewer and shall be compacted to the satisfaction of the Engineer by mechanical means. The filling of the trench shall be carried on simultaneously on both sides of the pipe.

The backfill material for trenches and excavation made in the subgrade of the proposed improvement, and for all trenches outside of the subgrade where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder or sidewalk shall be according to Section 208. The backfill material shall be compacted to 85 percent of standard lab density by mechanical means.

All backfill material up to a height of 300 mm (1 ft) above the pipe shall be deposited in uniform layers not exceeding 200 mm (8 in.) thick, loose measurement. The material in each layer shall be compacted to the satisfaction of the Engineer by mechanical means. The

backfilling above this height shall be done according to Method 1, 2 or 3 as described below, with the following exceptions.

When trench backfill or excavated material meeting the requirements of Section 208 is required above the first 300 mm (1 ft) of the pipe, the layers shall not exceed 200 mm (8 in.). Gradations CA6 or CA10 shall not be used with Method 2 or Method 3.

Method 1. The material shall be deposited in uniform layers not exceeding 300 mm (1 ft) thick, loose measurement, and each layer shall be compacted to the satisfaction of the Engineer by mechanical means.

~~Method 2. The material shall be deposited in uniform layers not exceeding 300 mm (1 ft) thick, loose measurement, and each layer shall be either inundated or deposited in water.~~

Method 3. The trench shall be backfilled with loose material, and settlement secured by introducing water through holes jetted into the backfill to a point approximately 600 mm (2 ft) above the top of the pipe. The holes shall be spaced as directed by the Engineer but shall be no farther than 2 m (6 ft) apart.

The water shall be injected at a pressure just sufficient to sink the holes at a moderate rate of speed. The pressure shall be such that the water will not cut cavities in the backfill material nor overflow the surface. If water does overflow the surface, it shall be drained into the jetted holes by means of shallow trenches.

Water shall be injected as long as it will be absorbed by the backfill material and until samples taken from test holes in the trench show a satisfactory moisture content. The Contractor shall bore the test holes not more than 15 m (50 ft) apart and at such other locations in the trench designated by the Engineer. As soon as the watersoaking has been completed, all holes shall be filled with soil and compacted by ramming with a tool approved by the Engineer.

Backfill material which has been watersoaked shall be allowed to settle and dry for at least 10 days before any surface course or pavement is constructed on it. The length of time may be altered, if deemed desirable, by the Engineer. Where the inner edge of the trench is within 600 mm (2 ft) of the edge of the proposed pavement, curb, gutter, curb and gutter, stabilized shoulder or sidewalk, the provisions of this paragraph shall also apply.

At the end of the settling and drying period, the crusted top of the backfill material shall be scarified and, if necessary, sufficient backfill material added, as specified in Method 1, to complete the backfilling operations.

The method used for backfilling and compacting the backfill material shall be the choice of the Contractor. If the method used does not produce results satisfactory to the Engineer, the Contractor will be required to alter or change the method being used so the resultant backfill will be satisfactory to the Engineer. Should the Contractor be required to alter or change the

method being used, no additional compensation will be allowed for altering or changing the method.

The Contractor may, at his/her expense, backfill the entire trench with controlled low strength material meeting the approval of the Engineer.

When sheeting and bracing have been used, sufficient bracing shall be left across the trench as the backfilling progresses to hold the sides firmly in place without caving or settlement. This bracing shall be removed as soon as practicable. Any depressions which may develop within the area involved in the construction operation due to settlement of the backfilling material shall be filled in a manner approved by the Engineer.

When the Contractor constructs the trench with sloped or benched sides according to Article 550.04, backfilling for the full width of the excavation shall be as specified, except no additional compensation will be allowed for trench backfill material required outside the vertical limits of the specified trench width.

Whenever excavation is made for installing sewer pipe across earth shoulders or private property, the topsoil disturbed by excavation operations shall be replaced as nearly as possible in its original position, and the whole area involved in the construction operations shall be left in a neat and presentable condition.

When using any PVC pipe, the pipe shall be backfilled with aggregate to 300 mm (1 ft) over the top of the pipe and compacted to a minimum of 85 percent of standard lab density by mechanical means.

When reinforced concrete pipes are used and the trench is within 600 mm (2 ft) of the pavement structure, the backfill shall be compacted to a minimum of 85 percent of standard lab density by mechanical means.

Deflection Testing for Storm Sewers. All PVC storm sewers will be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted.

For PVC storm sewers with diameters 600 mm (24 in.) or smaller, a mandrel drag shall be used for deflection testing. For PVC storm sewers with diameters over 600 mm (24 in.), deflection measurements other than by a mandrel drag shall be used.

Where the mandrel is used, the mandrel shall be furnished by the Contractor and pulled by hand through the pipeline with a suitable rope or cable connected to each end. Winching or other means of forcing the deflection gauge through the pipeline will not be allowed.

The mandrel shall be of a shape similar to that of a true circle enabling the gauge to pass through a satisfactory pipeline with little or no resistance. The mandrel shall be of a design to prevent it from tipping from side to side and to prevent debris build-up from occurring between the channels of the adjacent fins or legs during operation. Each end of the core of the mandrel shall have fasteners to which the pulling cables can be attached. The mandrel shall have 9,

various sized fins or legs of appropriate dimension for various diameter pipes. Each fin or leg shall have a permanent marking that states its designated pipe size and percent of deflection allowable.

The outside diameter of the mandrel shall be 95 percent of the base inside diameter, where the base inside diameter is:

For all PVC pipe (as defined using ASTM D 3034 methodology):

If the pipe is found to have a deflection greater than specified, that pipe section shall be removed, replaced, and retested."

Revise subparagraph (c) of Article 1003.04 of the Standard Specifications to read:

"(c) Gradation. The fine aggregate gradation shall be as follows:

Backfill, bedding and trench backfill for pipe culverts and storm sewers	FA 1, FA 2, FA 6, or FA 21	
Porous granular embankment and backfill, french drains, and sand backfill for underdrains	FA 1, FA 2, or FA20 (Note 1)	

Note 1: For FA 1, FA 2, and FA 20 the percent passing the 75 μ m (No. 200) sieve shall be 2 ± 2 ."

Revise the title of Article 1004.06 of the Standard Specifications to read:

"Coarse Aggregate for Blotter, Embankment, Backfill, Trench Backfill, French Drains, and Bedding."

Add the following to the end of subparagraph (c) of Article 1004.06 of the Standard Specifications:

"Backfill, bedding, and trench backfill for pipe culverts and storm sewers	CA 6, CA 10, and CA 18"
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80051

CONCRETE ADMIXTURES (BDE)

Effective: January 1, 2003

Revised: July 1, 2004

Revise Article 1020.05(b) of the Standard Specifications to read:

"(b) Admixtures. Except as specified, the use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted only when approved in writing by the Engineer. The Department will maintain an Approved List of Concrete Admixtures. When the Department permits the use of a calcium chloride accelerator, it shall be according to Article 442.02, Note 5.

When the atmosphere or concrete temperature is 18 °C (65 °F) or higher, a retarding admixture meeting the requirements of Article 1021.03 shall be used in the Class BD Concrete and portland cement concrete bridge deck overlays. The amount of retarding admixture to be used will be determined by the Engineer. The proportions of the ingredients of the concrete shall be the same as without the retarding admixture except that the amount of mixing water shall be reduced, as may be necessary, in order to maintain the consistency of the concrete as required. In addition, a high range water-reducing admixture shall be used in Class BD Concrete. The amount of high range water-reducing admixture will be determined by the Engineer. At the option of the Contractor, a water-reducing admixture may be used. Type I cement shall be used.

For Class PC and PS Concrete, a retarding admixture may be added to the concrete mixture when the concrete temperature is 18 °C (65 °F) or higher. Other admixtures may be used when approved by the Engineer, or if specified by the contract. If an accelerating admixture is permitted by the Engineer, it shall be the non-chloride type.

At the Contractor's option, admixtures in addition to an air-entraining admixture may be used for Class PP-1 concrete. The accelerator shall be the non-chloride type. If a water-reducing or retarding admixture is used, the cement factor may be reduced a maximum 18 kg/cu m (0.30 hundredweight/cu yd). If a high range water-reducing admixture is used, the cement factor may be reduced a maximum 36 kg/cu m (0.60 hundredweight/cu yd). Cement factor reductions shall not be cumulative when using multiple admixtures. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

If Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 concrete, a water-reducing or high range water-reducing admixture shall be used. However, the cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used. In addition, an accelerator shall not be used.

For Class PP-2 or PP-3 concrete, a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air-entraining admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-2 or PP-3 concrete, the Contractor has the option to use a water-reducing admixture. A retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

When the air temperature is less than 13 °C (55 °F) for Class PP-1 or PP-2 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture. An accelerator shall not be used. For stationary or truck mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has the option to use a mobile portland cement concrete plant according to Article 1103.04, but a retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

If the Department specifies a calcium chloride accelerator for Class PP-1 concrete, the maximum chloride dosage shall be 1.0 L (1.0 quart) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.0 L (2.0 quarts) per 45 kg (100 lb) of cement if approved by the Engineer. If the Department specifies a calcium chloride accelerator for Class PP-2 concrete, the maximum chloride dosage shall be 1.3 L (1.3 quarts) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.6 L (2.6 quarts) per 45 kg (100 lb) of cement if approved by the Engineer.

For Class PV, MS, SI, RR, SC and SH concrete, at the option of the Contractor, or when specified by the Engineer, a water-reducing admixture or a retarding admixture may be used. The amount of water-reducing admixture or retarding admixture permitted will be determined by the Engineer. The air-entraining admixture and other admixtures shall be added to the concrete separately, and shall be permitted to intermingle only after they have separately entered the concrete batch. The sequence, method and equipment for adding the admixtures shall be approved by the Engineer. The water-reducing admixture shall not delay the initial set of the concrete by more than one hour. Type I cement shall be used.

When a water-reducing admixture is added, a cement factor reduction of up to 18 kg/cu m (0.30 hundredweight/cu yd), from the concrete designed for a specific slump without the admixture, will be permitted for Class PV, MS, SI, RR, SC and SH concrete. When an approved high range water-reducing admixture is used, a cement factor reduction of up to 36 kg/cu m (0.60 hundredweight/cu yd), from a specific water cement/ratio without the admixture, will be permitted based on a 14 percent minimum water reduction. This is applicable to Class PV, MS, SI, RR, SC and SH concrete. A cement factor below 320 kg/cu m (5.35 hundredweight/cu yd) will not be permitted for Class PV, MS, SI, RR, SC and SH concrete. A cement factor reduction will not be

allowed for concrete placed underwater. Cement factor reductions shall not be cumulative when using multiple admixtures.

For use of admixtures to control concrete temperature, refer to Articles 1020.14(a) and 1020.14(b).

The maximum slumps given in Table 1 may be increased to 175 mm (7 in.) when a high range water-reducing admixture is used for all classes of concrete except Class PV and PP."

Revise Section 1021 of the Standard Specifications to read:

"SECTION 1021. CONCRETE ADMIXTURES

1021.01 General. Admixtures shall be furnished in liquid form ready for use. The admixtures may be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer and trade name of the material. Containers shall be readily identifiable to the satisfaction of the Engineer as to manufacturer and trade name of the material they contain.

Prior to inclusion of a product on the Department's Approved List of Concrete Admixtures, the manufacturer shall submit a report prepared by an independent laboratory accredited by the AASHTO Accreditation Program. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications.

Tests shall be conducted using materials and methods specified on a "test" concrete and a "reference" concrete, together with a certification that no changes have been made in the formulation of the material since the performance of the tests. Per the manufacturer's option, the cement content for all required tests shall either be according to applicable specifications or 335 kg/cu m (5.65 cwt/cu yd). Compressive strength test results for six months and one year will not be required.

In addition to the report, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The test and reference concrete mixture shall contain a cement content of 335 kg/cu m (5.65 cwt/cu yd). The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by the AASHTO Accreditation Program.

Prior to the approval of an admixture, the Engineer may conduct all or part of the applicable tests on a sample that is representative of the material to be furnished. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 335 kg/cu m (5.65 cwt/cu yd). For freeze-thaw testing, the Department will perform the test according to Illinois Modified AASHTO T 161, Procedure B.

The manufacturer shall include in the submittal the following information according to ASTM C 494; the average and manufacturing range of specific gravity, the average and manufacturing range of solids in the solution, and the average and manufacturing range of pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

When test results are more than seven years old, the manufacturer shall re-submit the infrared spectrophotometer trace and the report prepared by an independent laboratory accredited by the AASHTO Accreditation Program.

All admixtures, except chloride-based accelerators, shall contain no more than 0.3 percent chloride by mass (weight).

1021.02 Air-Entraining Admixtures. Air-entraining admixtures shall conform to the requirements of AASHTO M 154.

If the manufacturer certifies that the air-entraining admixture is an aqueous solution of Vinsol resin that has been neutralized with sodium hydroxide (caustic soda), testing for compliance with the requirements may be waived by the Engineer. In the certification, the manufacturer shall show complete information with respect to the formulation of the solution, including the number of parts of Vinsol resin to each part of sodium hydroxide. Before the approval of its use is granted, the Engineer will test the solution for its air-entraining quality in comparison with a solution prepared and kept for that purpose.

1021.03 Retarding and Water-Reducing Admixtures. The admixture shall comply with the following requirements:

- (a) The retarding admixture shall comply with the requirements of AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
- (b) The water-reducing admixture shall comply with the requirements of AASHTO M 194, Type A.
- (c) The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

When a Type F or Type G high range water-reducing admixture is used, water-cement ratios shall be a minimum of 0.32.

Type F or Type G admixtures may be used, subject to the following restrictions:

For Class MS, SI, RR, SC and SH concrete, the water-cement ratio shall be a maximum of 0.44.

The Type F or Type G admixture shall be added at the jobsite unless otherwise directed by the Engineer. The initial slump shall be a minimum of 40 mm (1 1/2 in.)

prior to addition of the Type F or Type G admixture, except as approved by the Engineer.

When a Type F or Type G admixture is used, retempering with water or with a Type G admixture will not be allowed. An additional dosage of a Type F admixture, not to exceed 40 percent of the original dosage, may be used to retemper concrete once, provided set time is not unduly affected. A second retempering with a Type F admixture may be used for all classes of concrete except Class PP and SC, provided that the dosage does not exceed the dosage used for the first retempering, and provided that the set time is not unduly affected. No further retempering will be allowed.

Air tests shall be performed after the addition of the Type F or Type G admixture.

1021.04 Set Accelerating Admixtures. The admixture shall comply with the requirements of AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating)"

80094

CONCRETE BARRIER (BDE)

Effective: January 1, 2004

Revised: April 2, 2004

Revise Section 637 of the Standard Specifications to read:

"SECTION 637. CONCRETE BARRIER

637.01 Description. This work shall consist of constructing a concrete barrier and its base.

637.02 Materials. Materials for concrete barrier and concrete base shall conform to the requirements of the following Articles of Section 1000 - Materials:

Item	Article/Section
(a) Portland Cement Concrete	1020
(b) Tie Bars (Note 1)	1006.10(a)(b)
(c) Dowel Bars	1006.11(b)
(d) Protective Coat	1023
(e) Non-Shrink Grout	1024
(f) Chemical Adhesive	1027
(g) Preformed Expansion Joint Filler	1051.01 – 1051.08

Note 1. Tie bars shall be Grade 400 (Grade 60).

Materials for bituminous concrete base shall conform to the requirements of Article 356.02.

637.03 Equipment. Equipment for concrete barrier shall conform to the requirements of the following Articles of Section 1100 - Equipment:

Item	Article/Section
(a) Hand Vibrator	1103.17(a)
(b) 3 m (10 ft) Straightedge	1103.17(h)

Equipment for portland cement concrete base shall conform to the requirements of Article 483.03.

Equipment for bituminous concrete base shall conform to the requirements of Article 356.03.

CONSTRUCTION REQUIREMENTS

637.04 Barrier Base. The base may be constructed separately or poured monolithically with the barrier. When constructed separately, portland cement concrete base shall be constructed according to Articles 483.04 – 483.06, except the surface shall be finished

according to Article 503.09(a). Bituminous concrete base shall be constructed according to Articles 356.05 and 356.06.

637.05 Anchoring. Barrier shall be anchored to the base by the methods shown on the plans. When tie bars are used, they shall be installed in preformed or drilled holes with a non-shrink grout or chemical adhesive.

637.06 Barrier Construction. Concrete barrier shall be constructed according to the applicable portions of Articles 503.06 and 503.07. Where the horizontal alignment of the concrete barrier is curved, the barrier shall be constructed either on the curved alignment or on cords not more than 3 m (10 ft) in length.

When slipformed, the vertical centerline of the barrier shall not vary from the proposed centerline by more than 75 mm (3 in.) nor by more than 13 mm in 3 m (1/2 in. in 10 ft). All surfaces shall be checked with a 3 m (10 ft) straightedge as the concrete exits the slipform mold. Surface irregularities greater than 10 mm in 3 m (3/8 in. in 10 ft) shall be corrected immediately. Continued variations in the barrier surface exceeding 6 mm in 3 m (1/4 in. in 10 ft) will not be permitted and remedial action shall immediately be taken to correct the problem. Any deformations or bulges remaining after the initial set shall be removed by grinding after the concrete has hardened. All holes and honeycombs shall be patched immediately.

637.07 Barrier Transitions. Transitions between barriers of different design shall be constructed according to the details shown on the plans.

637.08 Joints. Joints shall be constructed as shown on the plans and as follows:

- (a) Construction Joints. Construction joints shall be constructed in the barrier whenever there is an interruption in the pour of more than 30 minutes.
- (b) Expansion Joints. Expansion joints shall be constructed in the barrier and the base in line with expansion joints in the adjacent pavement or shoulder. Expansion joints shall also be constructed at locations where the barrier abuts a rigid structure.

Prior to placing concrete, a light coating of oil shall be uniformly applied to the dowel bars.

- (c) Contraction Joints. Contraction joints shall be constructed in the barrier at uniform intervals with a maximum spacing of 6 m (20 ft) or in line with contraction joints in the adjacent pavement or shoulder. Contraction joints shall be formed by a groove 3 mm (1/8 in.) wide by 50 mm (2 in.) deep either formed in the plastic concrete or sawed after the concrete has set.

637.09 Finishing. The surface of concrete barrier shall be finished according to Article 503.16(a).

637.10 Protective Coat. When required, the top and vertical surfaces of the barrier exposed to traffic shall receive a protective coat. The application of the protective coat shall be according to Article 420.21.

637.11 Method of Measurement. This work will be measured as follows:

- (a) Contract Quantities. The requirements for the use of contract quantities shall be according to Article 202.07(a).
- (b) Measured Quantities. New barrier base, both separate and monolithic, will be measured for payment in meters (feet) in place, along the centerline of the base or barrier. The width of the base will be defined as the width of the barrier.

Concrete barrier will be measured for payment in meters (feet) in place, along the centerline of the barrier.

Barrier transitions will be measured for payment in meters (feet) in place, along the centerline of the transition.

Protective coat will be measured for payment according to Article 420.22(b).

637.12 Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for BARRIER BASE; CONCRETE BARRIER, DOUBLE FACE, of the height specified; CONCRETE BARRIER, SINGLE FACE, of the height specified; and CONCRETE BARRIER TRANSITION.

Protective coat will be paid for according to Article 420.23."

80112

CORRUGATED METAL PIPE CULVERTS (BDE)

Effective: August 1, 2003

Revised: July 1, 2004

Revise the fourth paragraph of Article 542.04(d) of the Standard Specifications to read:

"When corrugated steel or aluminum alloy culvert pipe (including bituminous coated steel or aluminum and pre-coated steel) is used, the pipe shall be placed such that the longitudinal lap is placed at the sides and separate sections of pipe shall be joined with a hugger-type band. When the pipes are fabricated with a smooth sleeve-type coupler, the gasket shall meet the requirements of Article 1006.01."

Add the following paragraph after the first paragraph of Article 1006.01 of the Standard Specifications:

"Round pipes 1200 mm (48 in.) in diameter and smaller may be fabricated with a smooth sleeve-type coupler. Gasket material on the smooth sleeve-type coupler shall be polyisoprene or equal with a durometer hardness of 45 ± 5 (ASTM D 2240, Shore A). Pipe used with smooth sleeve-type couplers shall contain a homing mark that indicates when the joint is tight. The homing mark shall consist of a painted stripe around the circumference of the male end of the pipe."

Delete the last sentence of the first paragraph of Article 1006.01(a) of the Standard Specifications.

Add the following paragraph after the first paragraph of Article 1006.03 of the Standard Specifications:

"Round pipes 1200 mm (48 in.) in diameter and smaller may be fabricated with a smooth sleeve-type coupler. Gasket material on the smooth sleeve-type coupler shall be polyisoprene or equal with a durometer hardness of 45 ± 5 (ASTM D 2240, Shore A). Pipe used with smooth sleeve-type couplers shall contain a homing mark that indicates when the joint is tight. The homing mark shall consist of a painted stripe around the circumference of the male end of the pipe."

80102

CURB RAMPS FOR SIDEWALK (BDE)

Effective: January 1, 2004

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

The detectable warnings shall consist of an area of truncated domes that provide both visual and tactile cues to pedestrians who are about to enter into traffic. The warning area shall begin 150 mm (6 in.) from the back of the curb and continue 600 mm (2 ft) in the direction of pedestrian travel for the entire width of the walking surface.

The detectable warnings shall also present a contrast in color from the adjacent sidewalk. This shall be accomplished by constructing the warning area, plus the 150 mm (6 in.) area between the warning area and the back of curb, out of concrete that is integrally colored red. However if the sidewalk is brick or of some dark color, the contrast requirement shall be achieved with normal (grey), Class SI concrete.

Materials. Materials for the detectable warning area of the curb ramps shall meet the following requirements.

- a) **Integrally Colored Concrete.** Integrally colored concrete shall be according to Section 1020 of the Standard Specification for Class SI concrete except as follows.

- | | |
|--------------------|---|
| Article 1020.04 | The allowable water/cement ratio range shall be 0.40 minimum to 0.44 maximum. |
| Article 1020.04 | The allowable slump range shall be 75 mm (3 in.) minimum to 125 mm (5 in.) maximum. |
| Article 1020.04 | The allowable coarse aggregate gradations shall be CA 11, CA 13, CA 14, and CA 16. |
| Article 1020.05(b) | A calcium chloride accelerating admixture shall not be used. |
| Article 1020.05(b) | The cement factor shall not be reduced if a water-reducing or high range water-reducing admixture is used. |
| Article 1020.05(c) | Fly ash shall not be used. |
| Article 1020.05(k) | Ground granulated blast-furnace slag shall not be used. |
| Article 1020.11 | Pigment for integrally colored concrete shall be added to the concrete and mixed per the Manufacturer's recommendation. |

Article 1020.13 The curing method shall be Type I membrane curing.

Article 1020.13. The protection method shall be according to Article 1020.13(e)(1) and the protection period shall be 96 hours. No material, including the insulating material, shall be placed in direct contact with the concrete surface.

(b) Pigment for Integrally Colored Concrete. The pigment shall meet the requirements of ASTM C 979, match color number 30166 of Federal Standard 595, and be on the Department's Approved List of Pigments for Integrally Colored Concrete.

(c) Release Agent for Concrete Stamping Tools. The release agent shall be according to the stamping tool manufacturer's recommendations and the following: it shall be a clear liquid that will evaporate, it shall not harm the concrete, and it shall allow the application of Type I membrane curing.

Equipment. Equipment for the detectable warning area of the curb ramps shall meet the following requirements.

(a) Concrete Stamps. Sufficient numbers and sizes of stamps shall be furnished to cover the various widths of the curb ramps. The stamps shall have an air opening at the top of each truncated dome recess; and shall be rigid enough to evenly distribute the force exerted during tamping.

(b) Tamper. The tamper shall be according to the concrete stamp manufacturer's recommendations.

CONSTRUCTION REQUIREMENTS

Stamping. The concrete shall be placed and finished according to Article 424.06 except the area to be stamped shall not be brushed. When the bleed water has been absorbed, stamping shall begin. The entire width of the curb ramp shall be stamped at the same time. A single stamp or a combination of stamps may be used.

Prior to placing the stamp on the concrete, the stamp shall be coated with the release agent. When recommended by the manufacturer, the release agent shall also be applied to the concrete surface. Once the stamp has been placed on the ramp, it shall remain down until the stamping is complete.

The entire area of the stamp shall be tamped with a short, slow, repetitive action such that the concrete is caused to move up and into the dome recesses of the stamp. Tamping shall continue until mortar has come through the air openings in the stamp. Stepping or walking on the stamp will not be allowed. The base elevation of the domes shall be even with the adjacent sidewalk surface; the stamp shall not be forced down into the concrete.

When stamping is complete, the stamp shall be removed and the concrete cured.

Upon completion of curing, or after cold weather protection if required, the protruding mortar tip on the top of each dome shall be removed and the dome rubbed or ground smooth.

80113

CURING AND PROTECTION OF CONCRETE CONSTRUCTION (BDE)

Effective: January 1, 2004

Revise the second and third sentences of the eleventh paragraph of Article 503.06 of the Standard Specifications to read:

"Forms on substructure units shall remain in place at least 24 hours. The method of form removal shall not result in damage to the concrete."

Delete the twentieth paragraph of Article 503.22 of the Standard Specifications.

Revise the "Unit Price Adjustments" table of Article 503.22 of the Standard Specifications to read:

"UNIT PRICE ADJUSTMENTS"	
Type of Construction	Percent Adjustment in Unit Price
For concrete in substructures, culverts (having a waterway opening of more than 1 sq m (10 sq ft)), pump houses, and retaining walls (except concrete pilings, footings and foundation seals):	
When protected by: Protection Method II	115%
Protection Method I	110%
For concrete in superstructures:	
When protected by: Protection Method II	123%
Protection Method I	115%
For concrete in footings:	
When protected by: Protection Method I, II or III	107%
For concrete in slope walls:	
When protected by: Protection Method I	107%"

Delete the fourth paragraph of Article 504.05(a) of the Standard Specifications.

Revise the second and third sentences of the fifth paragraph of Article 504.05(a) of the Standard Specifications to read:

"All test specimens shall be cured with the units according to Article 1020.13."

Revise the first paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

"Curing and Low Air Temperature Protection. The curing and protection for precast, prestressed concrete members shall be according to Article 1020.13 and this Article."

Revise the first sentence of the second paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

“For curing, air vents shall be in place, and shall be so arranged that no water can enter the void tubes during the curing of the members.”

Revise the first sentence of the third paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

“As soon as each member is finished, the concrete shall be covered with curing material according to Article 1020.13.”

Revise the eighth paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

“The prestressing force shall not be transferred to any member before the concrete has attained the compressive strength of 28,000 kPa (4000 psi) or other higher compressive release strength specified on the plans, as determined from tests of 150 mm (6 in.) by 300 mm (12 in.) cylinders cured with the member according to Article 1020.13. Members shall not be shipped until 28-day strengths have been attained and members have a yard age of at least 4 days.”

Delete the third paragraph of Article 512.03(a) of the Standard Specifications.

Delete the last sentence of the second paragraph of Article 512.04(d) of the Standard Specifications.

Revise the "Index Table of Curing and Protection of Concrete Construction" table of Article 1020.13 of the Standard Specifications to read:

"INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION"			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Cast-in-Place Concrete: ^{11/}			
Pavement			
Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/5/}	3	1020.13(c)
Base Course			
Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{1/2/}	3	1020.13(c)
Driveway			
Median			
Curb			
Gutter	1020.13(a)(1)(2)(3)(4)(5) ^{4/5/}	3	1020.13(c) ^{16/}
Curb and Gutter			
Sidewalk			
Slope Wall			
Paved Ditch			
Catch Basin			
Manhole	1020.13(a)(1)(2)(3)(4)(5) ^{4/}	3	1020.13(c)
Inlet			
Valve Vault			
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3 ^{12/}	1020.13(c)
Pavement Replacement	1020.13(a)(1)(2)(3)(4)(5) ^{1/2/}	3	442.06(h) and 1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles	1020.13(a)(3)(5)	7	1020.13(e)(1)(2)(3)
Footings			
Foundation Seals	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(e)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) ^{17/}	7	1020.13(e)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) ^{8/}	7	1020.13(e)(1)(2)
Deck	1020.13(a)(5)	7	1020.13(e)(1)(2) ^{17/}
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) ^{17/}	7	1020.13(e)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) ^{1/}	7	1020.13(e)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(e)(1)(2) ^{18/}
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete: ^{11/}			
Bridge Beams			
Piles			
Bridge Slabs	1020.13(a)(3)(5) ^{9/10/}	As required. ^{13/}	504.06(c)(6), 1020.13(e)(2) ^{19/}
Nelson Type Structural Member			
All Other Precast Items	1020.13(a)(3)(4)(5) ^{2/9/10/}	As required. ^{14/}	504.06(c)(6), 1020.13(e)(2) ^{19/}
Precast, Prestressed Concrete: ^{11/}			
All Items	1020.13(a)(3)(5) ^{9/10/}	Until strand tensioning is released. ^{15/}	504.06(c)(6), 1020.13(e)(2) ^{19/}

Notes-General:

- 1/ Type I, membrane curing only
- 2/ Type II, membrane curing only
- 3/ Type III, membrane curing only
- 4/ Type I, II and III membrane curing
- 5/ Membrane curing will not be permitted between November 1 and April 15.
- 6/ The use of water to inundate footings, foundation seals or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 7 °C (45 °F) or higher.
- 7/ Asphalt Emulsion for Waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.
- 8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09 (b), and meets the material requirements of Article 1022.07.
- 9/ Steam curing (heat and moisture) is acceptable and shall be accomplished by the method specified in Article 504.06(c)(6).
- 10/ A moist room according to AASHTO M 201 is acceptable for curing.
- 11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.
- 12/ Curing maintained only until opening strength is attained, with a maximum curing period of three days.
- 13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 15/ The producer has the option to continue curing after strand release.
- 16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(e)(1).
- 17/ When Article 1020.13(e)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(e)(1).
- 18/ For culverts having a waterway opening of 1 sq m (10 sq ft) or less, the culverts may be protected according to Article 1020.13(e)(3).
- 19/ The seven day protection period in the first paragraph of Article 1020.13(e)(2) shall not apply. The protection period shall end when curing is finished. For the third paragraph of Article 1020.13(e)(2), the decrease in temperature shall be according to Article 504.06(c)(6)."

Add the following to Article 1020.13(a) of the Standard Specifications:

"(5) Wetted Cotton Mat Method. After the surface of concrete has been textured or finished, it shall be covered immediately with dry cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without marring the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 1.2 m (4 ft) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3)."

Revise the first paragraph of Article 1020.13(c) of the Standard Specifications to read:

"Protection of Portland Cement Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 0 °C (32 °F), or lower, or if the actual temperature drops to 0 °C (32 °F), or lower, concrete less than 72 hours old shall be provided at least the following protection:"

Delete Article 1020.13(d) and Articles 1020.13(d)(1),(2),(3),(4) of the Standard Specifications.

Revise the first five paragraphs of Article 1020.13(e) of the Standard Specifications to read:

"Protection of Portland Cement Concrete Structures From Low Air Temperatures. When the official National Weather Service Forecast for the construction area predicts a low below 7 °C (45 °F), or if the actual temperature drops below 7 °C (45 °F), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. If winter construction is specified, the Contractor shall proceed with the construction, including concrete, excavation, pile driving, steel erection and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced by the Contractor at his/her own expense."

Add the following at the end of the third paragraph of Article 1020.13(e)(1) of the Standard Specifications:

"The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period."

Revise the second sentence of the first paragraph of Article 1020.13(e)(2) of the Standard Specifications to read:

"The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period."

Delete the last sentence of the first paragraph of Article 1020.13(e)(3) of the Standard Specifications.

Add the following Article to Section 1022 of the Standard Specifications:

"1022.06 Cotton Mats. Cotton mats shall consist of a cotton fill material, minimum 400 g/sq m (11.8 oz/sq yd), covered with unsized cloth or burlap, minimum 200 g/sq m (5.9 oz/sq yd), and be tufted or stitched to maintain stability.

Cotton mats shall be in a condition satisfactory to the Engineer. Any tears or holes in the mats shall be repaired.

Add the following Article to Section 1022 of the Standard Specifications:

"1022.07 Linseed Oil Emulsion Curing Compound. Linseed oil emulsion curing compound shall be composed of a blend of boiled linseed oil and high viscosity, heavy bodied linseed oil emulsified in a water solution. The curing compound shall meet the requirements of a Type I, II, or III according to Article 1022.01, except the drying time requirement will be waived. The oil phase shall be 50 ± 4 percent by volume. The oil phase shall consist of 80 percent by mass (weight) boiled linseed oil and 20 percent by mass (weight) Z-8 viscosity linseed oil. The water phase shall be 50 ± 4 percent by volume."

Revise Article 1020.14 of the Standard Specifications to read:

"1020.14 Temperature Control for Placement. Temperature control for concrete placement shall conform to the following requirements:

- (a) Temperature Control other than Structures. The temperature of concrete immediately before placing, shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

Plastic concrete temperatures up to 35 °C (96 °F), as placed, may be permitted provided job site conditions permit placement and finishing without excessive use of water on and/or overworking of the surface. The occurrence within 24 hours of unusual surface distress shall be cause to revert to a maximum 32 °C (90 °F) plastic concrete temperature.

Concrete shall not be placed when the air temperature is below 5 °C (40 °F) and falling or below 2 °C (35 °F), without permission of the Engineer. When placing of concrete is authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F). The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

For pavement patching, refer to Article 442.06(e) for additional information on temperature control for placement.

- (b) Temperature Control for Structures. The temperature of concrete as placed in the forms shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits. When insulated forms are used, the temperature of the concrete mixture shall not exceed 25 °C (80 °F). If the Engineer determines that heat of hydration might cause excessive temperatures in the concrete, the concrete shall be placed at a temperature between 10 °C (50 °F) and 15 °C (60 °F), per the Engineer's instructions. When concrete is placed in contact with previously placed concrete, the temperature of the concrete may be increased as required to offset anticipated heat loss.

Concrete shall not be placed when the air temperature is below 7 °C (45 °F) and falling or below 4 °C (40 °F), without permission of the Engineer. When placing of concrete is

authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F). The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

- (c) Temperature. The concrete temperature shall be determined according to ASTM C 1064."

80114

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000
Revised: June 1, 2004

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. 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. 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 DBE Directory or most recent addendum.

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 federally-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the 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 firms 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 25 % 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 DBE Directory as a reference source for DBE companies certified by the Department. 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.state.il.us.

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 nonresponsive.

- (a) In order to assure the timely award of the contract, the as-read low bidder must submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven (7) working days after the date of letting. To meet the seven (7) day requirement, the bidder may send the Plan by certified mail or delivery service within the seven (7) 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 as-read low bidder to ensure that the postmark or receipt date is affixed within the seven (7) 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 (7) day submittal requirement, and the bid will be declared nonresponsive. In the event the bid is declared nonresponsive 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 firms and non-DBE firms, 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 (5) 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% 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 firm does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100% 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% 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 firm does not count toward the DBE goal.~~
- (d) DBE as a trucker: 100% 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% goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100% goal credit for the cost of materials or supplies obtained from a DBE manufacturer.
 - (3) 100% 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 prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors 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 contractor'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 contractor'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 Contractor 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 (5) 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 (5) 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 (10) 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 nonresponsive.

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 and provide a full accounting of the efforts undertaken to obtain substitute DBE participation. The Bureau 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 (30) 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 Report on Department form SBE 2115 to the District Engineer. If full and final payment has not been made to the DBE, the Report 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.

80029

EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: August 1, 2001

Revised: November 1, 2001

When the Engineer is notified or determines an erosion and/or sediment control deficiency(s) exists, he/she will direct the Contractor in writing to correct the deficiency. The Contractor shall then correct the deficiency within 24 hours. The 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 National Pollutant Discharge Elimination System (NPDES) Storm Water Permit for Construction Site Activities.

If the Contractor fails to correct the deficiency(s) within 24 hours, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The time period will begin with the initial written notification to the Contractor and end with the Engineer's acceptance of the corrected work. The per calendar day deduction will be either \$1000.00 or 0.05 percent of the awarded contract value, whichever is greater.

If the Contractor fails to respond, the Engineer may correct the deficiencies and deduct the cost from monies due or which may become due the Contractor. This corrective action shall in no way relieve the Contractor of his/her contractual requirements or responsibilities.

80055

EXPANSION JOINTS (BDE)

Effective: August 1, 2003

Add the following paragraph after the second paragraph of Article 420.10(e) of the Standard Specifications:

"After the dowel bars are oiled, plastic expansion caps shall be secured to the bars maintaining a minimum expansion gap of 50 mm (2 in.) between the end of the bar and the end of the cap. The caps shall fit snugly on the bar and the closed end shall be watertight. For expansion joints formed using dowel bar basket assemblies, the caps shall be installed on the alternating free ends of the bars. For expansion joints formed using a construction header, the caps shall be installed on the exposed end of each bar once the header has been removed and the joint filler material has been installed."

80103

FLAGGER VESTS (BDE)

Effective: April 1, 2003

Revise the first sentence of Article 701.04(c)(1) of the Standard Specifications to read:

"The flagger shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments and approved flagger traffic control signs conforming to Standard 702001 and Article 702.05(e)."

Revise Article 701.04(c)(6) of the Standard Specifications to read:

"(6) Nighttime Flagging. The flagger station shall be lit by additional overhead lighting other than streetlights. The flagger shall be equipped with a fluorescent orange or fluorescent orange and fluorescent yellow/green garment meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments."

80101

FREEZE-THAW RATING (BDE)

Effective: November 1, 2002

Revise the first sentence of Article 1004.02(f) of the Standard Specifications to read:

“When coarse aggregate is used to produce portland cement concrete for base course, base course widening, pavement, driveway pavement, sidewalk, shoulders, curb, gutter, combination curb and gutter, median, paved ditch or their repair using concrete, the gradation permitted will be determined from the results of the Department’s Freeze-Thaw Test.”

80079

FURNISHED EXCAVATION (BDE)

Effective: August 1, 2002

Revised: November 1, 2004

Revise Article 204.01 of the Standard Specifications to read:

Description. Borrow excavation and furnished excavation shall consist of excavating suitable materials obtained from locations approved by the Engineer and transporting the materials to various locations throughout the limits of the contract."

Revise Article 204.07(b) of the Standard Specifications to read:

"(b) Measured Quantities. Furnished excavation will be computed for payment in cubic meters (cubic yards) as follows:

Furnished Excavation = Embankment - [Suitable Excavation x (1 - Shrinkage Factor)]

Where:

Embankment = the volume of fill in its final position computed by the method of average end areas and based upon the existing ground line as shown on the plans except as noted in (1) and (2) below;

Suitable Excavation = earth excavation, rock excavation, and other on-site excavation suitable for use in embankments as shown in the Earthwork Schedule on the plans;

Shrinkage Factor = 0.25 unless otherwise shown on the plans.

(1) If the Contractor so requests, the Engineer will reestablish the existing ground line after the clearing and tree removal have been performed according to Section 201 and the top 150 mm (6 in.) of the existing ground surface has been disked and compacted to the satisfaction of the Engineer.

(2) If settlement platforms are erected, the Engineer will reestablish the existing ground line after the embankment is complete as specified in Article 204.07(a)(2).

Furnished excavation placed in excess of that required for the execution of the contract will not be measured for payment."

Add the following paragraph to the end of Article 204.07 of the Standard Specifications:

"The quantity for furnished excavation will not be recalculated when surplus, suitable materials are utilized in embankments according to Article 202.03."

80072

HAND VIBRATOR (BDE)

Effective: November 1, 2003

Add the following paragraph to Article 1103.17(a) of the Standard Specifications:

"The vibrator shall have a non-metallic head for areas containing epoxy coated reinforcement. The head shall be coated by the manufacturer. The hardness of the non-metallic head shall be less than the epoxy coated reinforcement, resulting in no damage to the epoxy coating. Slip-on covers will not be allowed."

80054

INLET FILTERS (BDE)

Effective: August 1, 2003

Add the following to Article 280.02 of the Standard Specifications:

"(k) Inlet Filters..... 1081.15(h)"

Add the following paragraph after the first paragraph of Article 280.04(c) of the Standard Specifications:

~~"When specified, drainage structures shall be protected with inlet filters. Inlet filters shall be installed either directly on the drainage structure or under the grate of the drainage structure resting on the lip of the frame. The fabric bag shall hang down into the drainage structure. Prior to ordering materials, the Contractor shall determine the size and shape of the various drainage structures being protected."~~

Revise Article 280.07(d) of the Standard Specifications to read:

"(d) Inlet and Pipe Protection. This work will be paid for at the contract unit price per each for INLET AND PIPE PROTECTION.

Protection of drainage structures with inlet filters will be paid for at the contract unit price per each for INLET FILTERS."

Add the following to Article 1081.15 of the Standard Specifications:

"(h) Inlet Filters. An inlet filter shall consist of a steel frame with a two piece geotextile fabric bag attached with a stainless steel band and locking cap that is suspended from the frame. A clean, used bag and a used steel frame in good condition meeting the approval of the Engineer may be substituted for new materials. Materials for the inlet filter assembly shall conform to the following requirements:

(1) Frame Construction. Steel shall conform to Article 1006.04.

Frames designed to fit under a grate shall include an overflow feature that is welded to the frame's ring. The overflow feature shall be designed to allow full flow of water into the structure when the filter bag is full. The dimensions of the frame shall allow the drainage structure grate to fit into the inlet filter assembly frame opening. The assembly frame shall rest on the inside lip of the drainage structure frame for the full variety of existing and proposed drainage structure frames that are present on this contract. The inlet filter assembly frame shall not cause the drainage structure grate to extend higher than 6 mm (1/4 in.) above the drainage structure frame.

- (2) Grate Lock. When the inlet is located in a traffic lane, a grate lock shall be used to secure the grate to the frame. The grate lock shall conform to the manufacturer's requirements for materials and installation.
- (3) Geotextile Fabric Bag. The sediment bag shall be constructed of an inner filter bag and an outer reinforcement bag.
- a. Inner Filter Bag. The inner filter bag shall be constructed of a polypropylene geotextile fabric with a minimum silt and debris capacity of 0.06 cu m (2.0 cu ft). The bag shall conform to the following requirements:

Inner Filter Bag		
Material Property	Test Method	Minimum Avg. Roll Value
Grab Tensile Strength	ASTM D 4632	45 kg (100 lb)
Grab Tensile Elongation	ASTM D 4632	50%
Puncture Strength	ASTM D 4833	29 kg (65 lb)
Trapezoidal Tear	ASTM D 4533	20 kg (45 lb)
UV Resistance	ASTM D 4355	70% at 500 hours
Actual Open Size	ASTM D 1420	212 μ m (No. 70 sieve US)
Permittivity	ASTM D 4491	2.0/sec
Water Flow Rate	ASTM D 4491	5900 Lpm/sq m (145 gpm/sq ft)

- b. Outer Reinforcement Bag. The outer reinforcement bag shall be constructed of polyester mesh material that conforms to the following requirements:

Outer Reinforcement Bag		
Material Property	Test Method	Value
Content	ASTM D 629	Polyester
Weight	ASTM D 3776	155 g/sq m (4.55 oz/sq yd) \pm 15%
Whales (holes)	ASTM D 3887	7.5 \pm 2 holes/25 mm (1 in.)
Chorses (holes)	ASTM D 3887	15.5 \pm 2holes/25 mm (1 in.)
Instronball Burst	ASTM D 3887	830 kPa (120 psi) min.
Thickness	ASTM D 1777	1.0 \pm 0.1 mm (0.040 \pm 0.005 in.)

- (4) Certification. The manufacturer shall furnish a certification with each shipment of inlet filters, stating the amount of product furnished, and that the material complies with these requirements."

LIGHT EMITTING DIODE (LED) SIGNAL HEAD (BDE)

Effective: April 1, 2002

Revised: August 1, 2003

Add the following paragraph to the end of Article 802.03 of the Standard Specifications:

"The warranty for light emitting diode (LED) modules, including the maintained minimum luminous intensities, shall cover a minimum of 60 months from the date of delivery."

Revise Article 880.01 of the Standard Specifications to read:

880.01 Description. This work shall consist of furnishing and installing a conventional signal head, optically programmed signal head or light emitting diode (LED) signal head."

Revise Article 880.02(a) of the Standard Specifications to read:

"(a) Signal Heads.....1078.01"

Revise the first sentence of the first paragraph of Article 880.03 of the Standard Specifications to read:

"The signal head shall be installed on a post, bracket, span wire or mast arm as shown on the plans."

Revise the first paragraph of Article 880.04 of the Standard Specifications to read:

880.04 Basis of Payment. This work will be paid for at the contract unit price each for SIGNAL HEAD, OPTICALLY PROGRAMMED SIGNAL HEAD, or SIGNAL HEAD, LED of the type specified and of the material type when specified."

Revise Article 1078.01 of the Standard Specifications to read:

1078.01 Signal Head, Optically Programmed Signal Head and Light Emitting Diode (LED) Signal Head."

Add the following to Article 1078.01(c) of the Standard Specifications:

"(3) The LED signal section shall be according to the following:

- a. General Requirements. The LED signal head shall meet the requirements of the Institute of Transportation Engineers (ITE) interim LED purchase specification, "Vehicle Traffic Control Signal Heads, Part 2: LED Vehicle Traffic Signal Modules", or applicable successor ITE specifications, except as modified herein. The LEDs utilized in the modules shall not be Aluminum Gallium Arsenide (AlGaAs) material technology.

- b. **Physical and Mechanical Requirements.** The power supply for the LED module shall be integrated with the unit.
- c. **Photometric Requirements.** The candlepower values for yellow 300 mm (12 in.) circular modules shall be equal to the corresponding values for green 300 mm (12 in.) circular modules as listed in Table 1 of Section 4 of the aforementioned ITE specification based on normal use in traffic signal operation over the operating temperature range.

The illuminated portion of the arrow module shall be uniformly and completely dispersed with the LEDs.

- d. **Electrical Requirements.** When applicable to the particular module type, the LED signal module shall be EPA Energy Star qualified. For yellow 300 mm (12 in.) circular and arrow modules, the wattage requirements shall be as follows:

Module Type	Maximum Watts (W) at 74 °C (165 °F)	Nominal Watts (W) at 25 °C (77 °F)
300 mm (12 in.) Yellow Circular	25	22
300 mm (12 in.) Yellow Arrow	12	10

The individual LEDs shall be wired such that a catastrophic loss or the failure of one LED will result in the loss of not more than 5 percent of the signal module light output.

- e. **Warranty.** The LED modules shall be warranted according to Article 802.03. The maintained minimum intensities for 300 mm (12 in.) arrow modules throughout the warranty period under the operating temperature and voltage range, and at the end of the warranty period shall not be less than the following values:

Module Type	Maintained Minimum Intensities (cd/sq m)
Red Arrow	5,000
Yellow Arrow	11,000
Green Arrow	11,000"

80067

PARTIAL PAYMENTS (BDE)

Effective: September 1, 2003

Revise Article 109.07 of the Standard Specifications to read:

"109.07 Partial Payments. Partial payments will be made as follows:

- (a) **Progress Payments.** At least once each month, the Engineer will make a written estimate of the amount of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved. Furthermore, progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c).

- (b) **Material Allowances.** At the discretion of the Department, payment may be made for materials, prior to their use in the work, when satisfactory evidence is presented by the Contractor. Satisfactory evidence includes justification for the allowance (to expedite the work, meet project schedules, regional or national material shortages, etc.), documentation of material and transportation costs, and evidence that such material is properly stored on the project or at a secure location acceptable and accessible to the Department.

Material allowances will be considered only for nonperishable materials when the cost, including transportation, exceeds \$10,000 and such materials are not expected to be utilized within 60 days of the request for the allowance. For contracts valued under \$500,000, the minimum \$10,000 requirement may be met by combining the principal (material) product of no more than two contract items. An exception to this two item limitation may be considered for any contract regardless of value for items in which material (products) are similar except for type and/or size.

Material allowances shall not exceed the value of the contract items in which used and shall not include the cost of installation or related markups. Amounts paid by the Department for material allowances will be deducted from estimates due the Contractor as the material is used. Two-sided copies of the Contractor's cancelled checks for materials and transportation must be furnished to the Department within 60 days of payment of the allowances or the amounts will be reclaimed by the Department."

PAVEMENT THICKNESS DETERMINATION FOR PAYMENT (BDE)

Effective: April 1, 1999

Revised: January 1, 2004

Description. This work shall consist of determining pavement thickness for payment for full depth bituminous concrete and all pcc pavements. Pavement pay items that individually contain at least 840 sq m (1000 sq yd) of contiguous pavement will be subject to this Special Provision with the following exclusions: temporary pavements; variable width pavement; radius returns and side streets less than 125 m (400 ft) in length; and turn lanes of constant width less than 125 m (400 ft) in length. The areas of pavement excluded from the pay adjustment as described in this Special Provision will be cored according to Article 407.10 of the Standard Specifications. Temporary pavements are defined as pavements constructed and removed under this contract.

Materials. Rapid set materials shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitious Materials For Concrete Repairs. Coarse aggregate may be added to the mortar if allowed by the manufacturer's instructions on the package. Mixing shall be according to the manufacture's recommendations.

Equipment. Cores shall be taken utilizing an approved coring machine. The cores shall have a diameter of 50 mm (2 in.). The cores shall be measured utilizing an approved measuring device.

CONSTRUCTION REQUIREMENTS

Tolerance in Thickness. Determination of the pavement thickness shall be performed after the pavement surface tests and all corrective grinding are complete according to Article 407.09 of the Standard Specifications. Adjustments made in the contract unit price for pavement thickness will be in addition to and independent of those made for the Profile Index.

The pavement will be divided into approximately equal lots of not more than 1500 m (5000 ft) in length. When the length of a continuous strip of pavement is less than 1500 m (5000 ft), these short lengths of pavement, ramps, turn lanes, and other short sections of continuous pavement shall be grouped together to form lots of approximately 1500 m (5000 ft) in length. Short segments between structures will be measured continuously with the structure segments omitted. Each lot will be subdivided into ten equal sublots. The width of a subplot and lot will be the width from the pavement edge to the adjacent lane line, from one lane line to the next, or between pavement edges for single-lane pavements.

Fifty millimeter (Two inch) cores shall be taken from the pavement by the Contractor at random locations selected by the Engineer. When computing the thickness of a lot, one core will be taken per subplot. Core locations will be specified by the Engineer prior to beginning the coring operations.

The Contractor and the Engineer shall witness the coring operations, the measurement, and recording of the cores. Core measurements will be determined immediately upon removal from

the core bit and prior to moving to the next core location. Upon concurrence of the length, the core samples may be discarded.

Patching Holes. Upon completion of coring, all core holes shall be filled with a rapid set mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used, and the material shall be struck-off flush with the adjacent pavement.

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

Deficient Sublot. When the thickness of the core in a sublot is deficient by more than ten percent of plan thickness, the Contractor will have the option of taking three additional cores selected at random by the Engineer within the same sublot at the Contractor's expense. The thickness of the additional three cores will be averaged with the original core thickness. When the average thickness shows the sublot to be deficient by ten percent or less, no additional action is necessary. If the Contractor chooses not to take additional cores, the pavement in the sublot shall be removed and replaced at the Contractor's expense. When additional cores are taken and the average thickness of the additional cores show the sublot to be deficient by more than ten percent, the pavement in that sublot shall be removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. For Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material thickness(es), areas to be overlaid, and method of placement used for additional lift(s) will be approved by the Engineer. When the thin pavement is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin pavement is left in place and no additional lift(s) are placed, no payment will be made for the deficient pavement sublot. The thickness of the original core taken in the sublot will be used in determining the payment for the entire lot and no adjustment to the pay factor will be made for any corrective action taken.

Deficient Lot. After analyzing the cores, the Percent Within Limits will be calculated. A lot of pavement represented by the Percent Within Limits (PWL) of 60 percent or less, shall be removed and replaced at the Contractor's expense. When requested in writing by the Contractor, the Engineer, at his/her option, may permit in writing such pavement to remain in place. For Bituminous Concrete Pavement (Full Depth), allowed to remain in place, additional lift(s) may be placed, at the Contractor's expense, to bring the deficient pavement to plan thickness when the Engineer determines grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement used for the additional lift(s) will be approved by the Engineer. After either corrective action, the Contractor shall core the lot according to the "Coring Procedures" at no additional cost to the Department. The PWL will then be recalculated for the lot, however, the pay factor for the lot will be a maximum of 100 percent. When requested in writing by the Contractor, the Engineer, at his/her option, may

permit in writing, the lot to remain in place. When the lot is left in place and no additional lifts are placed the pay factor for the lot will be based on the calculated PWL.

Right of Discovery. When the Engineer has reason to believe the random core selection process will not accurately represent the true conditions of the work, he/she may order cores in addition to those specified. The additional cores shall be taken at specific locations determined by the Engineer. The Engineer will provide notice to the Contractor containing an explanation of the reasons for his/her action. These additional cores and locations will be determined prior to commencement of coring operations. When the additional cores show the pavement to be deficient by more than ten percent, additional cores shall be taken at locations determined by the Engineer to determine the limits of the deficient pavement area. The deficient pavement area will be defined as the area between two acceptable cores. An acceptable core is a core with a thickness of 90 percent or more of plan thickness. The defined pavement area shall be removed and replaced at the Contractor's expense. When requested by the Contractor, the Engineer, at his/her option, may permit in writing such thin pavement to remain in place. On Bituminous Concrete Pavement (Full Depth) allowed to remain in place, additional lift(s) may be placed to bring the deficient pavement to plan thickness when the Engineer determines that grade control conditions will permit such lift(s). The material, thickness(es), areas to be overlaid and method of placement for the additional lift(s) will be approved by the Engineer. When the thin pavement is removed and replaced or additional lifts are placed, the replacement pavement will be retested for thickness at the Contractor's expense. When the thin pavement is left in place and no additional lift(s) are placed, no payment will be made for the deficient pavement. When the additional cores show the pavement to be deficient by ten percent or less the additional cores will be paid for according to Article 109.04. When the additional cores show the pavement to be deficient by more than ten percent the additional cores taken in the deficient area shall be at the Contractor's expense.

Profile Index Adjustment. After any section of pavement is removed and replaced or any additional lifts are added, the corrected areas shall be tested for pavement smoothness and any necessary Profile Index adjustments and/or corrections will be made based on these final profile readings. Such surface testing shall be performed at the Contractor's expense.

Core Analysis. Cores will be analyzed according to the following:

(a) Definition:

- x_i = Individual values (core lengths) under consideration
- n = Number of individual values under consideration
(10 per lot)

- \bar{x} = Average of the values under consideration
- LSL = Lower Specification Limit (LSL = 0.98 plan thickness for pavement)
- Q_L = Lower Quality Index
- S = Sample Standard Deviation
- PWL = Percent Within Limits

Determine \bar{x} for the lot to the nearest two decimal places.

Compute the sample standard deviation to the nearest three decimal places using:

$$S = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}} \quad \text{where} \quad \sum (x_i - \bar{x})^2 = (x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \dots + (x_{10} - \bar{x})^2$$

Determine the Lower Quality Index to the nearest two decimal places using:

$$Q_L = \frac{(\bar{x} - LSL)}{S}$$

Determine the percentage that will fall above the Lower Specification Limit (LSL) by going to the attached Table and utilizing calculated Q_L . Read the appropriate PWL value from the Table. For Q_L values less than zero the value shown in the table must be subtracted from 100 to obtain PWL.

Pay Adjustment. The following pay adjustment equation will be used to determine (to the nearest two decimal places) the pay factor for each lot.

$$\text{Pay Factor (PF) in percent} = 55 + 0.5 (\text{PWL})$$

If \bar{x} for a lot is less than the plan thickness, the maximum pay factor for that lot will be 100 percent.

Total Payment. The payment will be based on the appropriate pay items in Sections 407, 420, and 421. The final payment will be adjusted according to the following equation:

$$\text{Total Payment} = \text{TPF}[\text{CUP} (\text{TOTPAVT} - \text{DEFPAVT})]$$

TPF = Total Pay Factor

CUP = Contract Unit Price

TOTPAVT = Area of Pavement Subject to Coring

DEFPAVT = Area of Deficient Pavement

The TPF for the entire pavement will be the average of the PF for all the lots, however, not more than 102 percent of plan quantity will be paid.

Deficient pavement is defined as an area of pavement represented by a subplot deficient by more than 10 percent which is left in place with no additional thickness added.

All work involved in determining the total payment will be included in the contract unit prices of the pay items involved.

53600

Percent Within Limits

Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)	Quality Index (Q)*	Percent in Limits (PWL)
0.00	50.00	0.40	65.07	0.80	78.43	1.20	88.76	1.60	95.46	2.00	98.83	2.40	99.89						
0.01	50.38	0.41	65.43	0.81	78.72	1.21	88.97	1.61	95.58	2.01	98.88	2.41	99.90						
0.02	50.77	0.42	65.79	0.82	79.02	1.22	89.17	1.62	95.70	2.02	98.92	2.42	99.91						
0.03	51.15	0.43	66.15	0.83	79.31	1.23	89.38	1.63	95.81	2.03	98.97	2.43	99.91						
0.04	51.54	0.44	66.51	0.84	79.61	1.24	89.58	1.64	95.93	2.04	99.01	2.44	99.92						
0.05	51.92	0.45	66.87	0.85	79.90	1.25	89.79	1.65	96.05	2.05	99.06	2.45	99.93						
0.06	52.30	0.46	67.22	0.86	80.19	1.26	89.99	1.66	96.16	2.06	99.10	2.46	99.94						
0.07	52.69	0.47	67.57	0.87	80.47	1.27	90.19	1.67	96.27	2.07	99.14	2.47	99.94						
0.08	53.07	0.48	67.93	0.88	80.76	1.28	90.38	1.68	96.37	2.08	99.18	2.48	99.95						
0.09	53.46	0.49	68.28	0.89	81.04	1.29	90.58	1.69	96.48	2.09	99.22	2.49	99.95						
0.10	53.84	0.50	68.63	0.90	81.33	1.30	90.78	1.70	96.59	2.10	99.26	2.50	99.96						
0.11	54.22	0.51	68.98	0.91	81.61	1.31	90.96	1.71	96.69	2.11	99.29	2.51	99.96						
0.12	54.60	0.52	69.32	0.92	81.88	1.32	91.15	1.72	96.78	2.12	99.32	2.52	99.97						
0.13	54.99	0.53	69.67	0.93	82.16	1.33	91.33	1.73	96.88	2.13	99.36	2.53	99.97						
0.14	55.37	0.54	70.01	0.94	82.43	1.34	91.52	1.74	96.97	2.14	99.39	2.54	99.98						
0.15	55.75	0.55	70.36	0.95	82.71	1.35	91.70	1.75	97.07	2.15	99.42	2.55	99.98						
0.16	56.13	0.56	70.70	0.96	83.24	1.36	91.87	1.76	97.16	2.16	99.45	2.56	99.98						
0.17	56.51	0.57	71.04	0.97	83.29	1.37	92.04	1.77	97.25	2.17	99.48	2.57	99.98						
0.18	56.89	0.58	71.38	0.98	83.50	1.38	92.22	1.78	97.33	2.18	99.50	2.58	99.99						
0.19	57.27	0.59	71.72	0.99	83.77	1.39	92.39	1.79	97.42	2.19	99.53	2.59	99.99						
0.20	57.65	0.60	72.06	1.00	84.03	1.40	92.56	1.80	97.51	2.20	99.56	2.60	99.99						
0.21	58.03	0.61	72.39	1.01	84.28	1.41	92.72	1.81	97.59	2.21	99.58	2.61	99.99						
0.22	58.40	0.62	72.72	1.02	84.53	1.42	92.88	1.82	97.67	2.22	99.61	2.62	99.99						
0.23	58.78	0.63	73.06	1.03	84.79	1.43	93.05	1.83	97.75	2.23	99.63	2.63	100.00						
0.24	59.15	0.64	73.39	1.04	85.04	1.44	93.21	1.84	97.83	2.24	99.66	2.64	100.00						
0.25	59.53	0.65	73.72	1.05	85.29	1.45	93.37	1.85	97.91	2.25	99.68	2.65	100.00						
0.26	59.90	0.66	74.04	1.06	85.53	1.46	93.52	1.86	97.98	2.26	99.70	2.66	100.00						
0.27	60.28	0.67	74.36	1.07	85.77	1.47	93.67	1.87	98.05	2.27	99.72	2.67	100.00						
0.28	60.65	0.68	74.69	1.08	86.02	1.48	93.83	1.88	98.11	2.28	99.73	2.68	100.00						
0.29	61.03	0.69	75.01	1.09	86.26	1.49	93.98	1.89	98.18	2.29	99.75	2.69	100.00						
0.30	61.40	0.70	75.33	1.10	86.50	1.50	94.13	1.90	98.25	2.30	99.77	2.70	100.00						
0.31	61.77	0.71	75.64	1.11	86.73	1.51	94.27	1.91	98.31	2.31	99.78	2.71	100.00						
0.32	62.14	0.72	75.96	1.12	86.96	1.52	94.41	1.92	98.37	2.32	99.80	2.72	100.00						
0.33	62.51	0.73	76.27	1.13	87.20	1.53	94.54	1.93	98.44	2.33	99.81	2.73	100.00						
0.34	62.88	0.74	76.59	1.14	87.43	1.54	94.68	1.94	98.50	2.34	99.83	2.74	100.00						
0.35	63.25	0.75	76.90	1.15	87.66	1.55	94.82	1.95	98.56	2.35	99.84	2.75	100.00						
0.36	63.61	0.76	77.21	1.16	87.88	1.56	94.95	1.96	98.61	2.36	99.85	2.76	100.00						
0.37	63.98	0.77	77.51	1.17	88.10	1.57	95.08	1.97	98.67	2.37	99.86	2.77	100.00						
0.38	64.34	0.78	77.82	1.18	88.32	1.58	95.20	1.98	98.72	2.38	99.87	2.78	100.00						
0.39	64.71	0.79	78.12	1.19	88.54	1.59	95.33	1.99	98.78	2.39	99.88	2.79	100.00						

*For Q values less than zero, subtract the table value from 100 to obtain PWL

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: September 1, 2003

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 no later than 30 days from the receipt of each payment made to the Contractor.

State law addresses the timing of payments to be made to subcontractors. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, generally requires that when a Contractor receives any payment from the Department, the Contractor is required to make corresponding, proportional payments to each subcontractor performing work within 15 calendar days after receipt of the state payment. Section 7 of the State Prompt Payment Act further provides that interest in the amount of 2% per month, in addition to the payment due, shall be paid to any subcontractor 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 throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

As progress payments are made to the Contractor in accordance with Article 109.07 of the Standard Specifications for Road and Bridge Construction, the Contractor shall make a corresponding partial payment within 15 calendar days to each subcontractor in proportion to the work satisfactorily completed by each subcontractor. The proportionate amount of partial payment due to each subcontractor 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 shall be paid in full within 15 calendar days after the subcontractor's work has been satisfactorily completed. The Contractor shall hold no retainage from the subcontractors.

This Special Provision does not create any rights in favor of any subcontractor against the State of Illinois or authorize any cause of action against the State of Illinois on account of any payment, nonpayment, delayed payment or interest claimed by application of the State Prompt Payment Act. The Department will neither determine the reasonableness of any cause for delay of payment nor enforce any claim to payment, including interest. Moreover, the Department will not approve any delay or postponement of the 15 day requirement. State law creates 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 in accordance with the Public Construction Bond Act, 30 ILCS 550.

80022

PERSONAL PROTECTIVE EQUIPMENT (BDE)

Effective: July 1, 2004

All personnel, excluding flaggers, working outside of a vehicle (car or truck) within 7.6 m (25 ft) of pavement open to traffic shall wear a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments. Other types of garments may be substituted for the vest as long as the garments have manufacturers tags identifying them as meeting the ANSI Class 2 requirement.

80130

PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)

Effective: November 1, 1993

Revised: April 2, 2004

Description. This work shall consist of furnishing, placing, and maintaining changeable message sign(s) at the locations(s) shown on the plans or as directed by the Engineer.

The sign(s) shall be trailer mounted. The message panel shall be at least 2.1 m (7 ft) above the pavement, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time. Character height shall be 450 mm (18 in.).

The message panel shall be of either a bulb matrix or disc matrix design controlled by an onboard computer capable of storing a minimum of 99 programmed messages for instant recall. The computer shall be capable of being programmed to accept messages created by the operator via an alpha-numeric keyboard and able to flash any six messages in sequence. The message panel shall also be capable of being controlled by a computer from a remote location via a cellular linkage. The Contractor shall supply the modem, the cellular phone, and the necessary software to run the sign from a remote computer at a location designated by the Engineer. The Contractor shall promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

The message panel shall be visible from 400 m (1/4 mile) under both day and night conditions. The letters shall be legible from 250 m (750 ft).

The sign shall include automatic dimming for nighttime operation and a power supply capable of providing 24 hours of uninterrupted service.

The Contractor shall provide all preventive maintenance efforts s(he) deems necessary to achieve uninterrupted service. If service is interrupted for any cause and not restored within 24 hours, the Engineer will cause such work to be performed as may be necessary to provide this service. The cost of such work shall be borne by the Contractor or deducted from current or future compensation due the Contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all times when no message is displayed, they shall be considered equipment.

Basis of Payment. When portable changeable message signs are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN.

80124

PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2002

Add the following paragraph after the fourth paragraph of Article 1103.01(b) of the Standard Specifications:

"The truck mixer shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Add the following paragraph after the first paragraph of Article 1103.01(c) of the Standard Specifications:

"The truck agitator shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Add the following paragraph after the first paragraph of Article 1103.01(d) of the Standard Specifications:

"The nonagitator truck shall be approved before use according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

Revise the first sentence of the first paragraph of Article 1103.02 of the Standard Specifications to read:

"The plant shall be approved before production begins according to the Bureau of Materials and Physical Research's Policy Memorandum, "Approval of Concrete Plants and Delivery Trucks"."

80083

PRECAST CONCRETE PRODUCTS (BDE)

Effective: July 1, 1999

Revised: November 1, 2004

Product Approval. Precast concrete products shall be produced according to the Department's current Policy Memorandum, "Quality Control/Quality Assurance Program for Precast Concrete Products". The Policy Memorandum applies to precast concrete products listed under the Products Key of the "Approved List of Certified Precast Concrete Producers".

Precast Concrete Box Culverts. Add the following sentence to the end of the fourth paragraph of Article 540.06:

"After installation, the interior and exterior joint gap between precast concrete box culvert sections shall not exceed 38 mm (1 1/2 in.)."

Portland Cement Replacement. For precast concrete products using Class PC concrete or other mixtures, portland cement replacement with fly ash or ground granulated blast-furnace (GGBF) slag shall be governed by the AASHTO or ASTM standard specification referenced in the Standard Specifications.

For all other precast concrete products using Class PC concrete or other mixtures, portland cement replacement with fly ash or GGBF slag shall be approved by the Engineer. Class F fly ash shall not exceed 15 percent by mass (weight) of the total portland cement and Class F fly ash. Class C fly ash shall not exceed 20 percent by mass (weight) of the total portland cement and Class C fly ash. GGBF slag shall not exceed 25 percent by mass (weight) of the total portland cement and GGBF slag.

Concrete mix designs, for precast concrete products, shall not consist of portland cement, fly ash and GGBF slag.

Ready-Mixed Concrete. Delete the last paragraph of Article 1020.11(a) of the Standard Specifications.

Shipping. When a precast concrete product has attained the specified strength, the earliest the product may be loaded, shipped, and used is on the fifth calendar day. The first calendar day shall be the date casting was completed.

Acceptance. Products which have been lot or piece inspected and approved by the Department prior to July 1, 1999, will be accepted for use on this contract.

419.doc

PUBLIC CONVENIENCE AND SAFETY (BDE)

Effective: January 1, 2000

Add the following paragraph after the fourth paragraph of Article 107.09 of the Standard Specifications:

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

80015

SEEDING AND SODDING (BDE)

Effective: July 1, 2004

Revised: November 1, 2004

Revise Class 1A and 2A seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

"Table 1 - SEEDING MIXTURES		
Class – Type	Seeds	kg/hectare (lb/acre)
1A Salt Tolerant Lawn Mixture 7/	Bluegrass	70 (60)
	Perennial Ryegrass	20 (20)
	Audubon Red Fescue	20 (20)
	Rescue 911 Hard Fescue	20 (20)
	Fults Salt Grass*	70 (60)
2A Salt Tolerant Roadside Mixture 7/	Alta Fescue or Ky 31	70 (60)
	Perennial Ryegrass	20 (20)
	Audubon Red Fescue	20 (30)
	Rescue 911 Hard Fescue	20 (30)
	Fults Salt Grass 1/	70 (60)"

Revise Note 7 of Article 250.07 of the Standard Specifications to read:

"Note 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 coverage over the entire seeded area(s) after one growing season. The guarantee shall be submitted to the Engineer in writing prior to performing the work. After one growing season, areas not sustaining 75 percent growth shall be interseeded or reseeded, as determined by the Engineer, at the Contractor's expense."

Add the following sentence to Article 252.04 of the Standard Specifications:

"Sod shall not be placed during the months of July and August."

Revise the first paragraph of Article 252.08 of the Standard Specifications to read:

"252.08 Sod Watering. Within two hours after the sod has been placed, water shall be applied at a rate of 25 L/sq m (5 gal/sq yd). Additional water shall be applied every other day at a rate of 15 L/sq m (3 gal/sq yd) for a total of 15 additional waterings. During periods exceeding 26 °C (80 °F) or subnormal rainfall, the schedule of additional waterings may be altered with the approval of the Engineer."

Revise Article 252.09 of the Standard Specifications to read:

“252.09 Supplemental Watering. During periods exceeding 26 °C (80 °F) or subnormal rainfall, supplemental watering may be required after the initial and additional waterings. Supplemental watering shall be performed when directed by the Engineer. Water shall be applied at the rate specified by the Engineer within 24 hours of notice.”

Revise the first and third paragraphs of Article 252.12 of the Standard Specifications to read:

“252.12 Method of Measurement. Sodding will be measured for payment in place and the area computed in square meters (square yards). To be acceptable for final payment, the sod shall be growing in place for a minimum of 30 days in a live, healthy condition. When directed by the Engineer, any defective or unacceptable sod shall be removed, replaced and watered by the Contractor at his/her own expense.”

“Supplemental watering will be measured for payment in units of 1000 L (1000 gal) of water applied on the sodded areas. Waterings performed in addition to those required by Article 252.08 or after the 30 day establishment period will be considered as supplemental watering.”

Replace the first paragraph of Article 252.13 of the Standard Specifications with the following:

“252.13 Basis of Payment. Sodding will be paid for at the contract unit price per square meter (square yard) for SODDING or SODDING, SALT TOLERANT according to the following schedule.

- (a) Initial Payment. Upon placement of sod, 25 percent of the pay item will be paid.
- (b) Final Payment. Upon acceptance of sod, the remaining 75 percent of the pay item will be paid.”

Revise Article 1081.03(b) of the Standard Specifications to read:

“(b) Salt Tolerant Sod.

Variety	Percent by Weight
Buffalo Grass Buchloe Dactyloides	30%
Amigo Fineleaf Tall Fescue	20%
Audubon Red Fescue	15%
Rescue 911 Hard Fescue	15%
Rugby Kentucky Bluegrass	5%
Fults Pucinnellia Distans	15%”

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	Weed	Secondary	Remarks
	Percent Maximum	Percent Minimum	Seed Percent Minimum	Percent Maximum	Noxious Weeds No. per kg (oz) Max. Permitted*	
Alfalfa	20	92	89	0.50	211 (6)	1/
Brome Grass	-	90	75	0.50	175 (5)	-
Clover, Alsike	15	92	87	0.30	211 (6)	2/
Clover, Crimson	15	92	83	0.50	211 (6)	-
Clover, Ladino	15	92	87	0.30	211 (6)	-
Clover, Red	20	92	87	0.30	211 (6)	-
Clover, White Dutch	30	92	87	0.30	211 (6)	3/
Audubon Red Fescue	0	97	82	0.10	105 (3)	-
Fescue, Alta or Ky. 31	-	97	82	1.00	105 (3)	-
Fescue, Creeping Red	-	97	82	1.00	105 (3)	-
Fults Salt Grass	0	98	85	0.10	70 (2)	-
Kentucky Bluegrass	-	97	80	0.30	247 (7)	5/
Lespedeza, Korean	20	92	84	0.50	211 (6)	3/
Oats	-	92	88	0.50	70 (2)	4/
Orchard Grass	-	90	78	1.50	175 (5)	4/
Redtop	-	90	78	1.80	175 (5)	4/
Ryegrass, Perennial, Annual	-	97	85	0.30	175 (5)	4/
Rye, Grain, Winter	-	92	83	0.50	70 (2)	4/
Rescue 911 Hard Fescue	0	97	82	0.10	105 (3)	-
Timothy	-	92	84	0.50	175 (5)	4/
Vetch, Crown	30	92	67	1.00	211 (6)	3/ & 6/
Vetch, Spring	30	92	88	1.00	70 (2)	4/
Vetch, Winter	15	92	83	1.00	105 (3)	4/
Wheat, hard Red Winter	-	92	89	0.50	70 (2)	4/

80131

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)

Effective: July 1, 2004

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. The design and testing of a self-consolidating concrete mixture shall be according to Section 1020 of the Standard Specifications except as modified herein.

Materials. Materials shall conform to the following requirements:

- (a) Self-Consolidating Admixtures. The self-consolidating admixture system shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a flowable concrete that does not require mechanical vibration.

The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F.

The viscosity modifying admixture will be evaluated according to the test methods and mix design proportions referenced in AASHTO M 194, except the following physical requirements shall be met:

- (1) For initial and final set times, the allowable deviation of the test concrete from the reference concrete shall not be more than 1.0 hour earlier or 1.5 hours later.
 - (2) For compressive and flexural strengths, the test concrete shall be a minimum of 90 percent of the reference concrete at 3, 7 and 28 days.
 - (3) The length change of the test concrete shall be a maximum 135 percent of the reference concrete. However, if the length change of the reference concrete is less than 0.030 percent, the length change of the test concrete shall be a maximum 0.010 percentage units greater than the reference concrete.
 - (4) The relative durability factor of the test concrete shall be a minimum 80 percent.
- (b) Fine Aggregate. A fine aggregate used alone in the mix design shall not have an expansion greater than 0.30 percent per ASTM C 1260. For a blend of two or more fine aggregates, the resulting blend shall not have an expansion greater than 0.30 percent.

The aggregate blend expansion will be calculated as follows:

$$\text{Aggregate Blend Expansion} = (a/100 \times A) + (b/100 \times B) + (c/100 \times C) + \dots \text{etc.}$$

Where: a, b, c, ... = percent of aggregate blend
A, B, C, ... = aggregate expansion according to ASTM C 1260

Mix Design Criteria. The slump requirements of Article 1020.04 of the Standard Specifications shall not apply. In addition, the allowable coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. The fine aggregate proportion shall be a maximum 50 percent by mass (weight) of the total aggregate used.

Trail Batch. A minimum 1 cu m (1 cu yd) trial batch shall be produced. The mixture will be evaluated for air content, slump flow, visual stability index, compressive strength, passing ability, and static/dynamic segregation resistance.

The trial batch shall be scheduled and performed in the presence of the Engineer. Testing shall be performed per the Department's test method or as approved by the Engineer.

For the trial batch, the air content shall be within the top half of the allowable specification range. The slump flow range shall be 510 mm (20 in.) minimum to 710 mm (28 in.) maximum. The visual stability index shall be a maximum of 1. Strength shall be determined at 28 days. At the Contractor's option, strength may be determined for additional days.

Passing ability and static/dynamic segregation resistance shall be determined by tests selected by the Contractor and approved by the Engineer. The visual stability index shall not be used as the sole criteria for evaluating static segregation resistance.

After an acceptable mixture has been batched and tested, the mixture shall also be evaluated for robustness. Robustness shall be evaluated by varying the dosage of the self-consolidating admixture system and water separately. Additional trial batches may be necessary to accomplish this.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Quality Control. Once testing is completed and acceptable results have been attained, production test frequencies and allowable test ranges for slump flow, visual stability index, passing ability, and static/dynamic segregation resistance shall be proposed. The production test frequencies and allowable test ranges will be approved by the Engineer.

The slump flow range shall be ± 50 mm (± 2 in.) of the target value, and within the overall range of 510 mm (20 in.) minimum to 710 mm (28 in.) maximum. The visual stability index shall be a maximum of 1. The approved test ranges for passing ability and static/dynamic segregation resistance will be based on recommended guidelines determined by the Engineer.

SHOULDER STABILIZATION AT GUARDRAIL (BDE)

Effective: January 1, 2005

Revise the last sentence of the second paragraph of Article 630.06 of the Standard Specifications to read:

"The void around each post shall be backfilled with earth or aggregate and capped with 75 mm (3 in.) of bituminous mixture or grout."

Replace the last sentence of the third paragraph of Article 630.06 of the Standard Specifications with the following:

"Guardrail posts shall be driven through holes cored in the completed shoulder stabilization. The void around each post shall be backfilled with earth or aggregate and capped with 75 mm (3 in.) of bituminous mixture or grout."

Add the following paragraph to the end of Article 630.06 of the Standard Specifications:

"When driving guardrail posts through existing shoulders, shoulder stabilization, or other paved areas, the posts shall be driven through cored holes. The void around each post shall be backfilled with earth or aggregate and capped with 75 mm (3 in.) of bituminous mixture or grout."

80140

SUBGRADE PREPARATION (BDE)

Effective: November 1, 2002

Revise the tenth paragraph of Article 301.03 of the Standard Specifications to read:

“Equipment of such weight, or used in such a way as to cause a rut in the finished subgrade of 13 mm (1/2 in.) or more in depth, shall be removed from the work or the rutting otherwise prevented.”

80086

SUPERPAVE BITUMINOUS CONCRETE MIXTURES (BDE)

Effective: January 1, 2000

Revised: April 1, 2004

Description. This work shall consist of designing, producing and constructing Superpave bituminous concrete mixtures using Illinois Modified Strategic Highway Research Program (SHRP) Superpave criteria. This work shall be according to Sections 406 and 407 of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures", except as follows.

Materials.

- (a) Fine Aggregate Blend Requirement. The Contractor may be required to provide FA 20 manufactured sand to meet the design requirements. For mixtures with $N_{design} \geq 90$, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation.
- (b) Reclaimed Asphalt Pavement (RAP). If the Contractor is allowed to use more than 15 percent RAP, as specified in the plans, a softer performance-graded binder may be required as determined by the Engineer.

RAP shall meet the requirements of the special provision, "RAP for Use in Bituminous Concrete Mixtures".

RAP will not be permitted in mixtures containing polymer modifiers.

RAP containing steel slag will be permitted for use in top-lift surface mixtures only.

- (c) Bituminous Material. The asphalt cement (AC) shall be performance-graded (PG) or polymer modified performance-graded (SBS-PG or SBR-PG) meeting the requirements of Article 1009.05 of the Standard Specifications for the grade specified on the plans.

The following additional guidelines shall be used if a polymer modified asphalt is specified:

- (1) The polymer modified asphalt cement shall be shipped, maintained, and stored at the mix plant according to the manufacturer's requirements. Polymer modified asphalt cement shall be placed in an empty tank and shall not be blended with other asphalt cements.
- (2) The mixture shall be designed using a mixing temperature of 163 ± 3 °C (325 ± 5 °F) and a gyratory compaction temperature of 152 ± 3 °C (305 ± 5 °F).
- (3) Pneumatic-tired rollers will not be allowed unless otherwise specified by the Engineer. A vibratory roller meeting the requirements of Article 406.16 of the

Standard Specifications shall be required in the absence of the pneumatic-tired roller.

Laboratory Equipment.

- (a) Superpave Gyrotory Compactor. The superpave gyrotory compactor (SGC) shall be used for all QC/QA testing.
- (b) Ignition Oven. The ignition oven shall be used to determine the AC content. The ignition oven shall also be used to recover aggregates for all required washed gradations.

The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the AC content.

Mixture Design. The Contractor shall submit mix designs, for approval, for each required mixture. Mix designs shall be developed by Level III personnel who have successfully completed the course, "Superpave Mix Design Upgrade". Articles 406.10 and 406.13 of the Standard Specifications shall not apply. The mixtures shall be designed according to the respective Illinois Modified AASHTO references listed below.

AASHTO MP 2	Standard Specification for Superpave Volumetric Mix Design
AASHTO R 30	Standard Practice for Mixture Conditioning of Hot-Mix Asphalt (HMA)
AASHTO PP 28	Standard Practice for Designing Superpave HMA
AASHTO T 209	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
AASHTO T 312	Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor
AASHTO T 308	Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method

- (a) Mixture Composition. The ingredients of the bituminous mixture shall be combined in such proportions as to produce a mixture conforming to the composition limits by weight. The gradation mixture specified on the plans shall produce a mixture falling within the limits specified in Table 1.

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

1/ Based on percent of total aggregate weight.

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

3/ The mixture composition shall not exceed 40 percent passing the 2.36 mm (#8) sieve for surface courses with Ndesign ≥ 90.

4/ The mixture composition for surface courses shall be according to IL-12.5 mm or IL-9.5 mm, unless otherwise specified by the Engineer.

One of the above gradations shall be used for leveling binder as specified in the plans and according to Article 406.04 of the Standard Specifications.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

- (b) Dust/AC Ratio for Superpave. The ratio of material passing the 75 μm (#200) sieve to total asphalt cement shall not exceed 1.0 for mixture design (based on total weight of mixture).
- (c) Volumetric Requirements. The target value for the air voids of the hot mix asphalt (HMA) shall be 4.0 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix and shall conform to the requirements listed in Table 2.

TABLE 2. VOLUMETRIC REQUIREMENTS					
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum				Voids Filled with Asphalt (VFA), %
	IL-25.0	IL-19.0	IL-12.5	IL-9.5	
50	12.0	13.0	14.0	15	65 - 78
70					65 - 75
90					
105					

- (d) Determination of Need for Anti-Stripping Additive. The mixture designer shall determine if an additive is needed in the mix to prevent stripping. The determination will be made on the basis of tests performed according to Illinois Modified T 283 using 4 in. Marshall bricks. To be considered acceptable by the Department as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSRs) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSRs less than 0.75 will be considered unacceptable.

If it is determined that an additive is required, the additive may be hydrated lime, slaked quicklime, or a liquid additive, at the Contractor's option. The liquid additive shall be selected from the Department's list of approved additives and may be limited to those which have exhibited satisfactory performance in similar mixes.

Dry hydrated lime shall be added at a rate of 1.0 to 1.5 percent by weight of total dry aggregate. Slurry shall be added in such quantity as to provide the required amount of hydrated lime solids by weight of total dry aggregate. The exact rate of application for all anti-stripping additives will be determined by the Department. The method of application shall be according to Article 406.12 of the Standard Specifications.

Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".

Required Plant Tests. Testing shall be conducted to control the production of the bituminous mixture. The Contractor shall use the test methods identified to perform the following mixture tests at a frequency not less than that indicated in Table 3.

TABLE 3. REQUIRED PLANT TESTS for SUPERPAVE		
Parameter	Frequency of Tests	Test Method
Aggregate Gradation Hot bins for batch and continuous plants Individual cold-feeds or combined belt-feed for drier drum plants. (% passing sieves: 12.5 mm (1/2 in.), 4.75 mm (No. 4), 2.36 mm (No. 8), 600 µm (No. 30), 75 µm (No. 200))	1 dry gradation per day of production (either morning or afternoon sample). and 1 washed ignition oven test on the mix per day of production (conduct in afternoon if dry gradation is conducted in the morning or vice versa). NOTE. The order in which the above tests are conducted shall alternate from the previous production day (example: a dry gradation conducted in the morning will be conducted in the afternoon on the next production day and so forth). The dry gradation and washed ignition oven test results shall be plotted on the same control chart.	Illinois Procedure (See Manual of Test Procedures for Materials).
Asphalt Content by Ignition Oven (Note 1.)	1 per half day of production	Illinois Modified AASHTO T 308
Air Voids	Bulk Specific Gravity of Gyratory Sample	Illinois Modified AASHTO T 312
	Maximum Specific Gravity of Mixture	Illinois Modified AASHTO T 209

Note 1. The Engineer may waive the ignition oven requirement for AC content if the aggregates to be used are known to have ignition AC content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the AC content.

During production, the ratio of minus 75 µm (#200) sieve material to total asphalt cement shall be not less than 0.6 nor more than 1.2 and the moisture content of the mixture at discharge from the mixer shall not exceed 0.5 percent. If at any time the ratio of minus 75 µm (#200) material to asphalt or moisture content of the mixture falls outside the stated limits, production of the mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resuming production.

During production, mixtures containing an anti-stripping additive will be tested by the Department for stripping according to Illinois Modified T 283. If the mixture fails to meet the TSR

criteria for acceptance, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria.

Construction Requirements

Lift Thickness.

- (a) Binder and Surface Courses. The minimum compacted lift thickness for constructing bituminous concrete binder and surface courses shall be according to Table 4:

TABLE 4 – MINIMUM COMPACTED LIFT THICKNESS	
Mixture	Thickness, mm (in.)
IL-9.5	32 (1 1/4)
IL-12.5	38 (1 1/2)
IL-19.0	57 (2 1/4)
IL-25.0	76 (3)

- (b) Leveling Binder. Mixtures used for leveling binder shall be as follows:

TABLE 5 – LEVELING BINDER	
Nominal, Compacted, Leveling Binder Thickness, mm (in.)	Mixture
≤ 32 (1 1/4)	IL-9.5
32 (1 1/4) to 50 (2)	IL 9.5 or IL-12.5

Density requirements shall apply for leveling binder when the nominal, compacted thickness is 32 mm (1 1/4 in.) or greater for IL-9.5 mixtures and 38 mm (1 1/2 in.) or greater for IL-12.5 mixtures.

- (c) Full-Depth Pavement. The compacted thickness of the initial lift of binder course shall be 100 mm (4 in.). The compacted thickness of succeeding lifts shall meet the minimums specified in Table 4 but not exceed 100 mm (4 in.).

If a vibratory roller is used for breakdown, the compacted thickness of the binder lifts, excluding the top lift, may be increased to 150 mm (6 in.) provided the required density is obtained.

- (d) Bituminous Patching. The minimum compacted lift thickness for constructing bituminous patches shall be according to Table 4.

Control Charts/Limits. Control charts/limits shall be according to QC/QA Class I requirements, except density shall be plotted on the control charts within the following control limits:

TABLE 6. DENSITY CONTROL LIMITS		
Mixture	Parameter	Individual Test
12.5 mm / 9.5 mm	Ndesign \geq 90	92.0 – 96.0%
12.5 mm / 9.5 mm	Ndesign < 90	92.5 – 97.4%
19.0 mm / 25.0 mm	Ndesign \geq 90	93.0 – 96.0%
19.0 mm / 25.0 mm	Ndesign < 90	93.0 – 97.4%

Basis of Payment. On resurfacing projects, this work will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On resurfacing projects in which polymer modifiers are required, this work will be paid for at the contract unit price per metric ton (ton) for POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, of the friction aggregate mixture and Ndesign specified, POLYMERIZED LEVELING BINDER (HAND METHOD), SUPERPAVE, of the Ndesign specified, POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, of the Ndesign specified, and POLYMERIZED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition and Ndesign specified.

On full-depth pavement projects, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE PAVEMENT, (FULL-DEPTH), SUPERPAVE, of the thickness specified.

On projects where widening is constructed and the entire pavement is then resurfaced, the binder for the widening will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, of the mixture composition, Ndesign, and thickness specified. The surface and binder used to resurface the entire pavement will be paid for according to the paragraphs above for resurfacing projects.

80010

TEMPORARY EROSION CONTROL (BDE)

Effective: November 1, 2002

Revise the fifth sentence of the third paragraph of Article 280.04(a) of the Standard Specifications to read:

"This work may be constructed of hay or straw bales, extruded UV resistant high density polyethylene panels, erosion control blanket, mulch barrier, aggregate barriers, excavation, seeding, or mulch used separately or in combination, as approved, by the Engineer."

Add the following paragraphs after the fifth paragraph of Article 280.04(a) of the Standard Specifications.

"A ditch check constructed of extruded, UV resistant, high density polyethylene panels, "M" pins and erosion control blanket shall consist of the following materials:

Extruded, UV resistant, high density polyethylene panels shall have a minimum height of 250 mm (10 in.) and minimum length of 1.0 m (39.4 in.). The panels shall have a 51 mm (2 in.) lip along the bottom of the panel. Each panel shall have a single rib thickness of 4 mm (5/32 in.) with a 12 mm (1/2 in.) distance between the ribs. The panels shall have an average apparent opening size equal to 4.75 mm (No. 4) sieve, with an average of 30 percent open area. The tensile strength of each panel shall be 26.27 kN/m (1800 lb/ft) in the machine direction and 7.3 kN/m (500 lb/ft) in the transverse direction when tested according to ASTM D 4595.

"M" pins shall be at least 76 mm (3 in.) by 686 mm (27 in.), constructed out of deformed grade C1008 D3.5 rod (0.211 in. diameter). The rod shall have a minimum tensile strength of 55 MPa (8000 psi).

Erosion control blanket shall conform to Article 251.04.

A section of erosion control blanket shall be placed transverse to the flowline direction of the ditch prior to the construction of the polyethylene ditch check. The length of the section shall extend from the top of one side of the ditch to the top of the opposite side of the ditch, while the width of the section shall be one roll width of the blanket. The upstream edge of the erosion control blanket shall be secured in a 100 mm (4 in.) trench. The blanket shall be secured in the trench with 200 mm (8 in.) staples placed at 300 mm (1 ft) intervals along the edge before the trench is backfilled. Once the upstream edge of the blanket is secured, the downstream edge shall be secured with 200 mm (8 in.) staples placed at 300 mm (1 ft) intervals along the edge. The polyethylene ditch check shall be installed in the middle of the erosion control blanket, with the lip of each panel facing outward.

The ditch check shall consist of two panels placed back to back forming a single row. Placement of the first two panels shall be at the toe of the backslope or sideslope, with the panels extending across the bottom of the ditch. Subsequent panels shall extend both across the bottom of the ditch and up the opposite sideslope, as well as up the original backslope or sideslope at the distance determined by the Engineer.

The M pins shall be driven through the panel lips to secure the panels to the ground. M pins shall be installed in the center of the panels with adjacent panels overlapping the ends a minimum of 50 mm (2 in.). The pins shall be placed through both sets of panels at each overlap. They shall be installed at an interval of three M pins per one meter (39 in.) length of ditch check. The panels shall be wedged into the M pins at the top to ensure firm contact between the entire bottom of the panels and the soil."

80087

TRAFFIC BARRIER TERMINALS (BDE)

Effective: January 1, 2003

Revise Article 631.05 of the Standard Specifications to read:

“631.05 Traffic Barrier Terminal, Type 5 and Type 5A. The face of the guardrail shall be installed flush with the face of the bridge rail or parapet.”

Revise Article 631.06 of the Standard Specifications to read:

“631.06 Traffic Barrier Terminal, Type 6. When attaching the end shoe to concrete constructed with forms and with a thickness of 300 mm (12 in.) or less, the holes may be formed, core drilled or an approved 20 mm (3/4 in.) cast-in-place insert may be used.

When attaching the end shoe to concrete constructed with forms and with a thickness greater than 300 mm (12 in.), an approved M20 (3/4 in.) bolt with an approved expansion device may be used in lieu of formed or core drilled holes.

When attaching the end shoe to concrete constructed by slipforming, the holes shall be core drilled.

The tapered, parapet, wood block out shall be used on all appurtenances with a sloped face.

When no bridge approach curb is present, Type B concrete curb shall be constructed as shown on the plans according to Section 606.”

Revise Article 631.07 of the Standard Specifications to read:

“631.07 Traffic Barrier Terminal, Type 6B. Attachment of the end shoe to concrete shall be according to Article 631.06 except the tapered, parapet, wood block out will not be required.”

Delete the third and fourth paragraphs of Article 631.11 of the Standard Specifications.

Add the following paragraph to the end of Article 631.11 of the Standard Specifications:

“Construction of the Type B concrete curb for TRAFFIC BARRIER TERMINAL, TYPE 6 will be paid for according to Article 606.14.”

80098

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: April 1, 1992

Revised: January 1, 2005

To ensure a prompt response to incidents involving the integrity of work zone traffic control, the Contractor shall provide a telephone number where a responsible individual can be contacted 24 hours-a-day.

When the Engineer is notified, or determines a traffic control deficiency exists, he/she 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 12 hours based upon the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge.

A deficiency may be any lack of repair, maintenance, or non-compliance with the traffic control plan. A deficiency may also be applied to situations where corrective action is not an option such as the use of non-certified flaggers for short term operations; working with lane closures beyond the time allowed in the contract; or failure to perform required contract obligations such as traffic control surveillance.

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 \$1,000 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option this monetary deduction will be immediate.

In addition, if the Contractor fails to respond, the Engineer may correct the deficiency and the cost thereof will be deducted from monies due or which may become due the Contractor. This corrective action will in no way relieve the Contractor of his/her contractual requirements or responsibilities.

57291

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 6. 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

WEIGHT CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: April 1, 2001

Revised: August 1, 2002

The Contractor shall provide accurate weights of materials delivered to the contract for incorporation into the work (whether temporary or permanent) and for which the basis of payment is by weight. These weights shall be documented on delivery tickets which shall identify the source of the material, type of material, the date and time the material was loaded, the contract number, the net weight, the tare weight when applicable and the identification of the transporting vehicle. For aggregates, the Contractor shall have the driver of the vehicle furnish or establish an acceptable alternative to provide the contract number and a copy of the material order to the source for each load. The source is defined as that facility that produces the final material product that is to be incorporated into the contract pay items.

The Department will conduct random, independent vehicle weight checks for material sources according to the procedures outlined in the Documentation Section Policy Statement of the Department's Construction Manual and hereby incorporated by reference. The results of the independent weight checks shall be applicable to all contracts containing this Special Provision. Should the vehicle weight check for a source result in the net weight of material on the vehicle exceeding the net weight of material shown on the delivery ticket by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. No adjustment in pay quantity will be made. Should the vehicle weight check for a source result in the net weight of material shown on the delivery ticket exceeding the net weight of material on the vehicle by 0.50% (0.70% for aggregates) or more, the Engineer will document the independent vehicle weight check and immediately furnish a copy of the results to the Contractor. The Engineer will adjust the net weight shown on the delivery ticket to the checked delivered net weight as determined by the independent vehicle weight check.

The Engineer will also adjust the method of measurement for all contracts for subsequent deliveries of all materials from the source based on the independent weight check. The net weight of all materials delivered to all contracts containing this Special Provision from this source, for which the basis of payment is by weight, will be adjusted by applying a correction factor "A" as determined by the following formula:

$$A = 1.0 - \left(\frac{B - C}{B} \right); \text{ Where } A \leq 1.0; \left(\frac{B - C}{C} \right) > 0.50\% \text{ (0.70\% for aggregates)}$$

Where A = Adjustment factor

B = Net weight shown on delivery ticket

C = Net weight determined from independent weight check

The adjustment factor will be applied as follows:

$$\text{Adjusted Net Weight} = A \times \text{Delivery Ticket Net Weight}$$

The adjustment factor will be imposed until the cause of the deficient weight is identified and corrected by the Contractor to the satisfaction of the Engineer. If the cause of the deficient weight is not identified and corrected within seven (7) calendar days, the source shall cease delivery of all materials to all contracts containing this Special Provision for which the basis of payment is by weight.

Should the Contractor elect to challenge the results of the independent weight check, the Engineer will continue to document the weight of material for which the adjustment factor would be applied. However, provided the Contractor furnishes the Engineer with written documentation that the source scale has been calibrated within seven (7) calendar days after the date of the independent weight check, adjustments in the weight of material paid for will not be applied unless the scale calibration demonstrates that the source scale was not within the specified Department of Agriculture tolerance.

At the Contractor's option, the vehicle may be weighed on a second independent Department of Agriculture certified scale to verify the accuracy of the scale used for the independent weight check.

80048

WORK ZONE SPEED LIMIT SIGNS (BDE)

Effective: April 2, 2004

Revised: April 15, 2004

Delete Article 702.05(c).

Revise Article 702.05(d) to read:

"(d) Work Zone Speed Limit Signs. Work zone speed limit sign assemblies shall be provided and located as shown on the plans. Two additional assemblies shall be placed 150-m (500 ft) beyond the last entrance ramp for each interchange. The individual signs that make up an assembly may be combined on a single panel. The sheeting for the signs shall be reflective and conform to the requirements of Article 1084.02.

All permanent "SPEED LIMIT" signs located within the work zone shall be removed or covered. This work shall be coordinated with the lane closure(s) by promptly establishing a reduced posted speed zone when the lane closure(s) are put into effect and promptly reinstating the posted speed zone when the lane closure(s) are removed.

The work zone speed limit signs and end work zone speed limit signs shown in advance of and at the end of the lane closure(s) shall be used for the entire duration of the closure(s).

The work zone speed limit signs shown within the lane closure(s) shall only be used when workers are present in the closed lane adjacent to traffic; at all other times, the signs shall be promptly removed or covered. The sign assemblies shown within the lane closure(s) will not be required when the worker(s) are located behind a concrete barrier wall.

80125

WORK ZONE TRAFFIC CONTROL (BDE)

Effective: April 2, 2004

Revise the first paragraph of Article 701.07(b) to read:

"(b) Standards 701401 and 701422 will be measured for payment on an each basis only when the traffic control and protection applies to isolated stationary work areas and does not involve or is a part of other protected areas."

Revise the Article 701.07(c) to read:

"(c) Measured As Lump Sum. Traffic control and protection required under Standards 701201, 701206, 701306, 701326, 701336, 701400, 701406, 701421, 701501, 701502, 701601, 701602, 701606, 701701 and 701801 will be measured for payment on a lump sum basis. Traffic control protection required under Standards 701401 and 701422 will be measured for payment on a lump sum basis, except as specified under Article 701.07(b). Where the Contractor's operations result in daily changing, or two or more work areas each of which requires traffic control according to one of the above Standards, each work area installation will not be paid for separately, but shall be included in the lump sum price for the type of protection furnished."

Revise the first paragraph of Article 701.08(a) to read:

"(a) Traffic control and protection will be paid for at the contract unit price each for TRAFFIC CONTROL AND PROTECTION STANDARD 701316; TRAFFIC CONTROL AND PROTECTION STANDARD 701321; TRAFFIC CONTROL AND PROTECTION STANDARD 701331; TRAFFIC CONTROL AND PROTECTION STANDARD 701401; TRAFFIC CONTROL AND PROTECTION STANDARD 701402; TRAFFIC CONTROL AND PROTECTION STANDARD 701411; TRAFFIC CONTROL AND PROTECTION STANDARD 701416; TRAFFIC CONTROL AND PROTECTION STANDARD 701422; TRAFFIC CONTROL AND PROTECTION STANDARD 701423; or TRAFFIC CONTROL AND PROTECTION STANDARD 701431 at the location specified."

Revise the first paragraph of Article 701.08(b) to read:

"(b) Traffic control and protection indicated in Article 701.07(c) will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION STANDARD 701201; TRAFFIC CONTROL AND PROTECTION STANDARD 701206; TRAFFIC CONTROL AND PROTECTION STANDARD 701306; TRAFFIC CONTROL AND PROTECTION STANDARD 701326; TRAFFIC CONTROL AND PROTECTION STANDARD 701336; TRAFFIC CONTROL AND PROTECTION STANDARD 701400; TRAFFIC CONTROL AND PROTECTION STANDARD 701401; TRAFFIC CONTROL AND PROTECTION STANDARD 701406; TRAFFIC CONTROL AND PROTECTION STANDARD 701421; TRAFFIC CONTROL AND PROTECTION STANDARD 701422; TRAFFIC CONTROL AND PROTECTION STANDARD 701501; TRAFFIC CONTROL AND PROTECTION

STANDARD 701502; TRAFFIC CONTROL AND PROTECTION STANDARD 701601;
TRAFFIC CONTROL AND PROTECTION STANDARD 701602, TRAFFIC CONTROL
AND PROTECTION STANDARD 701606; TRAFFIC CONTROL AND PROTECTION
STANDARD 701701; or TRAFFIC CONTROL AND PROTECTION STANDARD
701801."

80126

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: January 1, 2003

Revised: November 1, 2004

Add the following to Article 702.01 of the Standard Specifications:

"All devices and combinations of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 for their respective categories. The categories are as follows:

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, flexible delineators and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self-certified by the manufacturer.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions, truck mounted attenuators and other devices not meeting the definitions of Category 1 or 2. Category 3 devices shall be crash tested and accepted for either Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals and area lighting supports. Currently, there is no implementation date set for this category and it is exempt from the NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer's self-certification letter for each Category 1 device and an FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets the NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device."

Delete the third, fourth and fifth paragraphs of Article 702.03(b) of the Standard Specifications.

Delete the third sentence of the first paragraph of Article 702.03(c) of the Standard Specifications.

Revise the first sentence of the first paragraph of Article 702.03(e) of the Standard Specifications to read:

"Drums shall be nonmetallic and have alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes."

Add the following to Article 702.03 of the Standard Specifications:

"(h) Vertical Barricades. Vertical barricades may be used in lieu of cones, drums or Type II barricades to channelize traffic."

Delete the fourth paragraph of Article 702.05(a) of the Standard Specifications.

Revise the sixth paragraph of Article 702.05(a) of the Standard Specifications to read:

"When the work operations exceed four days, all signs shall be post mounted unless the signs are located on the pavement or define a moving or intermittent operation. When approved by the Engineer, a temporary sign stand may be used to support a sign at 1.2 m (5 ft) minimum where posts are impractical. Longitudinal dimensions shown on the plans for the placement of signs may be increased up to 30 m (100 ft) to avoid obstacles, hazards or to improve sight distance, when approved by the Engineer. "ROAD CONSTRUCTION AHEAD" signs will also be required on side roads located within the limits of the mainline "ROAD CONSTRUCTION AHEAD" signs."

Delete all references to "Type 1A barricades" and "wing barricades" throughout Section 702 of the Standard Specifications.

80097

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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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

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

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 a 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 the submission of copies of payrolls by 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 work 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 contractor's 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.

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.

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.

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

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.il.gov/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.il.gov/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.