

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

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

The Internet is the Department's primary way of doing business. The subscription server e-mails are an added courtesy the Department provides. It is suggested that 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 Tim Garman (217)524-1642 or garmantr@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)524-1642 |

ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS

Planholders should verify that they have received and incorporated the addendum and/or revision 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 June 16, 2006

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. 90758
CHAMPAIGN County
Section 10-32HB-3,K
Route FAI 57
Project IM-F-575(189)231
District 5 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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| Mailing of CD-ROMS | 217/782-7806 |

RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

Taxpayer Identification Number (Mandatory) _____

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

**Contract No. 90758
CHAMPAIGN County
Section 10-32HB-3,K
Project IM-F-575(189)231
Route FAI 57
District 5 Construction Funds**

This project consists of constructing a new interchange and a four lane roadway connecting Staley Road and Duncan Road at Interstate 57; multiple culverts, lighting, signing, and other work will also be required to complete this project located near Champaign.

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.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER - 90758

State Job # - C-95-093-05
 PPS NBR - 5-91660-0100
 County Name - CHAMPAIGN- -
 Code - 19 - -
 District - 5 - -
 Section Number - 10-32HB-3,K

Project Number
 IM-F-057-5/189/231

Route
 FAI 57

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|----------|---|------------|---|-------------|
| A2000610 | T-ACER PLAT 1-1/4 | EACH | 6.000 | | | | |
| A2001010 | T-ACER RUBRUM 1-1/4 | EACH | 5.000 | | | | |
| A2001210 | T-ACER RUB RS 1-1/4 | EACH | 6.000 | | | | |
| A2002370 | T-BETULA NIGRA CL 8' | EACH | 5.000 | | | | |
| A2003312 | T-FRAXINUS AMER 1-1/2 | EACH | 8.000 | | | | |
| A2003515 | T-FRAX AMER AP 1-1/2 | EACH | 5.000 | | | | |
| A2004212 | T-FRAX PENN SUM 1-1/2 | EACH | 7.000 | | | | |
| A2006912 | T-QUERCUS PALUS 1-1/2 | EACH | 5.000 | | | | |
| A2007112 | T-QUERCUS RUBRA 1-1/2 | EACH | 5.000 | | | | |
| A2016002 | T-FAG SYLV TCB 1-1/2 | EACH | 7.000 | | | | |
| B2000412 | T-ACER GRIS TF 1-1/2 | EACH | 4.000 | | | | |
| C2011265 | S-THUJA OCCIDENTAL 4' | EACH | 10.000 | | | | |
| D2002172 | E-PICEA PUNGENS 6' | EACH | 4.000 | | | | |
| D2002272 | E-PICEA PUNG GLAU 6' | EACH | 11.000 | | | | |
| T9991500 | REM EX SIGN COMPL | EACH | 1.000 | | | | |

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|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| XX001429 | FORM LINER TEX SURF | SQ YD | 169.000 | | | | |
| XX002065 | LIGHTING UNIT COMP | EACH | 1.000 | | | | |
| XX003189 | LIGHT UNIT INST ONLY | EACH | 1.000 | | | | |
| XZ193300 | SURVEY MARKER T1 SPL | EACH | 1.000 | | | | |
| XZ193400 | SURVEY MARKER T2 SPL | EACH | 31.000 | | | | |
| X0321962 | CONNECT EX PIPE UNDR | EACH | 8.000 | | | | |
| X0322729 | MATL TRANSFER DEVICE | TON | 11,503.000 | | | | |
| X0324058 | OUTLET SPL | EACH | 2.000 | | | | |
| X0324865 | DIAMOND GRIND BR SEC | SQ YD | 2,076.000 | | | | |
| X0325398 | EC T 600V UF 2C NO 10 | FOOT | 810.000 | | | | |
| X0325399 | PCBC 10X2 (M273) | FOOT | 92.500 | | | | |
| X0325400 | REL EX 8 HP GAS MAIN | L SUM | 1.000 | | | | |
| X0325401 | BCBC SUP IL19 N70 10 | SQ YD | 5,284.000 | | | | |
| X0325402 | MODIFY SPRINKLER SYST | L SUM | 1.000 | | | | |
| X0325403 | CON FLX NON-MET WP 2 | EACH | 4.000 | | | | |

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|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| X0349800 | CONC HDWL - P UNDR RM | EACH | 12.000 | | | | |
| X0731725 | DROP STRUCTURE C5 | EACH | 1.000 | | | | |
| X0731735 | DROP STRUCTURE C7 | EACH | 1.000 | | | | |
| X4066526 | P BCSC SUPER "D" N70 | TON | 865.000 | | | | |
| X4066770 | LEV BIND MM SUPER N70 | TON | 696.000 | | | | |
| X4073071 | BIT C PVT FD SUP 9.5 | SQ YD | 2,460.000 | | | | |
| X4073131 | B C PVT FD SUP 12.5 | SQ YD | 27,910.000 | | | | |
| X4073146 | B C PVT FD SUP 13.25 | SQ YD | 17,738.000 | | | | |
| X7011005 | TR CONT-PROT TEMP DET | L SUM | 1.000 | | | | |
| X7013015 | TRAF CONT RD CLOSURE | L SUM | 1.000 | | | | |
| X7015005 | CHANGEABLE MESSAGE SN | CAL DA | 52.000 | | | | |
| X8040010 | ELECT SERV INSTALL L1 | L SUM | 1.000 | | | | |
| X8040020 | ELECT SERV INSTALL L2 | L SUM | 1.000 | | | | |
| Z0002600 | BAR SPLICERS | EACH | 180.000 | | | | |
| Z0013825 | CONTR LOW-STRENG MATL | CU YD | 593.000 | | | | |

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|-------------|-----------------------|-----------------|-------------|---|------------|---|-------------|
| Z0030150 | IMPACT ATTEN NRD TL3 | EACH | 2.000 | | | | |
| Z0030250 | IMP ATTN TEMP NRD TL3 | EACH | 2.000 | | | | |
| Z0030330 | IMP ATTN REL FRD TL3 | EACH | 2.000 | | | | |
| Z0040530 | PIPE UNDERDRAIN REMOV | FOOT | 5,709.000 | | | | |
| Z0070100 | SURV MONUMENT COV ASY | EACH | 1.000 | | | | |
| Z0076600 | TRAINEES | HOUR | 1,500.000 | | 0.800 | | 1,200.000 |
| 20100110 | TREE REMOV 6-15 | UNIT | 509.000 | | | | |
| 20100210 | TREE REMOV OVER 15 | UNIT | 141.000 | | | | |
| 20200100 | EARTH EXCAVATION | CU YD | 128,604.000 | | | | |
| 20400100 | BORROW EXCAV | CU YD | 632,848.000 | | | | |
| 20700400 | POROUS GRAN EMB SPEC | CU YD | 551.000 | | | | |
| 20800150 | TRENCH BACKFILL | CU YD | 24.000 | | | | |
| 21101505 | TOPSOIL EXC & PLAC | CU YD | 40,045.000 | | | | |
| 21301072 | EXPLOR TRENCH 72 | FOOT | 16,646.000 | | | | |
| 25000200 | SEEDING CL 2 | ACRE | 88.500 | | | | |

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|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| 25000350 | SEEDING CL 7 | ACRE | 88.500 | | | | |
| 25000400 | NITROGEN FERT NUTR | POUND | 7,938.000 | | | | |
| 25000500 | PHOSPHORUS FERT NUTR | POUND | 7,938.000 | | | | |
| 25000600 | POTASSIUM FERT NUTR | POUND | 7,938.000 | | | | |
| 25100115 | MULCH METHOD 2 | ACRE | 177.000 | | | | |
| 25100630 | EROSION CONTR BLANKET | SQ YD | 232.000 | | | | |
| 28000250 | TEMP EROS CONTR SEED | POUND | 8,820.000 | | | | |
| 28000300 | TEMP DITCH CHECKS | EACH | 69.000 | | | | |
| 28000400 | PERIMETER EROS BAR | FOOT | 22,270.000 | | | | |
| 28000500 | INLET & PIPE PROTECT | EACH | 30.000 | | | | |
| 28100107 | STONE RIPRAP CL A4 | SQ YD | 1,287.000 | | | | |
| 28101700 | RIPRAP SPL | TON | 1,999.000 | | | | |
| 28200200 | FILTER FABRIC | SQ YD | 5,284.000 | | | | |
| 28500200 | PREC BLOCK REV MAT | SQ YD | 251.000 | | | | |
| 30200650 | PROCESS MOD SOIL 12 | SQ YD | 78,568.000 | | | | |

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|-------------|----------------------|-----------------|-----------|---|------------|---|-------------|
| 30201500 | LIME | TON | 1,768.000 | | | | |
| 31100300 | SUB GRAN MAT A 4 | SQ YD | 7,114.000 | | | | |
| 31101900 | SUB GRAN MAT C | TON | 3,320.000 | | | | |
| 40200800 | AGG SURF CSE B | TON | 822.000 | | | | |
| 40600100 | BIT MATLS PR CT | GALLON | 9,422.000 | | | | |
| 40600300 | AGG PR CT | TON | 10.000 | | | | |
| 40600895 | CONSTRUC TEST STRIP | EACH | 4.000 | | | | |
| 40600980 | BIT SURF REM BUTT JT | SQ YD | 502.000 | | | | |
| 40800010 | BIT MATLS PR CT | GALLON | 131.000 | | | | |
| 40800030 | AGG PR CT | TON | 1.000 | | | | |
| 40800040 | INCIDENTAL BIT SURF | TON | 59.000 | | | | |
| 42001400 | BR APPROACH PAVT SPL | SQ YD | 622.000 | | | | |
| 44000100 | PAVEMENT REM | SQ YD | 377.000 | | | | |
| 44000200 | DRIVE PAVEMENT REM | SQ YD | 520.000 | | | | |
| 44004250 | PAVED SHLD REMOVAL | SQ YD | 5,720.000 | | | | |

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|-------------|----------------------|-----------------|------------|---|------------|---|-------------|
| 44201771 | CL D PATCH T4 10 | SQ YD | 180.000 | | | | |
| 48101200 | AGGREGATE SHLDS B | TON | 992.000 | | | | |
| 48101600 | AGGREGATE SHLDS B 8 | SQ YD | 6,166.000 | | | | |
| 48202600 | BIT SHLD SUPER 8 | SQ YD | 21,785.000 | | | | |
| 48300300 | PCC SHOULDERS 8 | SQ YD | 67.000 | | | | |
| 50100300 | REM EXIST STRUCT N1 | EACH | 1.000 | | | | |
| 50101430 | REM EXIST STRUCT N25 | EACH | 1.000 | | | | |
| 50101431 | REM EXIST STRUCT N26 | EACH | 1.000 | | | | |
| 50105220 | PIPE CULVERT REMOV | FOOT | 328.000 | | | | |
| 50200100 | STRUCTURE EXCAVATION | CU YD | 696.000 | | | | |
| 50300130 | PREF JOINT SEAL 4 | FOOT | 84.000 | | | | |
| 50300225 | CONC STRUCT | CU YD | 367.600 | | | | |
| 50300255 | CONC SUP-STR | CU YD | 785.900 | | | | |
| 50300260 | BR DECK GROOVING | SQ YD | 1,662.000 | | | | |
| 50300300 | PROTECTIVE COAT | SQ YD | 2,405.000 | | | | |

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 Section Number - 10-32HB-3,K

Project Number
 IM-F-057-5/189/231

Route
 FAI 57

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|-------------|---|------------|---|-------------|
| 50400735 | F&E PPC BULB T-BM 63 | FOOT | 3,050.000 | | | | |
| 50800105 | REINFORCEMENT BARS | POUND | 352,999.000 | | | | |
| 50800205 | REINF BARS, EPOXY CTD | POUND | 215,022.000 | | | | |
| 51100100 | SLOPE WALL 4 | SQ YD | 928.000 | | | | |
| 51201700 | FUR STL PILE HP12X74 | FOOT | 5,070.000 | | | | |
| 51202700 | DRIVE STL PILE | FOOT | 5,070.000 | | | | |
| 51203700 | TEST PILE ST HP12X74 | EACH | 2.000 | | | | |
| 51500100 | NAME PLATES | EACH | 9.000 | | | | |
| 54001004 | BOX CUL END SEC C4 | EACH | 2.000 | | | | |
| 54001005 | BOX CUL END SEC C5 | EACH | 1.000 | | | | |
| 54001007 | BOX CUL END SEC C7 | EACH | 1.000 | | | | |
| 54001008 | BOX CUL END SEC C8 | EACH | 2.000 | | | | |
| 54001020 | BOX CUL END SEC C20 | EACH | 2.000 | | | | |
| 54001021 | BOX CUL END SEC C21 | EACH | 2.000 | | | | |
| 54001025 | BOX CUL END SEC C25 | EACH | 2.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER - 90758

State Job # - C-95-093-05
 PPS NBR - 5-91660-0100
 County Name - CHAMPAIGN- -
 Code - 19 - -
 District - 5 - -
 Section Number - 10-32HB-3,K

Project Number
 IM-F-057-5/189/231

Route
 FAI 57

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|----------------------|-----------------|-----------|---|------------|---|-------------|
| 54001026 | BOX CUL END SEC C26 | EACH | 2.000 | | | | |
| 54002060 | EXPAN BOLTS 3/4 X 12 | EACH | 8.000 | | | | |
| 54003000 | CONC BOX CUL | CU YD | 1,570.000 | | | | |
| 54010503 | PCBC 5X3 | FOOT | 95.000 | | | | |
| 54010603 | PCBC 6X3 | FOOT | 80.500 | | | | |
| 54010703 | PCBC 7X3 | FOOT | 134.500 | | | | |
| 54010802 | PCBC 8X2 | FOOT | 76.500 | | | | |
| 54010803 | PCBC 8X3 | FOOT | 136.500 | | | | |
| 54010903 | PCBC 9X3 | FOOT | 86.500 | | | | |
| 542A0229 | P CUL CL A 1 24 | FOOT | 25.000 | | | | |
| 542A1063 | P CUL CL A 2 18 | FOOT | 25.000 | | | | |
| 542A1093 | P CUL CL A 2 48 | FOOT | 104.000 | | | | |
| 542A5473 | P CUL CL A 1 EQRS 18 | FOOT | 34.000 | | | | |
| 542D0241 | P CUL CL D 1 36 | FOOT | 136.000 | | | | |
| 542D5473 | P CUL CL D 1 EQRS 18 | FOOT | 68.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
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 IM-F-057-5/189/231

Route
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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|-----------|---|------------|---|-------------|
| 542D5485 | P CUL CL D 1 EQRS 30 | FOOT | 66.000 | | | | |
| 54213447 | END SECTIONS 12 | EACH | 8.000 | | | | |
| 54213471 | END SECTIONS 36 | EACH | 2.000 | | | | |
| 54213663 | PRC FLAR END SEC 18 | EACH | 1.000 | | | | |
| 54213669 | PRC FLAR END SEC 24 | EACH | 1.000 | | | | |
| 54213693 | PRC FLAR END SEC 48 | EACH | 1.000 | | | | |
| 54214293 | END SEC EQV R-S 18 | EACH | 2.000 | | | | |
| 54214305 | END SEC EQV R-S 30 | EACH | 2.000 | | | | |
| 54214503 | PRC FL END S EQ RS 18 | EACH | 2.000 | | | | |
| 54248510 | CONCRETE COLLAR | CU YD | 0.500 | | | | |
| 550A0340 | STORM SEW CL A 2 12 | FOOT | 193.000 | | | | |
| 55100500 | STORM SEWER REM 12 | FOOT | 1,045.000 | | | | |
| 59100100 | GEOCOMPOSITE WALL DR | SQ YD | 220.000 | | | | |
| 60100060 | CONC HDWL FOR P DRAIN | EACH | 58.000 | | | | |
| 60100070 | SHOULDER REM & REPL | FOOT | 1,856.000 | | | | |

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Project Number
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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|----------------------|-----------------|------------|---|------------|---|-------------|
| 60100945 | PIPE DRAINS 12 | FOOT | 455.000 | | | | |
| 60107600 | PIPE UNDERDRAINS 4 | FOOT | 18,660.000 | | | | |
| 60107700 | PIPE UNDERDRAINS 6 | FOOT | 1,800.000 | | | | |
| 60108100 | PIPE UNDERDRAIN 4 SP | FOOT | 1,480.000 | | | | |
| 60108200 | PIPE UNDERDRAIN 6 SP | FOOT | 274.000 | | | | |
| 60109580 | P UNDR FOR STRUCT 4 | FOOT | 278.000 | | | | |
| 60240210 | INLETS TB T1F OL | EACH | 4.000 | | | | |
| 60258200 | MAN RECON NEW T1F CL | EACH | 1.000 | | | | |
| 60600095 | CLASS SI CONC OUTLET | CU YD | 9.000 | | | | |
| 60600105 | CONC CURB | FOOT | 60.000 | | | | |
| 60605000 | COMB CC&G TB6.24 | FOOT | 778.000 | | | | |
| 60608600 | COMB CC&G TM6.06 | FOOT | 7,500.000 | | | | |
| 60610400 | COMB CC&G TM6.24 | FOOT | 290.000 | | | | |
| 60618320 | CONC MEDIAN SURF 6 | SQ FT | 9,540.000 | | | | |
| 60621600 | CONC MED TSM | SQ FT | 723.000 | | | | |

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Project Number
 IM-F-057-5/189/231

Route
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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|-----------|---|------------|---|-------------|
| 60624600 | CORRUGATED MED | SQ FT | 3,200.000 | | | | |
| 60900515 | CONC THRUST BLOCKS | EACH | 4.000 | | | | |
| 61000225 | TY F INLET BOX 610001 | EACH | 4.000 | | | | |
| 63000000 | SPBGR TY A | FOOT | 75.000 | | | | |
| 63100085 | TRAF BAR TERM T6 | EACH | 2.000 | | | | |
| 63100169 | TR BAR TRM T1 SPL FLR | EACH | 2.000 | | | | |
| 63400105 | GUARD POSTS | EACH | 20.000 | | | | |
| 63500105 | DELINEATORS | EACH | 245.000 | | | | |
| 66500105 | WOV W FENCE 4 | FOOT | 9,326.000 | | | | |
| 66600105 | FUR ERECT ROW MARKERS | EACH | 56.000 | | | | |
| 67000400 | ENGR FIELD OFFICE A | CAL MO | 21.000 | | | | |
| 67000600 | ENGR FIELD LAB | CAL MO | 21.000 | | | | |
| 67100100 | MOBILIZATION | L SUM | 1.000 | | | | |
| 70100460 | TRAF CONT-PROT 701306 | L SUM | 1.000 | | | | |
| 70100500 | TRAF CONT-PROT 701326 | L SUM | 1.000 | | | | |

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Project Number
 IM-F-057-5/189/231

Route
 FAI 57

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| 70100700 | TRAF CONT-PROT 701406 | L SUM | 1.000 | | | | |
| 70100800 | TRAF CONT-PROT 701401 | L SUM | 1.000 | | | | |
| 70101800 | TRAF CONT & PROT SPL | L SUM | 1.000 | | | | |
| 70103815 | TR CONT SURVEILLANCE | CAL DA | 10.000 | | | | |
| 70300100 | SHORT-TERM PAVT MKING | FOOT | 1,692.000 | | | | |
| 70300220 | TEMP PVT MK LINE 4 | FOOT | 55,853.000 | | | | |
| 70300240 | TEMP PVT MK LINE 6 | FOOT | 974.000 | | | | |
| 70300250 | TEMP PVT MK LINE 8 | FOOT | 3,525.000 | | | | |
| 70300260 | TEMP PVT MK LINE 12 | FOOT | 1,193.000 | | | | |
| 70300280 | TEMP PVT MK LINE 24 | FOOT | 220.000 | | | | |
| 70300610 | TEMP PT PAVT MK L&S | SQ FT | 843.000 | | | | |
| 70301000 | WORK ZONE PAVT MK REM | SQ FT | 564.000 | | | | |
| 70400100 | TEMP CONC BARRIER | FOOT | 1,840.000 | | | | |
| 72000100 | SIGN PANEL T1 | SQ FT | 366.000 | | | | |
| 72000200 | SIGN PANEL T2 | SQ FT | 176.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|------------|---|------------|---|-------------|
| 72000300 | SIGN PANEL T3 | SQ FT | 1,538.000 | | | | |
| 72700100 | STR STL SIN SUP BA | POUND | 12,923.000 | | | | |
| 73000100 | WOOD SIN SUPPORT | FOOT | 812.000 | | | | |
| 73400100 | CONC FOUNDATION | CU YD | 26.000 | | | | |
| 73700200 | REM CONC FDN-GR MT | EACH | 2.000 | | | | |
| 78000100 | THPL PVT MK LTR & SYM | SQ FT | 843.000 | | | | |
| 78000200 | THPL PVT MK LINE 4 | FOOT | 39,362.000 | | | | |
| 78000400 | THPL PVT MK LINE 6 | FOOT | 306.000 | | | | |
| 78000600 | THPL PVT MK LINE 12 | FOOT | 695.000 | | | | |
| 78000650 | THPL PVT MK LINE 24 | FOOT | 162.000 | | | | |
| 78008310 | POLYUREA PM T2 LN 4 | FOOT | 17,343.000 | | | | |
| 78008330 | POLYUREA PM T2 LN 6 | FOOT | 668.000 | | | | |
| 78008340 | POLYUREA PM T2 LN 8 | FOOT | 3,525.000 | | | | |
| 78008350 | POLYUREA PM T2 LN 12 | FOOT | 498.000 | | | | |
| 78008370 | POLYUREA PM T2 LN 24 | FOOT | 61.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|-------------|-----------------------|-----------------|-----------|---|------------|---|-------------|
| 78100100 | RAISED REFL PAVT MKR | EACH | 530.000 | | | | |
| 78100105 | RAISED REF PVT MKR BR | EACH | 6.000 | | | | |
| 78200300 | PRISMATIC CURB REFL | EACH | 122.000 | | | | |
| 78200410 | GUARDRAIL MKR TYPE A | EACH | 2.000 | | | | |
| 78200510 | BAR WALL MKR TYPE A | EACH | 8.000 | | | | |
| 78201000 | TERMINAL MARKER - DA | EACH | 2.000 | | | | |
| 81014600 | CON T 2 IM | FOOT | 32.000 | | | | |
| 81020500 | CON P 2 IM | FOOT | 150.000 | | | | |
| 81020700 | CON P 3 IM | FOOT | 50.000 | | | | |
| 81200230 | CON EMB STR 2 PVC | FOOT | 1,070.000 | | | | |
| 81300800 | JUN BX SS AS 18X12X6 | EACH | 4.000 | | | | |
| 81500200 | TR & BKFIL F ELECT WK | FOOT | 8,110.000 | | | | |
| 81600215 | UD 2#8XLP1#8XLPG 3/4P | FOOT | 1,280.000 | | | | |
| 81600315 | UD 2#6XLP 1#6XLPG 1P | FOOT | 2,010.000 | | | | |
| 81600415 | UD 2#4XLP 1#4XLPG 1P | FOOT | 3,560.000 | | | | |

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|-------------|-----------------------|-----------------|-----------|---|------------|---|-------------|
| 81600515 | UD2#2XLP#2XLPG 1 1/4P | FOOT | 1,275.000 | | | | |
| 81702400 | EC C XLP USE 3-1C 2 | FOOT | 280.000 | | | | |
| 82103900 | LUM SV MM 250W | EACH | 14.000 | | | | |
| 82500510 | LT CONT CBRCs 60-240 | EACH | 1.000 | | | | |
| 83034400 | LT P S 45MH TEN MT | EACH | 10.000 | | | | |
| 83035400 | LT P S 45MH TEN MT-TW | EACH | 2.000 | | | | |
| 83600355 | LP F M 15BC 8" X 6' | EACH | 10.000 | | | | |
| 83600357 | LP F M 15BC 8" X 8' | EACH | 2.000 | | | | |
| 83800650 | BKWY DEV COU SS SCRn | EACH | 48.000 | | | | |

CONTRACT NUMBER

90758

THIS IS THE TOTAL BID

\$ _____

NOTES:

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

RETURN WITH BID

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

I. GENERAL

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

B. In order to comply with the provisions of Article 50 and to carry out the duty established therein, all bidders are to adhere to ethical standards established for the procurement process, and to make such assurances, disclosures and certifications required by law. 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 any or all of its subcontractors. Applicable apprenticeship and training programs are those that have been approved and registered with the United States Department of Labor. The bidder shall list in the space below, the official name of the program sponsor holding the Certificate of Registration for all of the types of work or crafts in which the bidder is a participant and that will be performed with the bidder's forces. Types of work or craft work that will be subcontracted shall be included and listed as subcontract work. The list shall also indicate any type of work or craft job category that does not have an applicable apprenticeship or training program. **The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project as reported on the Construction Employee Workforce Projection (Form BC-1256) and returned with the bid is accounted for and listed.**

NA - FEDERAL

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

TO BE RETURNED WITH BID

IV. DISCLOSURES

A. The disclosures hereinafter made by the bidder are each a material representation of fact upon which reliance is placed should the Department enter into the contract with the bidder. The Department may terminate the contract if it is later determined that the bidder rendered a false or erroneous disclosure, and the surety providing the performance bond shall be responsible for completion of the contract.

B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Illinois Procurement Code provides that all bids of more than \$10,000 shall be accompanied by disclosure of the financial interests of the bidder. This disclosed information for the successful bidder, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act.

The financial interests to be disclosed shall include ownership or distributive income share that is in excess of 5%, or an amount greater than 60% of the annual salary of the Governor, of the bidding entity or its parent entity, whichever is less, unless the contractor or bidder is a publicly traded entity subject to Federal 10K reporting, in which case it may submit its 10K disclosure in place of the prescribed disclosure. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. The disclosure shall include the names, addresses, and dollar or proportionate share of ownership of each person making the disclosure, their instrument of ownership or beneficial relationship, and notice of any potential conflict of interest resulting from the current ownership or beneficial interest of each person making the disclosure having any of the relationships identified in Section 50-35 and on the disclosure form.

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

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

C. Disclosure Form Instructions

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

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may 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.

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

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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. 90758
CHAMPAIGN County
Section 10-32HB-3,K
Project IM-F-575(189)231
Route FAI 57
District 5 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.

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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. 90758
CHAMPAIGN County
Section 10-32HB-3,K
Project IM-F-575(189)231
Route FAI 57
District 5 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.

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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 326
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

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

**Contract No. 90758
CHAMPAIGN County
Section 10-32HB-3,K
Project IM-F-575(189)231
Route FAI 57
District 5 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., June 16, 2006. 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. 90758
CHAMPAIGN County
Section 10-32HB-3,K
Project IM-F-575(189)231
Route FAI 57
District 5 Construction Funds**

This project consists of constructing a new interchange and a four lane roadway connecting Staley Road and Duncan Road at Interstate 57; multiple culverts, lighting, signing, and other work will also be required to complete this project located near Champaign.

- 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.

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-02) (Revised 3-1-05)

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2002, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI Route 57, Project IM-F-057-5(189)231, Section 10-32HB-3,K, in Champaign County, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

INTENT OF PROJECT

The intent of this project is to construct a new interchange at the intersection of Interstate 57 and Curtis Road and to construct Curtis Road in order to connect the new interchange with Staley and Duncan Roads.

DESCRIPTION OF WORK

The work included in this contract consists of: 1) Relocation of an 8" natural gas line; 2) Removal of two box culverts at Staley, multiple entrance culverts, and a small structure over the Kaskaskia Special Drainage Ditch; 3) Construction of 6 cast-in-place box culverts, 8 precast box culverts, and 6 other smaller culverts, 4) Placement of earthwork for the proposed alignments of Curtis Road and the entrance and exit ramps; 5) Construction of S.N. 010-0272; 6) Placement of the pavement structure for Curtis Road and the ramps; 7) Resurfacing of Staley Road near Curtis Road; 8) Installation of lighting and signing; 9) Striping, tree planting, and seeding; and 10) Any other work necessary to complete this project.

TRAFFIC CONTROL PLAN

Eff. 09-11-90
Rev.: 01-06-99

FAI 57
Section: 10-32HB-3K
Project: IM-F-057-5(189)231
Champaign Co.
Contract 90758

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

Special attention is called to Articles 107.09 and 107.14 of the Standard Specifications, the following Highway Standards relating to Traffic Control, and the listed Supplemental Specifications and Recurring Special Provisions.

| | | | | | |
|--------------------|--------|--------|--------|--------|--------|
| Highway Standards: | 701001 | 701006 | 701101 | 701106 | 701301 |
| | 701306 | 701311 | 701326 | 701400 | 701401 |
| | 701402 | 701406 | 702001 | | |

Plan Details: Typical Application of Traffic Control Devices for Road Closure
Interstate Detour Using Entrance and Exit Ramps
Traffic Control and Protection for Bridge Construction
Detail of Staley Road Closure

The Contractor shall provide and maintain access to commercial and private properties abutting the highway being improved in accordance with Article 107.09 of the Standard Specifications. Access to commercial property shall at no time be shut off completely and at no time shall a private entrance be closed for an extended period of time as determined by the Engineer.

The following traffic control standards shall be utilized during, but not limited to, the listed construction operations:

FAI-57 TRAFFIC

It is the intention of the Department that FAI-57 be kept open to traffic at all times during the construction of this section, except during beam placement as noted in the Special Provision TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR. For other construction operations, one-lane traffic will be permitted in the immediate work areas for a given direction during construction. At all other times, two-way, four-lane traffic shall be maintained throughout the project.

At any particular location on a four-lane highway when the driving lane is closed to traffic, the Contractor shall keep all equipment, materials, and vehicles out of the median and at least 30' beyond the far edge of pavement of the lanes in the opposite direction unless a lane is also closed to traffic in the opposite direction. When the passing lane is closed to traffic, the Contractor shall keep all equipment, materials, and vehicles at least 30' beyond the edge of pavement of the adjacent driving lane that is open to traffic and out of the area between the centerline of the median and 30' beyond the far edge of pavement of the opposite driving lane unless the passing lane in the opposite direction is also closed to traffic.

STALEY ROAD TRAFFIC

It is the intent of the Department that Staley Road be kept open to traffic at all times during the construction of this section, except during culvert removal and replacement as noted in the Special Provision TRAFFIC CONTROL FOR ROAD CLOSURE. For other construction operations, one-way traffic will be permitted in the immediate work areas during the construction. At all other times, two-way traffic shall be maintained throughout the project.

It is the intent of the Department that the Contractor only work on one side of the road at a time and that all equipment shall also be kept on the same side of the road.

CURTIS ROAD (WEST OF STALEY) TRAFFIC

It is the intent of the Department that Curtis Road west of Staley Road be kept open to traffic at all times during the construction of this section, except during reconstruction of the pavement and removal and replacement of Staley Road culverts as noted in the Special Provision TRAFFIC CONTROL FOR ROAD CLOSURE. For other construction operations, one-way traffic will be permitted in the immediate work areas during the construction. At all other times, two-way traffic shall be maintained throughout the project.

The following traffic control standards shall be utilized during, but not limited to, the listed construction operations:

OPENING STALEY ROAD TO TRAFFIC

As part of the Department's policy on opening roads to traffic when site conditions have been improved, the following requirements shall be completed by the contractor. When the concrete islands at the intersection of Curtis and Staley Roads are completed, the road shall not be opened unless stop signs are in place. Temporary stop signs may be used if necessary. Prior to opening Staley Road to the improved four-way stop condition, additional warning devices are required. Changeable Message Signs (CMS) shall be located on Staley Road ½ mile in advance of the Staley/Curtis Road intersection for a period of five (5) days; three (3) days prior to and two (2) days after the opening. MESSAGE BOARD TEXT SHALL BE VERIFIED WITH THE TRAFFIC CONTROL SUPERVISOR PRIOR TO INSTALLATION. In addition, flags shall be placed on the "Stop Ahead" signs for a period of fourteen (14) days to provide further notification to the traveling public. Cost associated with providing temporary stop signs and warning flags at Staley Road will be included with the permanent signing application of Staley Road. Changeable Message Signs (CMS) will be paid for according to the special provision for CHANGEABLE MESSAGE SIGN.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701001

Traffic Control and Protection, Standard 701001 shall be used on Staley Road and Curtis Road west of Staley Road for utility work, light and wiring installation, and any other construction operations that do not encroach closer than 15 feet from the edge of pavement. Traffic Control and Protection, Standard 701001 will not be measured for payment.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701006

Traffic Control and Protection, Standard 701006 shall be used on Staley Road and Curtis Road west of Staley Road for sign installation, earthwork, and any other construction operations that do not encroach closer than 2 feet from the edge of pavement. Traffic Control and Protection, Standard 701006 will not be measured for payment.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701101

Traffic Control and Protection, Standard 701101 shall be used on I-57 for ramp pavement work, earthwork, and any other construction operations that do not encroach closer than 2 feet from the edge of pavement. Traffic Control and Protection, Standard 701101 will not be measured for payment.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701106

Traffic Control and Protection, Standard 701106 shall be used on I-57 for sign installation, earthwork, underdrain extensions, and any other construction operations that do not encroach closer than 15 feet from the edge of pavement. Traffic Control and Protection, Standard 701101 will not be measured for payment.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701301

Traffic Control and Protection, Standard 701301 shall be used on Staley Road and Curtis Road west of Staley Road for any short term construction operations less than 60 minutes as shown in the standard. Traffic Control and Protection, Standard 701301 will not be measured for payment.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701306

Traffic Control and Protection, Standard 701306 shall be used on Staley Road and Curtis Road west of Staley Road for resurfacing and shoulder work. Traffic Control and Protection, Standard 701306 will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701306.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701311

Traffic Control and Protection, Standard 701311 shall be used on Staley Road and Curtis Road west of Staley Road for pavement marking operations. Traffic Control and Protection, Standard 701311 will not be measured for payment.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701326

Traffic Control and Protection, Standard 701326 shall be used on Staley Road for widening operations. Traffic Control and Protection, Standard 701326 will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701326.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701400

Traffic Control and Protection, Standard 701400 shall be used on I-57 for any operations which require a lane closure. Traffic Control and Protection, Standard 701400 will not be measured for payment.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701401

Description: Traffic Control Standard 701401 shall be utilized during construction along FAI 57 when operations require lanes to be closed through the night. The outside lane shall be closed any time there is a drop off of greater than 3" within 2' of the outside edge of pavement. The contractor shall be required to order their work to limit the amount of time lanes are closed on I-57. Work shall be scheduled to ensure that the exit and entrance ramp terminals in a given direction are constructed at the same time under the same lane closure. Traffic control Standard 701401 shall be limited to 45 consecutive calendar days in each direction. Failure to open the lane after 45 calendar days will result in liquidated damages being charged per calendar day in accordance with Section 108.09 of the Standard Specifications.

Basis of Payment: Traffic Control Standard 701401 shall be paid for a the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701401. This price shall include lane closures along the northbound and southbound lanes of FAI 57 when construction operations require traffic lanes to be closed through the night.

TRAFFIC CONTROL AND PROTECTION, STANDARD 701402

Traffic Control and Protection, Standard 701402 will not be measured for payment and is only included for reference when using the detail "Traffic Control and Protection for Bridge Construction". For additional information, see Traffic Control and Protection, (Special).

TRAFFIC CONTROL AND PROTECTION, STANDARD 701406

Traffic Control and Protection, Standard 701406 shall be used on I-57 for cross-over removal, temporary concrete barrier placement for Traffic Control & Protection, Special, and ramp operations which require a lane closure. Traffic Control and Protection, Standard 701406 will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701406.

TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR

Description. This work consists of furnishing, installing, maintaining, relocating, and removing of all traffic control devices for the temporary closure of FAI-57 for the purpose of setting the proposed concrete bridge beams for S.N. 010-0272.

Procedure. At the point of the gore area, between the ramp and the mainline pavement, the driving lanes shall be closed with Type III barricades and traffic shall use the ramps to detour around the work area. The work area is defined as the area between the start of the gore area of the off ramp and the end of the gore area of the on ramp in each direction. Through traffic from FAI-57 detoured onto the ramps shall be maintained in a free-flow situation and shall take priority over all other traffic including construction traffic in order to avoid a back-up situation on FAI-57.

Signs shall be located as shown in the plan detail "Interstate Detour Using Entrance and Exit Ramps." A changeable message sign shall be placed three miles in advance of the closure before the start of business two weeks prior to closing the road. The contractor will be responsible for obtaining, placing, programming and maintaining all changeable message signs during the road closure.

The setting of the proposed bridge beams for S.N. 010-0272 shall be completed in 2 eight-hour periods for northbound I-57 traffic and 2 eight-hour periods for southbound I-57 traffic. Each period shall begin at 10:00 p.m. Monday, Tuesday, Wednesday, or Thursday, and end at 6:00 a.m. on the following day. FAI-57 shall be open to traffic at all other times. No detour will be allowed on a holiday.

Failure to Complete the Work on Time. Should the contractor fail to complete the above work within the specified time, the contractor shall be liable to the Department in the amount of \$1,500 per hour not as a penalty but as liquidated damages and ascertained damages for each hour beyond the eight hours. Any portion of an hour will be considered as a complete hour when calculating the amount of liquidated damages. Such damages may be deducted by the Department from any monies due the contractor.

In fixing the hourly rate for damages, the desire is to establish a method of calculation for the rate because the Department's actual loss is difficult to determine and because any calculated actual loss could be a matter of argument and litigation. This mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of use of the roadway if completion of the work is delayed. The Department shall not be required to provide any actual loss to recover these liquidated damages, as these 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 the parties.

Notification of Closure. The contractor shall notify the organizations and individuals on the below contact list of the schedule for the temporary closure of FAI-57 at least two weeks prior to the date of temporary closure. The notification shall include the location and scheduled temporary closure details. The contractor will not be allowed to close the road without the minimum two week notice, and failure to provide proper notice will delay the temporary closure.

CHAMPAIGN COUNTY

Organizations:

| | |
|-------------------------------------|----------------|
| METCAD | (217) 333-8911 |
| Illinois State Police (District 10) | (217) 265-0050 |
| Farm Bureau | (217) 352-5235 |
| Savoy Post Master | (217) 355-8298 |
| Champaign Post Master | (217) 373-6001 |

Officials:

| | | |
|--------------------|-----------------------------|----------------|
| Jeff Blue | Champaign County Engineer | (217) 384-3800 |
| Steve Wegman | City of Champaign Engineer | (217) 403-4710 |
| Dave McGath | Township Road Commissioner | (217) 352-0321 |
| Robert C. McCleary | Village of Savoy | (217) 359-5894 |
| Chris Smith | Maintenance Field Engineer | (217) 465-4181 |
| Carl Phillips | Traffic Operations Engineer | (217) 465-4181 |

These agencies, organizations, and individuals shall also be notified when FAI-57 is opened to traffic.

Basis of Payment. This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR which shall include all labor, materials, transportation and incidental work mentioned herein to furnish, install, maintain, and remove all traffic control devices, all light towers deemed necessary by the Engineer in order to provide a safe working environment, and all labor, materials, equipment, and incidental items required to complete this work. Changeable message signs as required by the detail "Interstate Closure Using Exit Ramps" shall be paid for separately as provided in the contract.

TRAFFIC CONTROL FOR ROAD CLOSURE

Description. This work consists of furnishing, installing, maintaining, relocating and removing all traffic control devices for the temporary closure of the Staley/Curtis Road intersection during removal and replacement of Culverts 25 and 26 and pavement construction of Curtis Road west of Staley Road, respectively.

Procedure. The temporary closure of the Staley/Curtis Road intersection required for removal and replacement of Culverts 25 and 26 will be completed within two (2) day closures, therefore the contractor shall schedule operations accordingly. The temporary closure of Curtis Road; west of Staley Road will be limited to fifteen calendar days for the purpose of removing and constructing the proposed pavement, ONLY. All other improvements to Curtis Road west of Staley Road will be completed utilizing applicable traffic control highway standards. Staley and Curtis Roads will be open to traffic at all other times. Signing and Type III Barricades shall be located as shown in "Detail of Staley Road Closure" and "Typical Application of Traffic Control Devices for Road Closure" in the plans.

Beginning 24 hours in advance of the road closure of Staley Road and continuing during the closure, Changeable Message Signs will be required and will have the following text as directed by the Engineer, to inform the traveling public of the temporary closure. **MESSAGE BOARD TEXT SHALL BE VERIFIED WITH TRAFFIC CONTROL SUPERVISOR PRIOR TO INSTALLATION.**

SUGGESTED LOCATIONS AND MESSAGES FOR CMS:

STALEY ROAD NORTHBOUND:

Place one CMS 100 ft north of the Staley Road / Monticello Road intersection facing NB traffic.

The message 24 hours in advance of the closure shall state: Panel No. 1 – STALEY ROAD CLOSED; Panel No. 2 – INSERT DATES; Panel No. 3 – PLAN ALTERNATE ROUTE.

The message during the closure shall state: Panel No. 1 – STALEY ROAD CLOSED; Panel No. 2 – 2 MILE AHEAD; Panel No. 3 – USE ALTERNATE ROUTE.

STALEY ROAD SOUTHBOUND:

Place one CMS 100 ft south of the Staley Road / Kirby Avenue intersection facing SB traffic.

The message 24 hours in advance of the closure shall state: Panel No. 1 – STALEY ROAD CLOSED; Panel No. 2 – INSERT DATES; Panel No. 3 – PLAN ALTERNATE ROUTE.

The message during the closure shall state: Panel No. 1 – STALEY ROAD CLOSED; Panel No. 2 – 1 MILE AHEAD; Panel No. 3 – USE ALTERNATE ROUTE.

Notification of Closure. The contractor shall notify the organizations and individuals on the below contact list of the schedule for the temporary closure of the Staley/Curtis Road intersection at least two weeks prior to the date of temporary closure. The notification shall include the location and scheduled temporary closure details. The contractor will not be allowed to close the road without the minimum two week notice, and failure to provide proper notice will delay the temporary closure.

CHAMPAIGN COUNTY

Organizations:

| | |
|-------------------------------------|----------------|
| METCAD | (217) 333-8911 |
| Illinois State Police (District 10) | (217) 265-0050 |
| Farm Bureau | (217) 352-5235 |
| Savoy Post Master | (217) 355-8298 |
| Champaign Post Master | (217) 373-6001 |

Officials:

| | | |
|--------------------|-----------------------------|----------------|
| Jeff Blue | Champaign County Engineer | (217) 384-3800 |
| Steve Wegman | City of Champaign Engineer | (217) 403-4710 |
| Dave McGath | Township Road Commissioner | (217) 352-0321 |
| Robert C. McCleary | Village of Savoy | (217) 359-5894 |
| Chris Smith | Maintenance Field Engineer | (217) 465-4181 |
| Carl Phillips | Traffic Operations Engineer | (217) 465-4181 |

These agencies, organizations, and individuals shall also be notified when the Staley/Curtis Road intersection is opened to traffic.

In addition, the contractor will also provide written notification of the temporary closure to affected individuals and organizations along Staley Road between Old Church Road and Windsor Road and along Curtis Road extending one (1) mile west of Staley Road.

Basis of Payment. This work will be paid for at the contract lump sum price for TRAFFIC CONTROL FOR ROAD CLOSURE which shall include all labor, materials and equipment required to furnish, transport, install, maintain and remove all traffic control devices associated with the temporary road closure. Changeable Message Signs (CMS) will be paid for according to the special provision for CHANGEABLE MESSAGE SIGN.

TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

Description. This work consists of furnishing, installing, maintaining, and removing all traffic control devices during construction of the piers and other S.N. 010-0272 items in accordance with the detail "Traffic Control and Protection for Bridge Construction" in the plans.

The contractor shall prepare the shoulder as necessary depending on the requirements of the impact attenuator.

Basis of Payment. This work will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL). Impact Attenuators shall be paid for in accordance with the special provision "Impact Attenuators, Temporary (BDE)". Temporary Concrete Barrier will be paid for in accordance with Section 704 of the Standard Specifications. The contractor shall provide the temporary concrete barrier.

CONTRACTOR ACCESS

5-701PD4-94

Eff. 09-11-90

Rev.: 01-01-97

At road closure locations, where Type III barricades are installed in a manner that will not allow contractor access to the project without relocation of one or more of the barricades, the arrangement of the barricades at the beginning of each work day may be relocated, when approved by the Engineer, in the manner shown on Highway Standard 702001 for Road Closed to Through Traffic. ' Road Closed ' signs (R11-2), supplemented by ' Except Authorized Vehicles ' signs (R3-1101), shall be mounted on both the near-right and the far-left barricade(s). At the end of each work day the barricades shall be returned to their in-line positions. This work will be considered incidental to the contract and no extra compensation will be allowed.

BITUMINOUS RESURFACING

Effective: 01/27/2000

Revised: 04/19/2004

Revise the first paragraph of Article 406.18 as follows:

"406.18 Butt Joints. Butt joints shall be constructed according to the details shown on the plans. The surface removal shall be performed according to Section 440. Construction of butt joints shall not begin prior to beginning general operations on the project.

When butt joints are to be constructed under traffic, temporary ramps shall be constructed and maintained at both the upstream and downstream ends of the surface removal areas immediately upon completion of the surface removal operation. The temporary ramps shall be constructed by the following methods.

- (a) Temporary Bituminous Ramps. Temporary bituminous ramps shall have a minimum taper rate of 1:40 (V:H). For Interstates and Expressways with posted speed limits of 55 mph or greater, ramps shall be constructed of hot mix bituminous concrete surface course or binder course, and shall have a minimum taper rate of 1:120 (V:H). The bituminous material used shall meet the approval of the Engineer. Cold-milled bituminous tailings will not be acceptable.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 45 mph or less. The ramps shall have a minimum taper rate of 1:30 (V:H). The leading edge of the rubber ramp shall have a maximum thickness of ¼ inch (6 mm) and the trailing edge shall match the height of the adjacent pavement ± ¼ inch (6 mm).

The rubber material shall conform to the following:

| Property | Test Method | Requirement |
|-----------------------------|-------------|-------------------------|
| Durometer Hardness, Shore A | ASTM D 2240 | 80 ±10 |
| Tensile Strength | ASTM D 412 | 800 psi (5500 kPa) min. |
| Elongation, percent | ASTM D 412 | 100 min. |
| Specific Gravity | ASTM D 297 | 1.1-1.3 |
| Brittleness | ASTM D 746 | -40 °C (-40 °F) |

The rubber ramps shall be installed according to the manufacturer’s specifications and fastened with the anchors provided. Rubber ramps that fail to stay in place or create a traffic hazard shall be replaced immediately with temporary bituminous ramps at the Contractor’s expense.

The temporary ramps shall be removed just prior to placing the proposed surface course. If work is suspended for the winter season prior to completion of surface course construction, precut butt joints shall be filled to the elevation of the existing pavement surface with compacted bituminous concrete surface course or binder course.”

BRIDGE APPROACH PAVEMENT (SPECIAL)

Description. This work shall consist of constructing bridge approach pavements ¼” (6 mm) thicker than shown on Highway Standard 420401. The cover over the top layer of reinforcement shall be increased by ¼” (6 mm) to comply with the requirements of the special provision for **DIAMOND GRINDING AND SURFACE TESTING BRIDGE SECTIONS.**

Method of Measurement. Bridge Approach Pavement (Special) shall be measured in square yards (square meters). The length will be measured along the centerline of the surface of the approach pavement. The width will be the width of the pavement as shown on the plans.

Basis of Payment. Bridge Approach Pavement (Special) will be paid for at the contract unit price per square yard (square meter) for BRIDGE APPROACH PAVEMENT (SPECIAL), and no other compensation shall be allowed.

CHANGEABLE MESSAGE SIGN

Eff. 03-23-2004

Description. This work shall consist of furnishing, placing, and maintaining changeable message sign(s) at the location(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 7 ft (2.1 m) 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 18 inches (450 mm).

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 $\frac{1}{4}$ mile (400 m) under both day and night conditions. The letters shall be legible from 750 ft (250 m).

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 DAY for CHANGEABLE MESSAGE SIGN. Any portion of one calendar day during which the sign is operated as directed by the Engineer shall be paid as one full calendar day.

CLASS D PATCHING

5-442PD4-00
Eff. 11-08-2000
Rev. 02-11-2004

This work shall be according to Section 442 for Class D Patching except the mixtures and materials shall be according to the requirements for Superpave Bituminous Concrete Mixtures included elsewhere in this contract.

Unless otherwise shown in the contract, the performance graded asphalt cement and number of design gyrations for the mixture shall be the same as for other resurfacing mixtures specified to overlay the patching shown in the plans. Polymer modified asphalt cement will not be required for the Class D Patching.

Construction Requirement and Method of Measurement shall apply according to Section 442.

This work will be paid for at the contract unit price per square yard (square meter) for CLASS D PATCHES of the type and thickness specified.

COMPLETION DATE PLUS WORKING DAYS

All major items of work shall be completed on or before November 30, 2007. After November 30, 2007 the Contractor shall be allowed ten working days to complete minor work items. The Contractor is advised that multiple crews may be needed to complete the work by this deadline. All pavement, storm sewers, culverts, curb and gutter, shoulder work, lighting, and signing shall be complete by November 30, 2007, and all travel lanes shall be open to traffic by that date. Final pavement markings, seeding, minor grading, clean-up and other minor work items as determined by the Engineer may be completed after November 30, 2007.

CONDUIT, FLEXIBLE NON-METALLIC, WEATHERPROOF, 2" DIAMETER

Description. This work shall consist of installing non-metallic flexible conduit at stainless steel junction boxes mounted on bridge parapet. The flexible conduit shall join the junction box to the rigid conduit going into the ground. These flexible expansion joints are at locations on the bridge where movement will damage rigid conduit and are shown on the plans.

Materials. The conduit and fittings shall meet the applicable portions of Article 1088.01 of the Standard Specifications.

Installation. The flexible conduit shall be installed according to Section 811 of the Standard Specifications. In addition to installing the flexible conduit, this work shall include gland nuts, fitting, hardware, and all miscellaneous items necessary to make the connections to the rigid conduit system and stainless steel junction box attached to the structure. All fittings and hardware shall be stainless steel. The connections shall be made in such a manner that the flexible conduit does not pull out.

The stainless steel junction box shall be electrically bonded to the equipment grounding conductor. Connections shall be made and coated as stated in Article 801.14 of the Standard specifications.

Basis of Payment. This work will be paid for at the contract unit price each for CONDUIT, FLEXIBLE NON-METALLIC, WEATHERPROOF, 2" DIAMETER. The length of the conduit is based on the maximum amount of movement at each location and shall be determined by the Engineer.

CONNECTION OF EXISTING PIPE UNDERDRAINS

The intent of this work is to remove the existing pipe underdrain and pipe drains at the location where the proposed underdrain system intercepts the existing system. Special care shall be taken so as to not damage the existing underdrain which will remain in place. A special connection shall be required to guarantee proper drainage of the existing underdrains as shown in the plans. The contractor shall wrap the connection between the existing underdrains and proposed pipe drains with 24" wide geotechnical fabric meeting the requirements of Section 601 of the Standard Specifications.

The work shall include equipment, labor and material necessary to remove the existing pipe drains and or underdrains at the location where the existing and proposed underdrains meet and connect the existing underdrains to the proposed outlet or underdrain.

This work shall be paid for at the contract unit price each for CONNECTION OF EXISTING PIPE UNDERDRAIN, and no additional compensation shall be allowed.

DIAMOND GRINDING AND SURFACE TESTING BRIDGE SECTIONS

Effective December 6, 2004

Description. This work shall consist of diamond grinding and surface testing bridge sections.

A bridge section shall consist of the bridge deck plus the bridge approach pavement and connector pavement on each side of the bridge.

Equipment. Equipment shall be according to the following.

- (a) Diamond Grinder. The diamond grinder shall be a self-propelled planing machine specifically designed for diamond saw grinding. It shall be capable of accurately and automatically establishing the profile grade and shall have a positive means for controlling cross slope. It shall also have an effective means for removing excess material and slurry from the surface and for preventing dust from escaping into the air. The diamond grinder shall not cause strain or damage to the surface.

The grinding head shall be a minimum of 1.2 m (4 ft) wide and the diamond saw blades shall be gang mounted on the grinding head at a rate of 50 blades / 300 mm (1 ft).

- (b) Surface Testing Equipment. The surface testing equipment shall be a California Profilograph or an approved equivalent. The equipment shall consist of an 8 m (25 ft) long frame supported upon multiple wheels at each end, a recording wheel located midway between, and either a mechanical or computerized recorder. Data filters for an automated California Profilograph shall be set according to the parameters outlined in California Test 526, except the Blanking Band shall be set to 0.0 mm (0.00 inch). If the profilograph has a mechanical recorder, an electronic scanner, a computer, and software to reduce the trace shall also be provided. All analysis equipment (electronic scanner, computerized recorder, etc.) shall be able to accept 0.0 mm (0.00 in.) for the blanking band.

The Contractor shall demonstrate to the Engineer that the testing equipment has proper tire pressure inflation, trueness of tire travel, and is calibrated for horizontal distance and vertical displacement.

Horizontal distance calibration shall consist of pushing the profilograph, at walking speed [approximately 5 km/hr (3 mph)], over a pre-measured test section and determining the chart scale factor. To calculate the chart scale factor, divide the pre-measured test distance, in millimeters (inches), by the length of the profile trace from this test section, in millimeters (inches). This factor should be 300 ± 0.5 . If the profilograph produces charts with a different scale factor, it shall be adjusted and recalibrated.

Vertical displacement calibration shall consist of placing the center recording wheel of the profilograph on a base plate and recording the base elevation. Two plates, 13 mm (0.5 in.) thick each, are added under the center wheel, one at a time, and the change in elevation noted. The two plates are removed, one at a time, and the change in elevation noted. Each step in the process shall show a change in height of $13 \text{ mm} \pm 1.0 \text{ mm}$ ($0.5 \pm 0.01 \text{ in.}$). If the profilograph produces results outside the above limits, it shall be adjusted and recalibrated.

Equipment having a computerized recorder shall be checked by comparing the results from the automatic trace reduction to the results obtained through manual trace reduction using California Test Method 526 with a 0.0 mm (0.00 in.) blanking band. The comparison shall be made using the trace obtained on a pre-measured test section and the two trace reductions shall compare within 30 mm/km (2.0 in./mile).

All calibration traces and calculations shall be submitted to the Engineer to become part of the project file. The Department reserves the right to retest the surface testing equipment at any time to verify the accuracy.

CONSTRUCTION REQUIREMENTS

General. After all components have been properly cured, the bridge section shall be ground over its entire length and over a width that extends to within 600 mm (2 ft) of the curbs or parapets. The maximum thickness removed shall be 6 mm (1/4 in.); however, when the minimum bridge deck thickness of 190 mm (7.5 in.) can be maintained additional removal thickness may be permitted.

The vertical difference between longitudinal passes shall be 3 mm (1/8 in.) maximum. The grinding at the ends of the bridge section shall be diminished uniformly at a rate of 1:240 over the connector pavements.

Grinding shall be continuous through all joints. When sealed joints are specified, grinding shall be completed prior to final installation of the joints seals. During grinding, joint openings shall be temporarily filled with material approved by the Engineer.

Surface Testing. The diamond ground bridge section shall be surface tested in the presence of the Engineer prior to opening to traffic. All objects and debris shall be removed from the surface prior to testing. During surface testing, joint openings may be temporarily filled with material approved by the Engineer.

Profiles shall be taken in the wheel paths of each lane, 1 m (3 ft.) from and parallel to the planned lane lines. A guide shall be used to maintain the required distance.

The profile trace shall be printed on continuous paper with scales of 300:1 horizontally and 1:1 vertically and shall have stationing indicated every 150 m (500 ft.) at a minimum. Both ends of the profile trace shall be labeled with the following information: contract number, beginning and ending stationing, which direction is up on the trace, which direction the profilograph was pushed, and profilograph operator name(s). The top portion of the Profilograph Report of Bridge Smoothness (Attachment 1) shall be completed and the form secured around the trace roll.

Trace Reduction and Bump Locating Procedure. Traces shall be reduced using a 0.0 mm (0.00 in.) blanking band to determine the profile index [mm/km (in./mile)] for the bridge section. Traces produced by a mechanical recorder shall be reduced using an electronic scanner and computer software. This software shall calculate the profile index and indicate any bumps in excess of 8 mm (0.30 in.) with a line intersecting the profile on the printout. Computerized recorders shall provide the same information.

The average profile index and locations with deviations exceeding the 8 mm (0.30 in.) limit shall be recorded on the Profilograph Report of Bridge Smoothness as shown in Attachment 1.

All traces and completed reports shall be provided to the Engineer for the project file.

Corrective Actions. Within the bridge section, all deviations in excess of 8 mm (0.30 in.) in a length of 8 m (25 ft.) or less shall be corrected regardless of the profile index value. Correction of deviations shall not result in the deck thickness being less than the minimum.

Any bridge section having an average profile index greater than 555 mm (35.0 in./mile), including bumps, shall be corrected to reduce the profile index to 555 mm/km (35.0 in./mile) or less on each trace.

Where corrective work is performed, the bridge section shall be retested to verify that corrections have produced a profile index of 555 mm/km (35.0 in./mile) or less for each trace.

Corrective actions shall be performed at no additional cost to the department. The Contractor shall furnish the surface profilograph tracing and the completed form to the Engineer within two working days after any corrections are made.

The Engineer may perform profilograph testing on the surface at any time for monitoring and comparison purposes.

Smoothness Assessments. Smoothness assessments will be based on the final average profile index determined for the bridge section after performing any corrective work. Additional payments/deductions will be as indicated in the Smoothness Assessment Schedule.

The Smoothness Assessment Work Sheet (Attachment 2) will be completed by the Engineer for payment.

SMOOTHNESS ASSESSMENT SCHEDULE

| Profile Index mm/km (in./mile) per Bridge Section | Smoothness Assessment per Bridge Section |
|--|---|
| 240 (15.0) or less | +\$7,500.00 |
| >240 (15.0) to 285 (18.0) | +\$5,000.00 |
| >285 (18.0) to 315 (20.0) | +\$2,500.00 |
| >315 (20.0) to 555 (35.0) | +\$0.00 |
| >555 (35.0) to 710 (45.0) | +\$0.00 |
| >710 (45.0) | -\$5,000.00 |

Method of Measurement. This work will be measured for payment in place and the area computed in square meters (square yards) of diamond grinding performed.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square yard) for DIAMOND GRINDING (BRIDGE SECTION).

**INSTRUCTIONS FOR COMPLETING
PROFILOGRAPH REPORT OF BRIDGE SMOOTHNESS**

This form shall be prepared and submitted, along with the profile trace, to the Engineer.

The Type of Report is one of the following:

Information – Test conducted for informational purposes only.

Initial – Testing of bridge section prior to any corrective action.

Intermediate – After some corrective action has been completed.

Final – After all corrective action has been completed.

Other Information:

Structure Number – Numerical identification of the bridge.

Traffic Direction – NB, SB, EB, or WB depending on the design traffic flow of the numbered route.

Lane Designation – DL (Driving Lane), CL (Center Lane), or PL (Passing Lane).

Operator – Printed name of Contractor personnel operating profilograph.

Engineer – Printed name of Department representative witnessing data collection.

Bump locations are listed by station for each track (wheel path).

EXAMPLE

PROFILOGRAPH REPORT FOR BRIDGE SMOOTHNESS

Type of Report:

Information
 Initial
 Intermediate
 Final

Contract No. 96739

Route _____

Contractor John Doe Construction Co.

Section No. _____

Station 1795+06.0

County _____

No. of Lanes 2

Structure Number _____

Operator Joe Smith

Traffic Direction _____

Engineer Mike Jones

Date Tested _____

| Section No. | Length km (mile) | Track 1 Measured Roughness mm (in.) | Track 1 Profile Index mm/km (in./mile) | Track 2 Measured Roughness mm (in.) | Track 2 Profile Index mm/km (in./mile) | Average Profile Index mm/km (in./mile) |
|-------------|---------------------|--|--|--|--|--|
| 1 | 0.100 | 2.16 | 21.6 | 1.30 | 13.0 | 17.3 |
| 2 | 0.100 | 2.18 | 21.8 | 2.26 | 22.6 | 22.2 |
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Bump Locations: Track 1: 1893+53.5

Certified by: _____

Title: Chief Profilograph Pusher

Organization: John Doe Construction Co.

ELECTRIC SERVICE INSTALLATION, LOCATION NO. 1

The contractor shall comply with Sections 804 and 1086 of the Standard Specifications for Road and Bridge Construction with the following exceptions:

Description. This work shall consist of all material and labor required to install, modify, or extend the electric service installation to the First Christian Church, 3601 South Staley Road, Champaign. See Ameren-IP Detail.

Materials. In addition to the requirements of Section 804 of the Standard Specifications, materials used must meet the requirements of AmerenIP. Requirements of AmerenIP were provided to the State as follows:

The contractor shall furnish and install two 4" conduits from the proposed AmerenIP pole at Staley Sta. 245+85, RT to the proposed electric primary junction box at West Curtis Road Sta. 47+08. Pull wires (consisting of at least 600 lb. nylon cord or equivalent) shall be installed in all conduits. At the pole end, rigid steel elbows with 36" minimum radius shall be used with galvanized steel conduits extending above ground one 10' length and secured temporarily by the contractor. At the pad end, rigid steel elbows with 36" minimum radius shall be used with galvanized steel conduit above ground. The horizontal portions of the conduit may be rigid galvanized steel or gray Schedule 40 Electrical Grade PVC

Construction procedure. Conduits must be pushed, not trenched. The work must be completed according to the requirements of AmerenIP. Requirements of AmerenIP were provided to the State as follows:

The conduits in the vertical run must stand off the pole a distance of 4" and each conduit needs to be separated from adjacent vertical conduits by 4". Runs up the pole must not exceed 4 conduits in a row and must be vertical. AmerenIP will install the permanent mounting bolts and brackets. The riser(s) should be brought up on the North quadrant of the pole. All spare conduits will be capped. The galvanized steel conduit at the pad end shall be bushed and bonded and connected to a contractor installed ground rod. All primary conduits shall be buried with 30" to 36" of cover after final grade. The installation must comply with applicable provisions of the NEC, NESC, IP Standards, local codes if applicable, and the most current AmerenIP standard.

AmerenIP will furnish and install the primary cables. The contractor is responsible for repairing any damage to the church sprinkler system caused by the contractor's operations.

In case of questions, contact John Indelicato of AmerenIP at 217-383-7282.

Wiring Removal. After the proposed service installation is complete, the contractor shall remove any existing electrical wiring on State right-of-way which is in conflict with the proposed earthwork.

Basis of Payment. This work will be paid for at the contract lump sum price for ELECTRIC SERVICE INSTALLATION, LOCATION NO. 1, which shall be payment in full for the work. Any charges by the utility company to provide electrical service to the service installation will be paid for according to Article 109.05 of the Standard Specifications for Road and Bridge Construction.

ELECTRIC SERVICE INSTALLATION, LOCATION NO. 2

The contractor shall comply with Sections 804 and 1086 of the Standard Specifications for Road and Bridge Construction with the following exceptions:

Description. This work shall consist of all material and labor required to install the electric service installation for the interchange lighting at the lighting controller at Curtis Road Sta. 35+60, RT..

Materials. In addition to the requirements of Section 804 of the Standard Specifications, materials used must meet the requirements of AmerenIP. Requirements of AmerenIP were provided to the State as follows:

The contractor shall furnish and install two 3" conduits from the proposed AmerenIP transfer to the meter entrance. Pull cords (consisting of at least 600 lb. nylon cord or equivalent) shall be installed in all conduits. At the pole end, rigid steel elbows with 36" minimum radius shall be used with galvanized steel conduits extending 10' up the pole. At the service entrance end, rigid steel elbows with 36" minimum radius shall be used with galvanized steel conduit above ground. The horizontal portions of the conduit may be rigid galvanized steel or gray Schedule 40 Electrical Grade PVC.

Construction procedure. Trenching the conduits is permitted. The work must be completed according to the requirements of AmerenIP. Requirements of AmerenIP were provided to the State as follows:

Conduits are to be temporarily attached to the pole, spaced 4" from pole and 4" between conduits. All spare conduits shall be capped. The conduit shall be bushed and bonded. All primary conduits shall be buried with 24" to 36" of cover after final grade. The installation must comply with applicable provisions of the NEC, NESC, local codes if applicable, and the most current AmerenIP Standards, and local codes if applicable.

AmerenIP will furnish and install the service cables to the line side of the meter cabinet.

In case of questions, contact John Indelicato of AmerenIP at 217-383-7282.

Basis of Payment. This work will be paid for at the contract lump sum price for ELECTRIC SERVICE INSTALLATION, LOCATION NO. 2, which shall be payment in full for the work. Any charges by the utility company to provide electrical service to the service installation will be paid for according to Article 109.05 of the Standard Specifications for Road and Bridge Construction.

EMBANKMENT
5-205PI01-02

Eff: 04-18-02
Rev: 02-11-04

The embankment shall be constructed according to Section 205 of the Standard Specifications, except that the embankment shall not be compacted at a moisture content in excess of 110 percent of the optimum moisture content determined according to AASHTO T 99.

All material that is proposed for use in embankment construction must be approved by the Engineer. The proposed material shall have a Standard Dry Density of not less than 90 lb./ft³ (1442 kg/m³) when tested according to AASHTO T 99 and shall not have an organic content greater than 10 percent when tested according to AASHTO T 194. Soils that demonstrate the following properties shall be restricted to the interior of the embankment:

- a. A grain size distribution with less than 35 percent passing the #200 sieve.
- b. A silt and fine sand content as outlined in AASHTO T 88 in excess of 65%.
- c. A plasticity index (PI) of less than 12.
- d. A liquid limit (LL) in excess of 50.

Such soils shall be covered on the sides and top of the embankment by a minimum of 3 ft. (900 mm) of soil not characterized by any of the items a, b, c or d above. Other materials that may be considered by the Engineer as having the potential for erosion or excess volume change shall not be used in the 3 ft. (900mm) cover on the sides or the top of the embankment.

The top 1 ft. (300 mm) of any embankment that will be seeded shall be capable of sustaining vegetation when fertilized as outlined in the plans.

The District Geotechnical Engineer shall be contacted a minimum of two weeks prior any embankment construction. The contractor will be required to dig at least one test hole at each proposed borrow location as directed by the Engineer. Soil samples will be taken by the Engineer at each location to assure that the above specifications will be met. The contractor must obtain Environmental Clearance as outlined in Section 107.22 of the Standard Specifications prior to digging any test holes.

This work will not be paid for separately, but shall be considered as included in the cost of the various earthwork items.

GUARD POSTS

5-634PD3-97

Eff. 03-05-97

Rev. 02-11-2004

This work shall consist of furnishing and setting guard posts according to Section 634 of the Standard Specifications except as follows:

- The cross section of the posts shall be nominal 4 inches by 4 inches (100 mm by 100 mm.)
- The tops of the posts shall not be rounded, but shall be sloped at 30 degrees to the horizontal.
- The length of the posts shall be 5 feet (1.5 m).
- The embedment of the posts shall be 33 inches (0.84 m.)
- For closure of median ditch checks, the nominal spacing of the posts shall be 5 feet (1.5 m.)

90758sp

MATERIAL TRANSFER DEVICE (BDE)

Effective Date: June 15, 1999

Revised Date: March 1, 2001

Description. This work shall consist of placing the top lift of Polymer Binder and the Polymer Surface mixtures on mainline Curtis Road and the Ramps, except that these materials shall be placed using a material transfer device.

Materials and Equipment. The Material Transfer Device shall have a minimum surge capacity of 13.5 metric tons (15 tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following:

- (a) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage.
- (b) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 12.7 metric tons (14 tons).

- (c) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger or two full-length longitudinal paddle mixers designed for the purpose of re-mixing the bituminous material. The longitudinal paddle mixers shall be located in the paver hopper insert.

Construction Requirements. The material transfer device shall be used for the placement of the top lift of polymer binder and the polymer surface mixtures on mainline Curtis Road and the Ramps. The material transfer device speed shall be adjusted to the speed of the paver to maintain a continuous, non-stop paving operation.

The material transfer device will be permitted on partially completed segments of full-depth bituminous concrete pavement if the thickness of binder in place is 250 mm (10 in.) or greater.

Structures. The Material Transfer Device may be allowed to travel over structures under the following conditions:

- (a) Approval will be given by the Engineer.
- (b) The vehicle shall be emptied of bituminous material prior to crossing the structure and shall travel at crawl speed across the structure.
- (c) The tires of the vehicle shall travel on or in close proximity and parallel to the beam and/or girder lines of the structure.

Method of Measurement. This work will be measured for payment in metric tons (tons) for Polymerized Bituminous Concrete Binder Course, Superpave IL 19.0, N90 and Polymerized Bituminous Concrete Surface Course, Superpave Mix "D", N90 placed with a material transfer device.

Basis of Payment. This work will be paid for at the contract unit price per metric ton (ton) for MATERIAL TRANSFER DEVICE.

The various bituminous mixtures placed with the material transfer device will be paid for as specified in their respective specifications. The Contractor may choose to use the material transfer device for other applications on this project; however, no additional compensation will be allowed.

80045

PAVEMENT MARKING

It is the intention of the Department that at the following locations the Contractor place lane markings as shown on the plans on the completed pavement prior to opening the road to traffic in accordance with the applicable portions of the Manual on Uniform Traffic Control Devices for Streets and Highways:

- Curtis road between Staley Road and Duncan Road (Sta. 0+00 to Sta. 51+03.29), and
- All Ramps

PIPE UNDERDRAIN AND PIPE UNDERDRAIN HEADWALL REMOVAL

Description. Existing pipe underdrains shall be removed at locations shown on the plans. Any connected downstream headwalls shall also be removed. All pipe underdrains and underdrain headwalls which have been removed shall be disposed of outside of the project limits.

Basis of Payment. Removal of the existing pipe underdrains will be paid for at the contract unit price per foot for PIPE UNDERDRAIN REMOVAL. Removal of the existing pipe underdrain headwalls will be paid for at the contract unit price per each for CONCRETE HEADWALL FOR PIPE UNDERDRAIN REMOVAL.

PIPE UNDERDRAINS 4" (100 MM) (SPECIAL)

5-601PD3-99

Eff. 02-22-99

Rev. 02-11-04

This work shall be done according to Section 601 of the Standard Specifications with the following additions:

The PIPE UNDERDRAIN 4" (100 mm) (SPECIAL) under the bituminous shoulder shall be perforated and wrapped in the same manner as the PIPE UNDERDRAIN, 4" (100 mm). The trench beneath the bituminous shoulder will also be wrapped in the same manner as the trench for the PIPE UNDERDRAIN, 4" (100 mm) prior to placement of the pipe underdrain and CA-16 backfill.

This work will be measured per Article 601.07 of the Standard Specifications.

This work will be paid per Article 601.08 of the Standard Specifications and no additional compensation will be allowed.

PNEUMATIC-TIRED ROLLER FOR SUPERPAVE

5-406OP6-98

Eff. 10-01-98

Rev. 02-11-04

For all Superpave Bituminous Concrete Mixtures placed at a rate exceeding 85 tons per hour (75 metric tons per hour), a pneumatic-tired roller will be required as the intermediate roller. This roller shall meet the requirements of Table 1 of Article 406.16 of the Standard Specifications. This provision shall hold over any other requirements included elsewhere in the contract.

This work will not be measured for payment or paid for separately, but shall be considered as included in the price per ton (metric ton) or square yard (square meter) of the various items of BITUMINOUS CONCRETE MIXTURES SUPERPAVE, CLASS I, of the mixture, type, and thickness (if applicable) specified.

PORTLAND CEMENT CONCRETE SPECIMENS

Effective Date: 08/02/2004

All Portland Cement Concrete (PCC) shall be tested for flexural strength. No compression testing of any PCC will be allowed on this project. Any inconveniences to the Contractor shall be considered included in the cost of the various PCC pay items and no additional compensation will be allowed.

90758sp

PRECAST CONCRETE BOX CULVERTS

5-540PD3-98

Eff 07-07-1998
Rev 02-11-2004

Revise the fourth paragraph of Article 540.06 of the Standard Specifications to read:

The excavation and backfilling for precast concrete box culvert shall be according to the requirements of Section 502 except a layer of porous granular material, at least 6 inches (150 mm) in thickness, shall be placed below the elevation of the bottom of the box. The porous granular material shall be gradation CA 7 and shall be placed to extend at least 2 ft. (600 mm) beyond each side of the box. The precast concrete box culvert shall be laid according to the applicable requirements of Article 542.04(d).

REMOVAL OF EXISTING STRUCTURES

Description. This work shall consist of the removal and satisfactory disposal of existing drainage structures as specified herein, at locations shown on the plans and in accordance with the applicable portions of Section 501, and Article 202.03 of the Standard Specifications.

General. This item shall include the removal and disposal of the specified structure including all headwalls, end sections, connected field tiles, and other appurtenances attached to the structure. Field tile connected to the existing drainage structure shall be cut off and plugged or reconnected as directed by the Engineer.

Existing Structure No. 1 is located at Curtis Road Sta. 26+40. The structure is a reinforced concrete slab structure spanning 18.7' with a width of 16'. This item shall include the removal of approximately 16' of surplus guardrail at Curtis Sta. 26+00, 14' RT. and approximately 28' of guardrail at Curtis Sta. 26+87.

Existing Structure No. 25 is located at Staley Road Sta. 247+07. The structure is a 4' X 1.5' concrete box culvert with cast-in-place end sections.

Existing Structure No. 26 is located at Staley Road Sta. 246+66. The structure is a 4' X 1.5' concrete box culvert with cast-in-place end sections.

Basis of Payment. This work will be paid for at the contract unit price each for REMOVAL OF EXISTING STRUCTURES of the number specified, which shall include all equipment, materials, labor, and other items required for the complete removal and disposal of the existing structure.

REMOVE EXISTING SIGN COMPLETE

Description. This work shall consist of removing an existing ground-mounted sign and supports as shown in the plans. The removal shall include the sign panel with wood, metal, or structural steel supports. The sign panel shall become the property of the State and shall be delivered to the District Sign Shop in Paris. The supports, including hardware, shall become the property of the Contractor. The bid price shall reflect any salvage value for the supports and hardware.

Basis of Payment. This work will be paid for at the contract unit price each for REMOVE EXISTING SIGN COMPLETE.

The removal of the concrete foundations will be paid for separately as REMOVE CONCRETE FOUNDATION—GROUND MOUNT.

RESETTING OF SECTION CORNERS

Effective: 01-17-06

This work shall be according to Section 668, as shown in the plans, and as modified herein.

Land Survey Monuments

The District 5 Survey Unit will be responsible for locating and making recovery ties for all of the section corners before and after construction. After construction has been completed, the District 5 Survey Unit will be responsible for stamping the new section corner with the appropriate information and recording the new Monument Records with the appropriate County Recorder as required by law.

Project Implementation (Construction) should submit a list of the upcoming pre-construction conferences to the Land Acquisition Engineer so that the work can be scheduled. The Survey Unit Chief shall be given a two (2) week notice by the Resident Engineer prior to any milling, paving, or excavation operations that may disturb a section corner. The Survey Unit Chief shall be contacted by the Resident Engineer after construction operations have been completed so that the new markers can be stamped and recorded by District 5 Survey Unit personnel.

Method of Measurement

The work of furnishing and installing the section corners will be paid for at the contract unit price each of the type of marker specified and no additional compensation will be allowed. The Contractor will set the new markers and the District 5 Survey Unit will be responsible for the cross ties for the new markers, the stamping of the new markers, and the recording of the new Monument Records.

RIPRAP, SPECIAL

Riprap, Special shall be used at locations, as shown on plans, where A.R. Culverts are required to be undercut due to unstable soil conditions. Riprap, Special shall meet the requirements of Stone Riprap, Class A1 as described in Article 281 of the Standard Specifications. Riprap, Special shall be placed on Filter Fabric for Use with Riprap as described in Article 282 of the Standard Specifications, which shall be paid for separately. The excavation and removal of the unsuitable material will be included in the cost of the Riprap, Special.

Riprap, Special will be measured for payment in tons. This work will be paid for at the contract unit price per ton for RIPRAP, SPECIAL which shall include the excavation, removal of unsuitable material, equipment, labor and materials required to complete the aforementioned work and no additional compensation shall be allowed.

SEEDING, AND EROSION CONTROL BLANKET, AT CONCRETE HEADWALLS FOR PIPE DRAINS

5-251PD2-94

Eff. 09-11-90

Rev. 02-11-04

The area around the proposed concrete headwalls for the pipe drains shall be seeded with Seeding, Class II and covered with Erosion Control Blanket. The slopes around the headwalls shall be graded in accordance with Section B-B shown on Standard 601001.

Seeding, Class II and the Erosion Control Blanket shall be placed 24 inches (600 mm) wide above, along each side of the headwall, and beyond the downstream end of the headwall. Each headwall requires approximately 4 square yards (3.5 square meters) of cover materials.

This work will be paid for at the contract unit price per square yard (square meter) for EROSION CONTROL BLANKET which price shall include the earth excavation required to grade the slopes and the required seeding, and no additional compensation will be allowed. The excavated material shall be disposed of on the sideslopes to the satisfaction of the Engineer.

251.doc

SPRINKLER SYSTEM

Description. This work shall consist of removing, modifying, and salvaging portions of a sprinkler system at the First Christian Church, 3601 South Staley Road, Champaign.

Removal. As shown on the plans, the portion of the sprinkler system within right-of-way along Staley and Curtis Roads is in conflict with the proposed earth excavation and shall be removed. All sprinkler heads requiring removal shall be salvaged and provided to the First Christian Church. Care shall be taken to prevent damage to the sprinkler heads.

Repair. At locations where sprinkler system water lines are cut, the lines are to be plugged or repaired in a manner acceptable to the Engineer. The remaining sprinkler system shall be repaired to working order.

Basis of Payment. This work will be paid for at the contract lump sum price for MODIFY SPRINKLER SYSTEM.

STORM WATER POLLUTION PREVENTION PLAN



STORM WATER POLLUTION PREVENTION PLAN

Route FAI 57 Marked Interstate 57
Section 10-32HB-3,K Project _____
County Champaign

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.

Joseph E. Gowce 3/30/06
Signature Date
Regional Engineer
Title

1. Site Description

a. The following is a description of the construction activity which is the subject of this plan:

The proposed improvement consists of constructing Curtis Road as a four-lane roadway between Staley Road and Duncan Road with a diamond interchange constructed at I-57. The project includes a 220 foot long grade separation structure carrying Curtis Road over I-57, 6 cast-in-place box culverts, and 8 pre-cast box culverts. Three of the cast-in-place box culverts will be constructed in the Kaskaskia Special Drainage District ditch. The project includes significant earthwork for construction of new ditches and embankment. In addition, a natural gas line owned by the University of Illinois must be relocated due to conflicts with the proposed project.

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):

- Construction of pre-cast and cast-in-place box culverts along Staley Road, Curtis Road, and the ramps
- Placement of earthwork for embankment along Curtis Road and the ramps
- Clearing of vegetation from along I-57
- Construction of the four-lane highway structure over I-57
- Grading of ditches, interstate median, and interchange infields

c. The total area of the construction site is estimated to be 120 acres.
BDE 2342

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

88 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:

- Permanent seeding and mulch shall be provided on disturbed areas as soon as practicable.
- Temporary Erosion Control Seeding shall be used as needed at locations where soil is disturbed until permanent erosion control measures are in place.
- The area around the proposed concrete headwalls for the pipe drains shall be seeded with Seeding, Class II and covered with Erosion Control Blanket.

- (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:

- Inlet and pipe protection shall be used to protect proposed culverts from soil due to earth excavation and embankment operations.
- Temporary ditch checks shall be placed for control erosion in the proposed ditches.
- Perimeter Erosion Barrier shall be placed at locations where normal storm water would exit right-of-way in order to retain any siltation due to erosion within right-of-way.
- Perimeter Erosion Barrier shall be placed at proposed fill locations where normal storm water would flow over the end of proposed box culverts into the Kaskaskia Special Drainage Ditch.

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).

- Riprap shall be placed downstream of specified culverts as shown in the plans to prevent erosion due to the discharge velocity of the water exiting the structures.
- Riprap shall also be placed at locations where major ditches flow into the Kaskaskia Special Drainage Ditch as shown in the plans.

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:

There are no procedures or requirements from local officials.

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:

Temporary ditch checks and perimeter erosion barriers shall have the sediment removed and shall be replaced as necessary when directed by the Engineer. Temporary seeding for erosion control shall be continuously implemented as directed by the Engineer.

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.

There are no known sources of non-storm water discharge on this project.



Contractor Certification Statement

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 FAI 57 Marked Interstate 57
Sectio 10-32HB-3,K Project No. _____
County Champaign

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

STRINGLINE

Some or all of the cold-milling and leveling binder on this section is intended as the first step toward establishing the proposed profile grade. In these locations which are shown in the plans, the milling and leveling binder will be controlled by stringline(s) erected, maintained and removed and disposed of by the Contractor.

The cost of providing, erecting, maintaining, removing, disposing of and employing the stringline as the grade control will not be paid for separately but shall be considered as included in the milling or bituminous pay item involved.

TOPSOIL EXCAVATION AND PLACEMENT

Topsoil Excavation depth shall be 12 inches and shall be obtained from within the limits of the right of way from the following locations:

| | | |
|-------------|--------------------------|------------|
| Curtis Road | Sta. 1+50 to Sta. 26+00 | 140' width |
| Curtis Road | Sta. 29+50 to Sta. 48+50 | 140' width |
| Ramp A | Sta. 10+70 to Sta. 21+50 | 120' width |
| Ramp B | Sta. 17+00 to Sta. 27+10 | 120' width |
| Ramp C | Sta. 30+70 to Sta. 40+00 | 120' width |
| Ramp D | Sta. 33+00 to Sta. 42+15 | 120' width |

Topsoil shall be placed at a depth of 6 inches along Curtis Road east of Staley and along the ramps as shown on the cross-sections. Topsoil shall not be placed in the interchange infields, along Interstate 57, along Staley Road, or along Curtis Road west of Staley Road.

Revise the first paragraph of 211.08 of the Standard Specifications to read:

“Topsoil Excavation and Placement will be paid for at the contract unit price per cubic meter (cubic yard) for TOPSOIL EXCAVATION AND PLACEMENT, which shall include excavation of the topsoil and placement in its final location.”

**TREATMENT OF EXISTING FIELD TILE SYSTEMS
5-611PD8-98**

Eff. 12-21-98 Revised 09-23-04

This work shall be according to Section 611, as shown in the plans, and as modified herein.

Storm Sewers, Special and Storm Sewers, Protected

For use in replacing existing field tile, pipe diameters of 4 inches (100 mm), 6 inches (150 mm), and 8 inches (200 mm) will be allowed. The materials specifications and requirements for these sizes shall be the same as for 10 inch (250 mm) pipe of the same material and of the same "Type" of installation as required in Article 550.03. For storm sewers of these sizes used to replace existing field tile, Class B storm sewer pipe may be used where Class A storm sewer pipe would otherwise be required.

Connections between storm sewers smaller than 10 inches (250 mm) in diameter may be made using prefabricated, commercially available couplers, consisting of a casing pipe with flexible tubing bands at each end. The casing pipe shall completely cover the joint area, and the tubing shall be drawn tight around each pipe with corrosion and rust proof bands or hose clamps. Concrete collars, as shown in the plans, may also be used for these connections.

For pipe sizes of 10 inches (250 mm) and larger, concrete collars as shown on the plans will be required.

Field Tile Junction Vaults

If known, the locations and depths of field tile junction vaults are shown on the plans. Other junction vaults provided as plan pay items shall be constructed according to the following:

FIELD TILE JUNCTION VAULTS 2 FEET (600MM) DIA. shall be constructed according to Standard 602301, "Inlet, Type A", using a frame and closed lid as shown on Standard 604001, "Frame and Lids, Type 1." The maximum depth of the junction vault shall be 6 feet (1.8 m) from the flowline to the top of masonry. One or more Storm Sewer or field tiles will enter each of these junction vaults, and there will be at least one outlet pipe.

FIELD TILE JUNCTION VAULTS 3 FEET (900MM) DIA. shall be constructed according to Standard 602306, "Inlet, Type B", using a frame and closed lid as shown on Standard 604001, "Frame and Lids, Type 1." The maximum depth of the junction vault shall be 6 feet (1.8 m) from the flowline to the top of masonry. One or more Storm Sewer or field tiles will enter each of these junction vaults, and there will be at least one outlet pipe.

Where conditions found in the field require the use of flat slab tops for the junction vaults, this work will be according to Article 109.04.

Where conditions found in the field require depths in excess of 6 feet (1.8 m) for junction vaults, this work shall be according to Article 109.04.

Method of Measurement. Couplers for pipe sizes smaller than 10 inches (250 mm) will not be measured separately for payment.

Concrete collars will be measured in cubic yards (cubic meters), not to exceed the dimensions shown in the plans.

Field tile junction vaults will be measured on an each basis.

Basis of Payment. Concrete collars will be paid for at the contract unit price per cubic yard (cubic meter) for MISCELLANEOUS CONCRETE, which price shall include all excavation and backfill.

The risers, gratings, and pipe tees for inspection wells shall be considered as included in the payment for STORM SEWER of the type and diameter specified.

Pay items not included in the contract and not included in other items of the contract will be paid according to Article 109.04 of the Standard Specifications.

TRENCH BACKFILL FOR PIPE UNDERDRAINS

Eff: 08/02/04

This work shall be according to Section 601 of the Standard Specifications and Standard 601001 except CA 14, 15, 16 or CM 14, 15, 16 shall be used in lieu of FA 1 or FA 2 for trench backfill. The Coarse Aggregate shall be according to Article 1004.06 and Article 1004.01 of the Standard Specifications except in the table, "Coarse Aggregate Gradation", the percent passing the No. 16 (1.18 mm) sieve shall be $2\pm 2\%$ and the percent passing the No. 200 (75 μ m) sieve shall be $1\pm 1\%$. The trench shall be wrapped using a Fabric Envelope meeting the requirements of Section 1080 of the Standard Specifications.

WIRING FOR CHURCH LIGHT

Description. This work shall consist of all materials and labor required to install wiring to the light for the First Christian Church Sign at the southwest corner of Curtis and Staley as shown in the plans. The work shall comply with applicable portions of Section 870 of the Standard Specifications for Road and Bridge Construction and with Article 339 of the National Electric Code.

Any damage to portions of the sprinkler system not designated on the plans for removal shall be repaired in a manner approved by the Engineer at the Contractor's expense.

Basis of Payment. This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN TRENCH, 600 V (TYPE UF) 2/C NO. 10.

LIGHTING UNIT COMPLETE

Description. This work shall consist of furnishing, transporting, and installing lighting at the First Christian Church sign.

Material. Light shall be Directional Flood 100W 120V "PAR 20 Flood" Luma Landscape Light Model DF1P20F-1BK as manufactured by Rudd Lighting, Inc., 9201 Washington Avenue, Racine, Wisconsin 53406 or approved equal. A representative of Rudd Lighting, Inc. is available at (262) 886-3772.

Light shall include an integral junction box below light for pulling wire from the ground. The junction box shall be the type recommended by Rudd Lighting, Inc. for use with the light or approved equal. Use wire recommended by manufacturer where applicable.

Basis of Payment. Lighting will be paid for at the contract unit price each for LIGHTING UNIT COMPLETE. This price shall include connecting the light to the proposed wiring. Wiring shall be paid for separately as ELECTRIC CABLE IN TRENCH, 600V (TYPE UF) 2/C NO. 10 as specified in the special provision "WIRING FOR CHURCH LIGHT".

LIGHTING UNIT INSTALL ONLY

Description. This work shall consist of installing lighting at the First Christian Church sign. The light shall be provided.

Procedure. The existing light at Staley Sta. 246+27.62, 71' LT shall be removed by the First Christian Church and provided to the contractor. Please coordinate with the First Christian Church Site Superintendent Don Orr at 217-356-1649. The contractor shall install the light at the location shown in the plans.

Basis of Payment. Installation of lighting will be paid for at the contract unit price each for LIGHTING UNIT INSTALL ONLY. This price shall include connecting the light to the proposed wiring. Wiring shall be paid for separately as ELECTRIC CABLE IN TRENCH, 600V (TYPE UF) 2/C NO. 10 as specified in the special provision "WIRING FOR CHURCH LIGHT".

STATUS OF UTILITIES

The following utilities are involved in this project. The utility companies have provided the estimated dates.

| <u>Name & Address of Utility</u> | <u>Type & Location</u> | <u>Estimated Date Relocation Completed</u> |
|--|--|--|
| Mr. John Indelicato * Ameren-IP 1112 West Anthony Drive P.O. Box 17070 Urbana, IL 61803-7070 (217) 383-7282 Mob: (217) 778-0726 Construcion Number: 800-892-7715 | Gas along the east ROW of Staley Road Gas along the south ROW of Curtis Road 41+50 to 49+00. Relocated per agreement no. UT506002 Permit 5-29776 <u>on to private easement from 41+50 to 49+00</u> Electric along the east ROW of Staley Road <u>Relocated per permit number 5-29639</u> Electric underground conduit to be relocated per State pay item: X8040010 Location #1 <u>Call AmerenIP for conductor installation of power.</u> Install overhead power to the lighting system per State pay item: X8040020 Location #2 Call AmerenIP for installation on power. | Not required Completed 6/16/2006 During Construction During Construction |
| Mr. Michael Little * Urbana & Champaign Sanitary District 1100 East University Ave PO Box 669 Urbana, IL 61803-0669 (217) 367-3409 | 48" Sanitary Interceptor at AR 43+35 Permit number: 5-29630 Elevations shown in the cross sections. | Completed Not required |
| Mrs. Michelle Scott * AT & T Corp 201 S. Neil Street Champaign, IL 61820 (217) 398-7980 | Existing facilities abandoned on the existing Curtis road ROW. To remain in place Relocated per permit 5-29577 Mob: (217) 891-1794 | Required Completed |

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Sections 102, 103, and Articles 105.07, 107.20, 107.31, and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply.

The estimated utility relocation dates should be part of the progress schedule submitted by the contractor. If any utility adjustments or relocations have not been completed by the above dates specified and when required by the contractor's operations after these dates, the contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's critical path schedule is affected.

Status page 1 of 2

Toll Free J.U.L.I.E. Telephone Number (800) 892-0123

* = J.U.L.I.E. Member

STATUS OF UTILITIES

The following utilities are involved in this project. The utility companies have provided the estimated dates.

| <u>Name & Address of Utility</u> | <u>Type & Location</u> | <u>Estimated Date Relocation Completed</u> |
|--|--|--|
| Mr. Keith Erickson * University of Illinois at Urbana-Champaign Office for Facilities Planning and Programs 1501 South Oak Street Mail Code: 821t Champaign, IL 61820 (217) 333-8484 | 8" 800 PSI gas main along Curtis Road located 31' Lt of centerline. Gas main to be relocated per State contract. See plans for details. Contact U of I for coordination of the service pole for the cathodic protection field. Mob: (217) 840-2598 | Required During Construction |
| Mr. Brent O'Neil *Illinois-American Water Company Champaign County District 201 Devonshire Drive Champaign, IL 61820-7226 (217) 373-3247 | In area, Not within job limits Located along Duncan Road Mob: (217) 840-5131 | Not required |
| Mr. Don Orr * First Christian Church 3601 S. Staley Road Champaign, IL 61822-8730 (217) 356-1649 | Adjust irrigation system per State contract Adjust sign lighting per State contract Temporary Use Permit obtained on 12/12/05 | Required Required During Construction |

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Sections 102, 103, and Articles 105.07, 107.20, 107.31, and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply.

The estimated utility relocation dates should be part of the progress schedule submitted by the contractor. If any utility adjustments or relocations have not been completed by the above dates specified and when required by the contractor's operations after these dates, the contractor should notify the Engineer in writing. A request for an extension of time will be considered to the extent the Contractor's critical path schedule is affected.

Status page 2 of 2

Toll Free J.U.L.I.E. Telephone Number (800) 892-0123

* = J.U.L.I.E. Member

RELOCATE EXISTING 8" HIGH-PRESSURE GAS MAIN

Description. This work shall consist of all materials and labor required to install an 8" high-pressure gas main and remove/abandon an existing 8" gas main between Staley and Duncan Roads. The work shall be completed according to the gas pipeline plans and the attached special provision "PROJECT MANUAL UIUC CURTIS ROAD PHASE 2 GAS LINE RELOCATION—DUNCAN TO STALEY ROAD". The gas pipeline plans and attached special provisions from the U of I shall only apply to the work on the gas pipeline.

The existing gas pipeline shall be grouted or removed at locations shown on the plans. If the existing gas pipeline remaining in place is in conflict with construction of S.N. 010-0272, the portions of the gas pipeline in conflict shall be removed

Basis of Payment. This work will be paid for at the contract lump sum price for RELOCATE EXISTING 8" HIGH-PRESSURE GAS MAIN, COMPLETE and no additional compensation will be allowed.

AGGREGATE SHIPPING TICKETS (BDE)

Effective: January 1, 2006

Add the following to Article 1003.01 of the Standard Specifications:

"(f) Shipping Tickets. Shipping tickets for the material shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Designation of Aggregate Information on Shipping Tickets"."

Add the following to Article 1004.01 of the Standard Specifications:

"(f) Shipping Tickets. Shipping tickets for the material shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Designation of Aggregate Information on Shipping Tickets"."

Add the following to Article 1005.01 of the Supplemental Specifications:

"(d) Shipping Tickets. Shipping tickets for the material shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Designation of Aggregate Information on Shipping Tickets"."

80156

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

BITUMINOUS EQUIPMENT, SPREADING AND FINISHING MACHINE (BDE)

Effective: January 1, 2005

Revise the fourth paragraph of Article 1102.03 of the Standard Specifications to read:

“The paver shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation. The hopper shall be equipped with a distribution system to uniformly place a non-segregated mixture in front of the screed. The distribution system shall have chain curtains, deflector plates, and/or other devices designed and built by the paver manufacturer to prevent segregation during distribution of the mixture from the hopper to the paver screed. The Contractor shall submit a written certification that the devices recommended by the paver manufacturer to prevent segregation have been installed and are operational. Prior to paving, the Contractor, in the presence of the Engineer, shall visually inspect paver parts specifically identified by the manufacturer for excessive wear and the need for replacement. The Contractor shall supply a completed check list to the Engineer noting the condition of the parts. Worn parts shall be replaced. The Engineer may require an additional inspection prior to the placement of a surface course or at other times throughout the work.”

80142

BRIDGE DECK CONSTRUCTION (BDE)

Effective: April 1, 2002

Revised: April 1, 2004

Add the following to Article 503.03 of the Standard Specifications:

“(h).Fogging Equipment..... 1103.17(k)”

Add the following after the first sentence of the second paragraph to Article 503.07 of the Standard Specifications:

“When placing Class BD concrete, the discharge end of the pump shall have attached an “S” shaped flexible or rigid conduit, a 90 degree elbow with a minimum of 3 m (10 ft) of flexible conduit placed parallel to the deck, or a similar configuration approved by the Engineer.”

Add the following after the second sentence of the ninth paragraph of Article 503.07 of the Standard Specifications:

“When consolidating concrete in bridge decks, the vibrator shall be vertically inserted into the concrete for 3 - 5 seconds, or for a period of time determined by the Engineer.”

Add the following after the first paragraph of Article 503.17 of the Standard Specifications:

“For the bridge deck pour, fogging equipment shall be in operation unless the evaporation rate is less than 0.5 kg/sq m/hour (0.1 lb/sq ft/hour) and the Engineer gives permission to turn off the equipment. The evaporation rate shall be determined according to the figure in the Portland Cement Association’s publication, “Design and Control of Concrete Mixtures” (refer to the section on plastic shrinkage cracking). The Contractor shall provide temperature, relative humidity, and wind speed measuring equipment.

The fogging equipment shall be adjusted to adequately cover the entire width of the pour.

If there is a delay of more than ten minutes during bridge deck placement, wet burlap shall be used to protect the concrete until operations resume.

Concrete placement operations shall be coordinated to limit the distance between the point of concrete placement and concrete covered with cotton mats for curing. The distance shall not exceed 10.5 m (35 ft). For bridge deck widths greater than 15 m (50 ft), the distance shall not exceed 7.5 m (25 ft).”

Add the following to the end of the first paragraph of Article 503.17(b) of the Standard Specifications to read:

“The concrete in these areas shall be struck off during the deck pour and excess material from the finishing machine shall not be incorporated.”

In the Coarse Aggregate Gradation table of Article 1004.01(c) of the Standard Specifications revise the percent passing the 12.5 mm (1/2 in.) sieve for gradation CA 7 to "45±15^{4/ 9/}".

In the Coarse Aggregate Gradation table of Article 1004.01(c) of the Standard Specifications revise the percent passing the 12.5 mm (1/2 in.) sieve for gradation CA 11 to "45±15^{6/ 9/}".

Add the following to the Coarse Aggregate Gradation table of the Standard Specifications:

"9/ When Class BD concrete is to be pumped, the coarse aggregate gradation shall have a minimum of 45 percent passing the 12.5 mm (1/2 in.) sieve. The Contractor may combine two or more coarse aggregate sizes, consisting of CA-7, CA-11, CA-13, CA-14, and CA-16, provided a CA-7 or CA-11 is included in the blend."

Revise Article 1020.05(d) of the Standard Specifications to read:

"(d)Class BD Concrete. The maximum mortar factor shall be 0.86."

Add the following to Article 1103.17 of the Standard Specifications:

"(k) Fogging Equipment. Fogging equipment shall consist of a mechanically operated, pressurized system using a triple headed nozzle or an equivalent nozzle. The fogging nozzle shall be capable of producing a fine fog mist that will increase the relative humidity of the air just above the fresh concrete surface without accumulating any water on the concrete. The fogging equipment shall be mounted behind the roller and pan of finishing machine or on a separate foot bridge. Controls shall be designed to vary the volume of water flow, be easily accessible and immediately shut off the water when in the off position. Hand held fogging equipment will not be allowed."

80066

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"
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

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

CURING AND PROTECTION OF CONCRETE CONSTRUCTION (BDE)

Effective: January 1, 2004

Revised: November 1, 2005

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) ^{1/ 7/} | 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) ^{1/ 7/} | 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 at no additional cost to the Department.”

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 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 be according to the following.

- (a) Temperature Control other than Structures. The temperature of the concrete immediately before placement shall be a minimum of 10 °C (50 °F) and a maximum of 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 between 20 °C (70 °F) and 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 the concrete, as placed in the forms, shall be a minimum of 10 °C (50 °F) and a maximum of 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). 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 between 20 °C (70 °F) and 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

Effective: September 1, 2000

Revised: June 22, 2005

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR part 26 and listed in the DBE Directory or most recent addendum.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100% state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100% state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor:

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE 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 6.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will 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.il.gov.

BIDDING PROCEDURES. Compliance with the bidding procedures of this Special Provision is required prior to the award of the contract and the failure of the as-read low bidder to comply will render the bid not responsive.

- (a) In order to assure the timely award of the contract, the as-read low bidder shall submit a Disadvantaged Business Utilization Plan on Department form SBE 2026 within seven (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 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 not responsive. In the event the bid is declared not responsive due to a failure to submit a Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:
- (1) The name and address of each DBE to be used;
 - (2) A description, including pay item numbers, of the commercially useful work to be done by each DBE;
 - (3) The price to be paid to each DBE for the identified work specifically stating the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
 - (4) A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and

- (5) If the bidder is a joint venture comprised of DBE 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 bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.
 - (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
 - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will designate a

five (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 not responsive.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal.

- (a) No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.
- (b) All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to find another DBE to substitute for the terminated DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau 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 Regional 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.

- (e) Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

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

Revised: January 1, 2006

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 107-2004 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. Flaggers shall be illuminated by an overhead light source providing a minimum vertical illuminance of 108 lux (10 fc) measured 300 mm (1 ft) out from the flagger’s chest. The bottom of any luminaire shall be a minimum of 3 m (10 ft) above the pavement. Luminaire(s) shall be shielded to minimize glare to approaching traffic and trespass light to adjoining properties.

The flagger vest shall be a fluorescent orange or fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 3 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

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

IMPACT ATTENUATORS (BDE)

Effective: November 1, 2003

Description. This work shall consist of furnishing and installing impact attenuators of the category and test level specified.

Materials. Materials shall meet the requirements of the impact attenuator manufacturer and the following:

| Item | Article/Section |
|--|---------------------------|
| (a) Fine Aggregate (Note 1)..... | 1003.01 |
| (b) Steel Posts, Structural Shapes, and Plates | 1006.04 |
| (c) Rail Elements, End Section Plates, and Splice Plates | 1006.25 |
| (d) Bolts, Nuts, Washers and Hardware | 1006.25 |
| (e) Hollow Structural Tubing | 1006.27(b) |
| (f) Wood Posts and Wood Blockouts | 1007.01, 1007.02, 1007.06 |
| (g) Preservative Treatment..... | 1007.12 |

Note 1. Fine aggregate shall be FA-1 or FA-2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

CONSTRUCTION REQUIREMENTS

General. Impact attenuators shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 for the test level specified and shall be on the Department’s approved list. Fully redirective and partially redirective attenuators shall also be designed for bi-directional impacts.

Installation. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Attenuator bases, when required by the manufacturer, shall be constructed on a prepared subgrade according to the manufacturer’s specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage. For sand modules, the perimeter of each module and the specified mass (weight) of sand in each module shall be painted on the surface of the base.

Impact attenuators shall be installed according to the manufacturer's specifications and include all necessary transitions between the impact attenuator and the item to which it is attached.

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Basis of Payment. This work, will be paid for at the contract unit price per each for IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS (SEVERE USE, NARROW); IMPACT ATTENUATORS (SEVERE USE, WIDE); IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE); or IMPACT ATTENUATORS (NON-REDIRECTIVE), of the test level specified.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

80109

IMPACT ATTENUATORS, TEMPORARY (BDE)

Effective: November 1, 2003

Revised: April 1, 2004

Description. This work shall consist of furnishing, installing, maintaining, and removing temporary impact attenuators of the category and test level specified.

Materials. Materials shall meet the requirements of the impact attenuator manufacturer and the following:

| Item | Article/Section |
|--|---------------------------|
| (a) Fine Aggregate (Note 1)..... | 1003.01 |
| (b) Steel Posts, Structural Shapes, and Plates | 1006.04 |
| (c) Rail Elements, End Section Plates, and Splice Plates | 1006.25 |
| (d) Bolts, Nuts, Washers and Hardware | 1006.25 |
| (e) Hollow Structural Tubing | 1006.27(b) |
| (f) Wood Posts and Wood Blockouts | 1007.01, 1007.02, 1007.06 |
| (g) Preservative Treatment..... | 1007.12 |
| (h) Rapid Set Mortar (Note 2) | |

Note 1. Fine aggregate shall be FA-1 or FA-2, Class A quality. The sand shall be unbagged and shall have a maximum moisture content of five percent.

Note 2. Rapid set mortar shall be obtained from the Department's approved list of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs. 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. Mixing of the rapid set mortar shall be according to the manufacturer's instructions.

CONSTRUCTION REQUIREMENTS

General. Impact Attenuators shall meet the testing criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350 for the test level specified and shall be on the Department's approved list.

Installation. Regrading of slopes or approaches for the installation shall be as shown on the plans.

Attenuator bases, when required by the manufacturer, shall be constructed on a prepared subgrade according to the manufacturer's specifications. The surface of the base shall be slightly sloped or crowned to facilitate drainage.

Impact attenuators shall be installed according to the manufacturer's specifications and include all necessary transitions between the impact attenuator and the item to which it is attached.

When water filled attenuators are used between November 1 and April 15, they shall contain anti-freeze according to the manufacturer's recommendations.

Markings. Sand module impact attenuators shall be striped with alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes. There shall be at least two of each stripe on each module.

Other types of impact attenuators shall have a terminal marker applied to their nose and reflectors along their sides.

Maintenance. All maintenance of the impact attenuators shall be the responsibility of the Contractor until removal is directed by the Engineer.

Relocate. When relocation of temporary impact attenuators is specified, they shall be removed, relocated and reinstalled at the new location. The reinstallation requirements shall be the same as those for a new installation.

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

Surplus material shall be disposed of according to Article 202.03. Anti-freeze, when present, shall be disposed of/recycled according to local ordinances.

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

Method of Measurement. This work will be measured for payment as each, where each is defined as one complete installation.

Basis of Payment. This work will be paid for at the contract unit price per each for IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW); IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, WIDE); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, NARROW); IMPACT ATTENUATORS, TEMPORARY (SEVERE USE, WIDE); or IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) of the test level specified.

Relocation of the devices will be paid for at the contract unit price per each for IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE); IMPACT ATTENUATORS, RELOCATE (SEVERE USE); or IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE); of the test level specified.

Regrading of slopes or approaches will be paid for according to Section 202 and/or Section 204 of the Standard Specifications.

80110

LIME GRADATION REQUIREMENTS (BDE)

Effective: November 1, 2002

Revise Articles 1012.03(e) and 1012.04(e) of the Standard Specifications to modify the maximum percent retained on the 150 μm (No. 100) sieve from "25" to "30".

80081

MINIMUM LANE WIDTH WITH LANE CLOSURE (BDE)

Effective: January 1, 2005

Add the following paragraph after the eighth paragraph of Article 701.04(a) of the Standard Specifications.

"The minimum lane width adjacent to a closed lane during paving, patching, and other moving operations on freeways and expressways shall be a minimum of 3 m (10 ft). The 3 m (10 ft) shall be clear, unobstructed, and free of channelizing devices or other obstacles."
80137

MULCHING SEEDED AREAS (BDE)

Effective: January 1, 2005

Delete Article 251.02(a) of the Standard Specifications.

Add the following to Article 251.02 of the Standard Specifications:

“(h) Compost 1081.05(b)”

Delete Article 251.03(b)(1) of the Standard Specifications.

Add the following to Article 251.03 of the Standard Specifications:

“(d) Method 4. This method shall consist of applying compost combined with a performance additive designed to bind/stabilize the compost. The compost/performance additive mixture shall be applied to the surface of the slope using a pneumatic blower at a depth of 50 mm (2 in.)”

Revise the first sentence of the first paragraph of Article 251.06(b) of the Standard Specifications to read:

“Mulch Methods 1, 2, 3, and 4 will be measured for payment in hectares (acres) of surface area mulched.”

Revise Article 251.07 of the Standard Specifications to read:

“**251.07 Basis of Payment.** This work will be paid for at the contract unit price per hectare (acre) for MULCH, METHOD 1; MULCH, METHOD 2; MULCH, METHOD 3; or MULCH, METHOD 4; and at the contract unit price per square meter (square yard) for EROSION CONTROL BLANKET or HEAVY DUTY EROSION CONTROL BLANKET.”

Add the following after the second paragraph of Article 1081.05(b) of the Standard Specifications:

“Chemical Compost Binder. Chemical compost binder shall be a commercially available product specifically recommended by the manufacturer for use as a compost stabilizer.

The compost binder shall be nonstaining and nontoxic to vegetation and the environment. It shall disperse evenly and rapidly and remain in suspension when agitated in water.

Prior to use of the compost binder, the Contractor shall submit a notarized certification by the manufacturer stating that it meets these requirements. Chemical compost binder shall be packaged, stored, and shipped according to the manufacturer’s recommendations with the net quantity plainly shown on each package or container.”

80138

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."

80116

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.

Pay Factor (PF) in percent = 55 + 0.5 (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:

Total Payment = TPF[CUP (TOTPAVT - DEFFPAVT)]

TPF = Total Pay Factor

CUP = Contract Unit Price

TOTPAVT = Area of Pavement Subject to Coring

DEFFPAVT = 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.

| Percent Within Limits | | | | | | | |
|----------------------------------|-----------------------------|----------------------------------|-----------------------------|----------------------------------|-----------------------------|----------------------------------|-----------------------------|
| Quality Index (Q _L)* | Percent Within Limits (PWL) | Quality Index (Q _L)* | Percent Within Limits (PWL) | Quality Index (Q _L)* | Percent Within Limits (PWL) | Quality Index (Q _L)* | Percent Within Limits (PWL) |
| 0.00 | 50.00 | 0.40 | 65.07 | 0.80 | 78.43 | 1.20 | 88.76 |
| 0.01 | 50.38 | 0.41 | 65.43 | 0.81 | 78.72 | 1.21 | 88.97 |
| 0.02 | 50.77 | 0.42 | 65.79 | 0.82 | 79.02 | 1.22 | 89.17 |
| 0.03 | 51.15 | 0.43 | 66.15 | 0.83 | 79.31 | 1.23 | 89.38 |
| 0.04 | 51.54 | 0.44 | 66.51 | 0.84 | 79.61 | 1.24 | 89.58 |
| 0.05 | 51.92 | 0.45 | 66.87 | 0.85 | 79.90 | 1.25 | 89.79 |
| 0.06 | 52.30 | 0.46 | 67.22 | 0.86 | 80.19 | 1.26 | 89.99 |
| 0.07 | 52.69 | 0.47 | 67.57 | 0.87 | 80.47 | 1.27 | 90.19 |
| 0.08 | 53.07 | 0.48 | 67.93 | 0.88 | 80.76 | 1.28 | 90.38 |
| 0.09 | 53.46 | 0.49 | 68.28 | 0.89 | 81.04 | 1.29 | 90.58 |
| 0.10 | 53.84 | 0.50 | 68.63 | 0.90 | 81.33 | 1.30 | 90.78 |
| 0.11 | 54.22 | 0.51 | 68.98 | 0.91 | 81.61 | 1.31 | 90.96 |
| 0.12 | 54.60 | 0.52 | 69.32 | 0.92 | 81.88 | 1.32 | 91.15 |
| 0.13 | 54.99 | 0.53 | 69.67 | 0.93 | 82.16 | 1.33 | 91.33 |
| 0.14 | 55.37 | 0.54 | 70.01 | 0.94 | 82.43 | 1.34 | 91.52 |
| 0.15 | 55.75 | 0.55 | 70.36 | 0.95 | 82.71 | 1.35 | 91.70 |
| 0.16 | 56.13 | 0.56 | 70.70 | 0.96 | 82.97 | 1.36 | 91.87 |
| 0.17 | 56.51 | 0.57 | 71.04 | 0.97 | 83.24 | 1.37 | 92.04 |
| 0.18 | 56.89 | 0.58 | 71.38 | 0.98 | 83.50 | 1.38 | 92.22 |
| 0.19 | 57.27 | 0.59 | 71.72 | 0.99 | 83.77 | 1.39 | 92.39 |
| 0.20 | 57.65 | 0.60 | 72.06 | 1.00 | 84.03 | 1.40 | 92.56 |
| 0.21 | 58.03 | 0.61 | 72.39 | 1.01 | 84.28 | 1.41 | 92.72 |
| 0.22 | 58.40 | 0.62 | 72.72 | 1.02 | 84.53 | 1.42 | 92.88 |
| 0.23 | 58.78 | 0.63 | 73.06 | 1.03 | 84.79 | 1.43 | 93.05 |
| 0.24 | 59.15 | 0.64 | 73.39 | 1.04 | 85.04 | 1.44 | 93.21 |
| 0.25 | 59.53 | 0.65 | 73.72 | 1.05 | 85.29 | 1.45 | 93.37 |
| 0.26 | 59.90 | 0.66 | 74.04 | 1.06 | 85.53 | 1.46 | 93.52 |
| 0.27 | 60.28 | 0.67 | 74.36 | 1.07 | 85.77 | 1.47 | 93.67 |
| 0.28 | 60.65 | 0.68 | 74.69 | 1.08 | 86.02 | 1.48 | 93.83 |
| 0.29 | 61.03 | 0.69 | 75.01 | 1.09 | 86.26 | 1.49 | 93.98 |
| 0.30 | 61.40 | 0.70 | 75.33 | 1.10 | 86.50 | 1.50 | 94.13 |
| 0.31 | 61.77 | 0.71 | 75.64 | 1.11 | 86.73 | 1.51 | 94.27 |
| 0.32 | 62.14 | 0.72 | 75.96 | 1.12 | 86.96 | 1.52 | 94.41 |
| 0.33 | 62.51 | 0.73 | 76.27 | 1.13 | 87.20 | 1.53 | 94.54 |
| 0.34 | 62.88 | 0.74 | 76.59 | 1.14 | 87.43 | 1.54 | 94.68 |
| 0.35 | 63.25 | 0.75 | 76.90 | 1.15 | 87.66 | 1.55 | 94.82 |
| 0.36 | 63.61 | 0.76 | 77.21 | 1.16 | 87.88 | 1.56 | 94.95 |
| 0.37 | 63.98 | 0.77 | 77.51 | 1.17 | 88.10 | 1.57 | 95.08 |
| 0.38 | 64.34 | 0.78 | 77.82 | 1.18 | 88.32 | 1.58 | 95.20 |
| 0.39 | 64.71 | 0.79 | 78.12 | 1.19 | 88.54 | 1.59 | 95.33 |

*For Q_L values less than zero, subtract the table value from 100 to obtain PWL

| Percent Within Limits (continued) | | | | | |
|--|-----------------------------|----------------------------------|-----------------------------|----------------------------------|-----------------------------|
| Quality Index (Q _L)* | Percent Within Limits (PWL) | Quality Index (Q _L)* | Percent Within Limits (PWL) | Quality Index (Q _L)* | Percent Within Limits (PWL) |
| 1.60 | 95.46 | 2.00 | 98.83 | 2.40 | 99.89 |
| 1.61 | 95.58 | 2.01 | 98.88 | 2.41 | 99.90 |
| 1.62 | 95.70 | 2.02 | 98.92 | 2.42 | 99.91 |
| 1.63 | 95.81 | 2.03 | 98.97 | 2.43 | 99.91 |
| 1.64 | 95.93 | 2.04 | 99.01 | 2.44 | 99.92 |
| 1.65 | 96.05 | 2.05 | 99.06 | 2.45 | 99.93 |
| 1.66 | 96.16 | 2.06 | 99.10 | 2.46 | 99.94 |
| 1.67 | 96.27 | 2.07 | 99.14 | 2.47 | 99.94 |
| 1.68 | 96.37 | 2.08 | 99.18 | 2.48 | 99.95 |
| 1.69 | 96.48 | 2.09 | 99.22 | 2.49 | 99.95 |
| 1.70 | 96.59 | 2.10 | 99.26 | 2.50 | 99.96 |
| 1.71 | 96.69 | 2.11 | 99.29 | 2.51 | 99.96 |
| 1.72 | 96.78 | 2.12 | 99.32 | 2.52 | 99.97 |
| 1.73 | 96.88 | 2.13 | 99.36 | 2.53 | 99.97 |
| 1.74 | 96.97 | 2.14 | 99.39 | 2.54 | 99.98 |
| 1.75 | 97.07 | 2.15 | 99.42 | 2.55 | 99.98 |
| 1.76 | 97.16 | 2.16 | 99.45 | 2.56 | 99.98 |
| 1.77 | 97.25 | 2.17 | 99.48 | 2.57 | 99.98 |
| 1.78 | 97.33 | 2.18 | 99.50 | 2.58 | 99.99 |
| 1.79 | 97.42 | 2.19 | 99.53 | 2.59 | 99.99 |
| 1.80 | 97.51 | 2.20 | 99.56 | 2.60 | 99.99 |
| 1.81 | 97.59 | 2.21 | 99.58 | 2.61 | 99.99 |
| 1.82 | 97.67 | 2.22 | 99.61 | 2.62 | 99.99 |
| 1.83 | 97.75 | 2.23 | 99.63 | 2.63 | 100.00 |
| 1.84 | 97.83 | 2.22 | 99.66 | 2.64 | 100.00 |
| 1.85 | 97.91 | 2.25 | 99.68 | ≥ 2.65 | 100.00 |
| 1.86 | 97.98 | 2.26 | 99.70 | | |
| 1.87 | 98.05 | 2.27 | 99.72 | | |
| 1.88 | 98.11 | 2.28 | 99.73 | | |
| 1.89 | 98.18 | 2.29 | 99.75 | | |
| 1.90 | 98.25 | 2.30 | 99.77 | | |
| 1.91 | 98.31 | 2.31 | 99.78 | | |
| 1.92 | 98.37 | 2.32 | 99.80 | | |
| 1.93 | 98.44 | 2.33 | 99.81 | | |
| 1.94 | 98.50 | 2.34 | 99.83 | | |
| 1.95 | 98.56 | 2.35 | 99.84 | | |
| 1.96 | 98.61 | 2.36 | 99.85 | | |
| 1.97 | 98.67 | 2.37 | 99.86 | | |
| 1.98 | 98.72 | 2.38 | 99.87 | | |
| 1.99 | 98.78 | 2.39 | 99.88 | | |

*For Q_L values less than zero, subtract the table value from 100 to obtain PWL

53600

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 109.07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section 7(b) of the State Prompt Payment Act. State law creates other and additional remedies

available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

80022

PAYROLLS AND PAYROLL RECORDS (BDE)

Effective: August 10, 2005

FEDERAL AID CONTRACTS. Add the following State of Illinois requirements to the Federal requirements contained in Section V of Form FHWA-1273:

"The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid.

The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form."

STATE CONTRACTS. Revise Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

"IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

1. **Prevailing Wages.** All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of three years from the date of completion of this contract, records of the wages paid to his/her workers. The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid. Upon two business days' notice, these records shall be available, at all reasonable hours at a location within the State, for inspection by the Department or the Department of Labor.

3. Submission of Payroll Records. The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor which avers that: (i) such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class B misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor."

80155

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

PLANTING WOODY PLANTS (BDE)

Effective: January 1, 2006

Revise the first and second paragraphs of Article 253.14 of the Standard Specifications to read:

"253.14 Period of Establishment. Prior to being accepted, the plants shall endure a period of establishment. This period shall begin in June and end in September of the same year. To qualify for inspection, plants shall have been in place, in a live healthy condition, on or before June 1 of the year of inspection. To be acceptable, plants shall be in a live healthy condition, representative of their species, at the time of inspection in the month of September.

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

Revise Article 253.16 of the Standard Specifications to read:

“253.16 Method of Measurement. This work will be measured for final payment, in place, after the period of establishment. Trees, shrubs, and vines will be measured as each individual plant. Seedlings will be measured in units of 100 plants.”

Revise Article 253.17 of the Standard Specifications to read:

“253.17 Basis of Payment. This work will be paid for at the contract unit price per each for TREES, SHRUBS, and VINES, of the species, root type, and plant size specified; and per unit for SEEDLINGS. Payment will be made according to the following schedule.

- (a) Initial Payment. Upon planting, 75 percent of the pay item(s) will be paid.
- (b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining 25 percent of the pay item(s) will be paid.”

80148

PLASTIC BLOCKOUTS FOR GUARDRAIL (BDE)

Effective: November 1, 2004

Add the following to Article 630.02 of the Standard Specifications:

“(h) Plastic Blockouts (Note 1.)

Note 1. Plastic blockouts, 150 mm (6 in.) deep, may be used in lieu of 150 mm (6 in.) deep wood block-outs for steel plate beam guardrail. The plastic blockouts shall be on the Department’s approved list.”

80134

POLYMER MODIFIED EMULSIFIED ASPHALT (BDE)

Effective: November 1, 2002

Add the following to Article 1009.07 of the Standard Specifications: (insert it before the table on page 853 which begins, "The different grades are, in general, used for the following:")

- "(f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts shall be either anionic (SS-1hP) or cationic (CSS-1hP). They shall meet the SS-1h requirements of Article 1009.07(a) or the CSS-1h requirements of Article 1009.07(b) respectively, with the following exceptions for both types:
- (1) The emulsified asphalt shall be modified with a styrene-butadiene diblock or triblock copolymer, or a styrene butadiene rubber.
 - (2) The cement mixing and ductility tests will be waived.
 - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show no white, milky colored substance and shall be a homogeneous brown color throughout.
 - (4) The distillation for polymer modified emulsion shall be performed according to AASHTO T 59 except the temperature shall be 190 +/- 5 °C (374 +/- 9 °F) and measured using an ASTM 16C (16F) thermometer.
 - (5) The residue from distillation shall have a minimum elastic recovery value of 30 percent when tested according to AASHTO T 301. The specified temperature shall be 4.0 +/- 0.5 °C (39.2 +/- 1.0 °F)."

Add the following grades "for tack or fog seal" to the table at the end of Article 1009.07 of the Standard Specifications which begins, "The different grades are, in general, used for the following:"

"SS-1hP, CSS-1hP"

80073

POLYUREA PAVEMENT MARKING (BDE)

Effective: April 1, 2004

Description. This work shall consist of furnishing and applying pavement marking lines.

The type of polyurea pavement marking applied will be determined by the type of reflective media used. Polyurea Pavement Marking Type I shall use glass beads as a reflective media. Polyurea Pavement Marking Type II shall use a combination of composite reflective elements and glass beads as a reflective media.

Polyurea-based liquid pavement markings shall only be applied by Contractors on the list of Approved Polyurea Contractors maintained by the Engineer of Operations and in effect on the date of advertisement for bids.

Materials. Materials shall meet the following requirements:

(a) *Polyurea Pavement Marking.* The polyurea pavement marking material shall consist of 100 percent solid two part system formulated and designed to provide a simple volumetric mixing ratio of two components (must be two or three volumes of Part A to one volume of Part B). No volatile or polluting solvents or fillers will be allowed.

(b) *Pigmentation.* The pigment content by weight of component A shall be determined by low temperature ashing according to ASTM D 3723. The pigment content shall not vary more than \pm two percent from the pigment content of the original qualified paint.

White Pigment shall be Titanium Dioxide meeting ASTM D 476 Type II, Rutile.

Yellow Pigment shall be an Organic Yellow and contain no heavy metals.

(c) *Environmental.* Upon heating to application temperature, the material shall not exude fumes which are toxic or injurious to persons or property.

(d) *Daylight Reflectance.* The daylight directional reflectance of the cured polyurea material (without reflective media) shall be a minimum of 80 percent (white) and 50 percent (yellow) relative to magnesium oxide when tested using a color spectrophotometer with a 45 degrees circumferential /zero degrees geometry, illuminant C, and two degrees observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm. In addition, the color of the yellow polyurea shall visually match Color Number 33538 of Federal Standard 595a with chromaticity limits as follows:

| | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| X | 0 . 4 9 0 | 0 . 4 7 5 | 0 . 4 8 5 | 0 . 5 3 9 |
| Y | 0 . 4 7 0 | 0 . 4 3 8 | 0 . 4 2 5 | 0 . 4 5 6 |

(e) *Weathering Resistance.* The polyurea marking material, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness to an aluminum alloy panel (Federal Test Std. No. 141, Method 2013) and allowed to cure for 72 hours at room temperature, shall be subjected to accelerated weathering for 75 hours. The accelerated weathering shall be completed by using the light and water exposure apparatus (fluorescent UV - condensation type) and tested according to ASTM G 53.

The cycle shall consist of four hours UV exposure at 50 °C (122 °F) and four hours of condensation at 40 °C (104 °F). UVB 313 bulbs shall be used. At the end of the exposure period, the material shall show no substantial change in color or gloss.

(f) *Dry Time.* The polyurea pavement marking material, when mixed in the proper ratio and applied at 0.35 to 0.41 mm (14 to 16 mils) wet film thickness and with the proper saturation of reflective media, shall exhibit a no-tracking time of ten minutes or less when tested according to ASTM D 711.

(g) *Adhesion.* The catalyzed polyurea pavement marking materials when applied to a 100 x 100 x 50 mm (4 x 4 x 2 in.) concrete block, shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test.

The concrete block shall be brushed on one side and have a minimum strength of 24,100 kPa (3500 psi). A 50 mm (2 in.) square film of the mixed polyurea shall be applied to the brushed surface and allowed to cure for 72 hours at room temperature. A 50 mm (2 in.) square cube shall be affixed to the surface of the polyurea by means of an epoxy glue. After the glue has cured for 24 hours, the polyurea specimen shall be placed on a dynamic testing machine in such a fashion so that the specimen block is in a fixed position and the 50 mm (2 in.) cube (glued to the polyurea surface) is attached to the dynamometer head. Direct upward

pressure shall be slowly applied until the polyurea system fails. The location of the break and the amount of concrete failure shall be recorded.

- (h) *Hardness. The polyurea pavement marking materials when tested according to ASTM D 2240, shall have a shore D hardness of between 70 and 100. Films shall be cast on a rigid substrate at 0.35 to 0.41 mm (14 to 16 mils) in thickness and allowed to cure at room temperature for 72 hours before testing.*
- (i) *Abrasion. The abrasion resistance shall be evaluated according to ASTM D 4060 using a Taber Abrader with a 1,000 gram load and CS 17 wheels. The duration of the test shall be 1,000 cycles. The loss shall be calculated by difference and be less than 120 mgs. The tests shall be run on cured samples of polyurea material which have been applied at a film thickness of 0.35 to 0.41 mm (14 to 16 mils) to code S-16 stainless steel plates. The films shall be allowed to cure at room temperature for at least 72 hours and not more than 96 hours before testing.*
- (j) *Reflective Media. The reflective media shall meet the following requirements:*

(1) *Type I - The glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications and the following requirements:*

- a. **First Drop Glass Beads** The first drop glass beads shall be tested by the standard visual method of large glass spheres adopted by the Department. The beads shall have a silane coating and meet the following sieve requirements:

| Sieve Size | U.S. Standard Sieve Number | % Passing (By Weight) |
|------------|----------------------------|-----------------------|
| 1.70 mm | 12 | 95-100 |
| 1.40 mm | 14 | 75-95 |
| 1.18 mm | 16 | 10-47 |
| 1.00 mm | 18 | 0-7 |
| 850 µm | 20 | 0-5 |

- b. **Second Drop Glass Beads.** The second drop glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications for Type B.

(2) *Type II - The combination of microcrystalline ceramic elements and glass beads shall meet the following requirements:*

- a. **First Drop Glass Beads.** The first drop glass beads shall meet the following requirements:

1. Composition. The elements shall be composed of a titania opacified ceramic core having clear and or yellow tinted microcrystalline ceramic beads embedded to the outer surface.
 2. Index of Refraction. All microcrystalline reflective elements embedded to the outer surface shall have an index of refraction of 1.8 when tested by the immersion method.
 3. *Acid Resistance. A sample of microcrystalline ceramic beads supplied by the manufacturer, shall show resistance to corrosion of their surface after exposure to a one percent solution (by weight) of sulfuric acid. Adding 5.7 ml (0.2 oz) of concentrated acid into the water shall make the one percent acid solution. This test shall be performed by taking a 25 x 50 mm (1 x 2 in.) sample and adhering it to the bottom of a glass tray and placing just enough acid solution to completely immerse the sample. The tray shall be covered with a piece of glass to prevent evaporation and allow the sample to be exposed for 24 hours under these conditions. The acid solution shall be decanted (do not rinse, touch, or otherwise disturb the bead surfaces) and the sample dried while adhered to the glass tray in a 66 °C (150 °F) oven for approximately 15 minutes. Microscope examination (20X) shall show no white (corroded) layer on the entire surface.*
- b. Second Drop Glass Beads. The second drop glass beads shall meet the requirements of Article 1095.07 of the Standard Specifications for Type B or the following manufacturer's specification:

1. Sieve Analysis. The glass beads shall meet the following sieve requirements:

| Sieve Size | U.S. Standard Sieve Number | % Passing (By Weight) |
|------------|----------------------------|-----------------------|
| 850 μm | 20 | 100 |
| 600 μm | 30 | 75-95 |
| 300 μm | 50 | 15-35 |
| 150 μm | 100 | 0-5 |

The manufacturer of the glass beads shall certify that the treatment of the glass beads meets the requirements of the polyurea manufacturer.

2. Imperfections. The surface of the glass beads shall be free of pits and scratches. The glass beads shall be spherical in shape and shall contain a maximum of 20 percent by weight of irregular shapes when tested by the standard method using a vibratile inclined glass plate as adopted by the Department.

3. Index of Refraction. The index of refraction of the glass beads shall be a minimum of 1.50 when tested by the immersion method at 25 °C (77 °F).

(k) *Packaging. Microcrystalline ceramic reflective elements and glass beads shall be delivered in approved moisture proof bags or weather resistant bulk boxes. Each carton shall be legibly marked with the manufacturer, specifications and type, lot number, and the month and year the microcrystalline ceramic reflective elements and/or glass beads were packaged. The letters and numbers used in the stencils shall be a minimum of 12.7 mm (1/2 in.) in height.*

(1) Moisture Proof Bags. Moisture proof bags shall consist of at least five ply paper construction unless otherwise specified. Each bag shall contain 22.7 kg (50 lb) net.

(2) Bulk Weather Resistance Boxes. Bulk weather resistance boxes shall conform to Federal Specification PPP-8-640D Class II or latest revision. Boxes are to be weather resistant, triple wall, fluted, corrugated-fiber board. Cartons shall be strapped with two metal straps. Straps shall surround the outside perimeter of the carton. The first strap shall be located approximately 50 mm (2 in.) from the bottom of the carton and the second strap shall be placed approximately in the middle of the carton. All cartons shall be shrink wrapped for protection from moisture. Cartons shall be lined with a minimum 4 mil polyester bag and meet Interstate Commerce Commission requirements. Cartons shall be approximately 1 x 1 m (38 x 38 in.), contain 910 kg (2000 lb) of microcrystalline ceramic reflective elements and/or glass beads and be supported on a wooden pallet with fiber straps.

(l) *Packaging. The material shall be shipped to the job site in substantial containers and shall be plainly marked with the manufacturer's name and address, the name and color of the material, date of manufacture, and batch number.*

(m) *Verification. Prior to approval and use of the polyurea pavement marking materials, the manufacturer shall submit a notarized certification of an independent laboratory, together with the results of all tests, stating these materials meet the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, brand name of polyurea and date of manufacture. The certification shall be accompanied by one 1/2 L (1 pt) samples each of Part A and Part B. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B.*

After approval by the Department, certification by the polyurea manufacturer shall be submitted for each batch used. New independent laboratory certified test results and samples for testing by the Department shall be submitted any time the manufacturing process or paint formulation is changed. All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer.

- (n) *Acceptance samples. Acceptance samples shall consist of one 1/2 L (1 pt) samples of Part A and Part B, of each lot of paint. Samples shall be sent in the appropriate volumes for complete mixing of Part A and Part B. The samples shall be submitted to the Department for testing, together with a manufacturer's certification. The certification shall state the formulation for the lot represented is essentially identical to that used for qualification testing. All, acceptance samples will be taken by a representative of the Department. The polyurea pavement marking materials shall not be used until tests are completed and they have met the requirements as set forth herein.*
- (o) *Material Retainage. The manufacturer shall retain the test sample for a minimum of 18 months.*

Equipment. The polyurea pavement marking compounds shall be applied through equipment specifically designed to apply two component liquid materials, glass beads and/or reflective elements in a continuous and skip-line pattern. The two-component liquid materials shall be applied after being accurately metered and then mixed with a static mix tube or airless impingement mixing guns. The static mixing tube or impingement mixing guns shall accommodate plural component material systems that have a volumetric ratio of 2 to 1 or 3 to 1. This equipment shall produce the required amount of heat at the mixing head and gun tip and maintain those temperatures within the tolerances specified. The guns shall have the capacity to deliver materials from approximately 5.7 to 11.4 L/min (1.5 to 3 gal/min) to compensate for a typical range of application speeds of 10 to 13 km/h (6 to 8 mph). The accessories such as spray tip, mix chamber, and rod diameter shall be selected according to the manufacturer's specifications to achieve proper mixing and an acceptable spray pattern. The application equipment shall be maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc. This equipment shall also have as an integral part of the gun carriage, a high pressure air spray capable of cleaning the pavement immediately prior to making application.

The equipment shall be capable of spraying both yellow and white polyurea, according to the manufacturer's recommended proportions and be mounted on a truck of sufficient size and stability with an adequate power source to produce lines of uniform dimensions and prevent application failure. The truck shall have at least two polyurea tanks each of 415 L (110 gal) minimum capacity and be equipped with hydraulic systems and agitators. It shall be capable of placing stripes on the left and right sides and placing two lines on a three-line system simultaneously with either line in a solid or intermittent pattern, in yellow or white, and applying the appropriate reflective media according to manufacturer's recommendations. All guns shall be in full view of operations at all times. The equipment shall have a metering device to register the accumulated installed quantities for each gun, each day. Each vehicle shall include at least one operator who shall be a technical expert in equipment operations and polyurea application techniques. Certification of equipment shall be provided at the pre-construction conference.

The mobile applicator shall include the following features:

- (a) *Material Reservoirs. The applicator shall provide individual material reservoirs, or space for the storage of Part A and Part B of the resin composition.*

- (b) Heating Equipment. The applicator shall be equipped with heating equipment of sufficient capacity to maintain the individual resin components at the manufacturer's recommended temperature of ± 2.8 °C (± 5 °F) for spray application.
- (c) Dispensing Equipment. The applicator shall be equipped with glass bead and/or reflective element dispensing equipment. The applicator shall be capable of applying the glass beads and/or reflective elements at a rate and combination indicated by the manufacturer.
- (d) Volumetric Usage. The applicator shall be equipped with metering devices or pressure gauges on the proportioning pumps as well as stroke counters to monitor volumetric usage. Metering devices or pressure gauges and stroke counters shall be visible to the Engineer.
- (e) Pavement Marking Placement. The applicator shall be equipped with all the necessary spray equipment, mixers, compressors and other appurtenances to allow for the placement of reflectorized pavement markings in a simultaneous sequence of operations.

The Contractor shall provide an accurate temperature-measuring device(s) that shall be capable of measuring the pavement temperature prior to application of the material, the material temperature at the gun tip and the material temperature prior to mixing.

CONSTRUCTION REQUIREMENTS

General. The pavement shall be cleaned by a method approved by the Engineer to remove all dirt, grease, glaze or any other material that would reduce the adhesion of the markings with minimum or no damage to the pavement surface. New PCC pavements shall be air-blast-cleaned to remove all latents.

Widths, lengths, and shapes of the cleaned surface shall be of sufficient size to include the full area of the specified pavement marking to be placed.

The cleaning operation shall be a continuous moving operation process with minimum interruption to traffic.

Markings shall be applied to the cleaned surfaces on the same calendar day. If this cannot be accomplished, the surface shall be re-cleaned prior to applying the markings. No markings shall be applied until the Engineer approves the cleaning.

The pavement markings shall be applied to the cleaned road surface, during conditions of dry weather and subsequently dry pavement surfaces at a minimum uniform wet thickness of 0.4 mm (15 mils) according to the manufacturer's installation instructions. On new bituminous course surfaces the pavement markings shall be applied at a minimum uniform wet thickness of 0.5 mm (20 mils). The application of and combination of reflective media (glass beads and/or reflective elements) shall be applied at a rate specified by the manufacturer. At the time of installation the pavement surface temperature and the ambient temperature shall be above 4 °C (40 °F) and rising. The pavement markings shall not be applied if the pavement shows any

visible signs of moisture or it is anticipated that damage causing moisture, such as rain showers, may occur during the installation and set periods. The Engineer will determine the atmospheric conditions and pavement surface conditions that produce satisfactory results.

Using the application equipment, the pavement markings shall be applied in the following manner, as a simultaneous operation:

- (a) The surface shall be air-blasted to remove any dirt and residue.
- (b) The resin shall be mixed and heated according to manufacturer's recommendations and sprayed onto the pavement surface.

The edge of the center line or lane line shall be offset a minimum distance of 50 mm (2 in.) from a longitudinal crack or joint. Edge lines shall be approximately 50 mm (2 in.) from the edge of pavement. The finished center and lane lines shall be straight, with the lateral deviation of any 3 m (10 ft) line not to exceed 25 mm (1 in.).

Notification. The Contractor shall notify the Engineer 72 hours prior to the placement of the markings in order that he/she can be present during the operation. At the time of notification, the Contractor shall provide the Engineer the manufacturer and lot numbers of polyurea and reflective media that will be used.

Inspection. The polyurea pavement markings will be inspected following installation according to Article 780.10 of the Standard Specifications, except, no later than December 15, and inspected following a winter performance period that extends 180 days from December 15.

Method of Measurement. This work will be measured for payment in place, in meters (feet). Double yellow lines will be measured as two separate lines.

Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for POLYUREA PAVEMENT MARKING TYPE I – LINE of the line width specified or for POLYUREA PAVEMENT MARKING TYPE II – LINE of the line width specified.

80119

PORTLAND CEMENT (BDE)

Effective: January 1, 2005

Revised: November 1, 2005

Add the following paragraph after the last paragraph of Article 1001.01 of the Standard Specifications.

“For portland cement according to ASTM C 150, the bill of lading shall state if limestone has been added. The bill of lading shall also state that the limestone addition is not in excess of five percent by mass (weight) of the cement.”

80139

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.

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PRECAST, PRESTRESSED CONCRETE MEMBERS (BDE)

Effective: April 1, 2004

Revise the tables, “Maximum Allowable Dimensional Tolerances for Precast, Prestressed I-beams and Bulb T-beams” in Article 504.06(d) of the Standard Specifications to read:

| "Maximum Allowable Dimensional Tolerances for Precast, Prestressed Concrete I-Beams and Bulb T-Beams | |
|--|--------------------------------|
| mm | |
| Depth (flanges, web and fillets) | ± 5 |
| Depth (overall) | + 5 to - 3 |
| Width (flanges and fillets) | ± 5 |
| Width (web) | + 5 to - 3 |
| Length | ± 3 per 3 m, max. + 15 to - 20 |
| Square Ends (deviation from square) | ± 5 |
| Skew Ends (deviation from tangent offset) | ± 5 |
| Side Insert (spacing between centers of inserts and from the centers of inserts to the ends of the beams) | ± 15 |
| Bearing Plates (spacing between the centers of bearing plates) | ± 15 |
| Bearing Plate (spacing between the centers of bearing plates to the ends of the beams) | ± 5 |
| Bearing Plate or Bearing Area (variation from a true horizontal plane or from a plane surface when tested with a straightedge) | ± 2 |
| Stirrup Bars (extension above top of the beam) | 0 to - 10 |
| Stirrup Bars longitudinal spacing | |
| Within a distance equal to the depth of the member and measured from the end of the member | + 25 |
| In all other locations | + 50 |
| <p>The number of stirrups shall not be less than the required number in each length. Additional stirrups may be added when the maximum allowable tolerance is exceeded provided the minimum clearance between stirrups is not less than 50 mm.</p> | |
| <p>End Stirrup Bars - not more than 50 mm from the end of the beam</p> | |
| Horizontal Alignment (deviation from a straight line parallel to the centerline of the beam) | ± 3 per 3 m, max. ± 30 |

| Maximum Allowable Dimensional Tolerances For Precast, Prestressed Concrete I-Beams and Bulb T-Beams (English) | |
|---|------------------------------------|
| | in. |
| Depth (flanges, web and fillets) | ± 1/4 |
| Depth (overall) | + 1/4 to - 1/8 |
| Width (flanges and fillets) | ± 1/4 |
| Width (web) | + 1/4 to - 1/8 |
| Length | ± 1/8 per 10', max. + 1/2 to - 3/4 |
| Square Ends (deviation from square) | ± 1/4 |
| Skew Ends (deviation from tangent offset) | ± 1/4 |
| Side Insert (spacing between centers of inserts and from the centers of inserts to the ends of the beams) | ± 1/2 |
| Bearing Plates (spacing between the centers of bearing plates) | ± 1/2 |
| Bearing Plate (spacing between the centers of bearing plates to the ends of the beams) | ± 1/4 |
| Bearing Plate or Bearing Area (variation from a true horizontal plane or from a plane surface when tested with a straightedge) | ± 1/16 |
| Stirrup Bars (extension above top of the beam) | 0 to - 3/8 |
| Stirrup Bars longitudinal spacing | |
| Within a distance equal to the depth of the member and measured from the end of the member | + 1 |
| In all other locations | + 2 |
| <p>The number of stirrups shall not be less than the required number in each length. Additional stirrups may be added when the maximum allowable tolerance is exceeded provided the minimum clearance between stirrups is not less than 2 in.</p> | |
| <p>End Stirrup Bars - not more than 2" from the end of the beam</p> | |
| Horizontal Alignment (deviation from a straight line parallel to the centerline of the beam) | ± 1/8 per 10 ft, max. ± 1 1/4" |

80120

PREFORMED RECYCLED RUBBER JOINT FILLER (BDE)

Effective: November 1, 2002

Revise Article 503.02(c) of the Standard Specifications to read:

“(c) Preformed Expansion Joint Filler 1051”

Revise Article 637.02(d) of the Standard Specifications to read:

“(d) Preformed Expansion Joint Filler 1051”

Add the following Article to Section 1051 of the Standard Specifications:

“1051.10 Prefomed Recycled Rubber Joint Filler. Prefomed recycled rubber joint filler shall consist of ground tire rubber, free of steel and fabric, combined with ground scrap or waste polyethylene. It shall not have a strong hydrocarbon or rancid odor and shall meet the physical property requirements of ASTM D 1752. Water absorption by volume shall not exceed 5.0 percent.”

80084

RAISED REFLECTIVE PAVEMENT MARKERS (BRIDGE) (BDE)

Effective: August 1, 2003

Add the following sentence to the end of the second paragraph of Article 781.03(a) of the Standard Specifications:

“The installed height for the reflective pavement markers shall be approximately 7.5 mm (0.3 in.) above the road surface.”

Revise Article 781.05 of the Standard Specifications to read:

“**781.05 Basis of Payment.** This work will be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER, RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE), TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER, and REPLACEMENT REFLECTOR.”

Revise the first paragraph of Article 1096.01(b) of the Standard Specifications to read:

“(b) The overall dimensions for raised reflective pavement markers shall be approximately 254 mm (10 in.) long by 140 mm (5.5 in.) wide and a maximum of 45 mm (1.76 in.) high. The overall dimensions for bridge raised reflective pavement markers shall be approximately 235 mm (9.25 in.) long by 149 mm (5.86 in.) wide and a maximum of 32 mm (1.25 in.) high. The surface of the keel and web shall be free of scale, dirt, rust, oil, grease, or any other contaminant which may reduce the bond.”

80105

RAP FOR USE IN BITUMINOUS CONCRETE MIXTURES (BDE)

Effective: January 1, 2000

Revised: April 1, 2002

Revise Article 1004.07 to read:

“1004.07 RAP Materials. RAP is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt pavement. RAP must originate from routes or airfields under federal, state or local agency jurisdiction. The Contractor shall supply documentation that the RAP meets these requirements.

(a) Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP will be allowed on top of the pile after the pile has been sealed.

(1) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only and represent the same aggregate quality, but shall be at least C quality or better, the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag), similar gradation and similar AC content. If approved by the Engineer, combined single pass surface/binder millings may be considered “homogenous”, with a quality rating dictated by the lowest coarse aggregate quality present in the mixture. Homogenous stockpiles shall meet the requirements of Article 1004.07(d). Homogeneous RAP stockpiles not meeting these requirements may be processed (crushing and screening) and retested.

(2) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I/ Superpave, or equivalent mixtures only. The coarse aggregate in this RAP shall be crushed aggregate only and may represent more than one aggregate type and/or quality but shall be at least C quality or better. This RAP may have an inconsistent gradation and/or asphalt cement content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 16 mm (5/8 in.) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate RAP stockpiles shall meet the requirements of Article 1004.07(d).

(3) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP containing coarse aggregate (crushed or round) that is at least D quality or better. This RAP may have an inconsistent gradation and/or asphalt content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department. Conglomerate DQ RAP shall meet the requirements of Article 1004.07(d).

Reclaimed Superpave Low ESAL IL-9.5L surface mixtures shall only be placed in conglomerate DQ RAP stockpiles due to the potential for rounded aggregate.

(4) Other. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Other”. “Other” RAP stockpiles shall not be used in any of the Department’s bituminous mixtures.

- (b) Use. The allowable use of a RAP stockpile shall be set by the lowest quality of coarse aggregate in the RAP stockpile. Class I/Superpave surface mixtures are designated as containing Class B quality coarse aggregate only. Superpave Low ESAL IL-19.0L binder and IL-9.5L surface mixtures are designated as Class C quality coarse aggregate only. Class I/Superpave binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate only. Bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate only. Any mixture not listed above shall have the designated quality determined by the Department.

RAP containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in Class I/Superpave (including Low ESAL) surface mixtures only. RAP stockpiles for use in Class I/Superpave mixtures (including Low ESAL), base course, base course widening and Class B mixtures shall be either homogeneous or conglomerate RAP stockpiles except conglomerate RAP stockpiles shall not be used in Superpave surface mixture Ndesign 50 or greater. RAP for use in bituminous aggregate mixtures (BAM) shoulders and BAM stabilized subbase shall be from homogeneous, conglomerate, or conglomerate DQ stockpiles.

Additionally, RAP used in Class I/Superpave surface mixtures shall originate from milled or crushed mixtures only, in which the coarse aggregate is of Class B quality or better. RAP stockpiles for use in Class I/Superpave (including Low ESAL) binder mixes as well as base course, base course widening and Class B mixtures shall originate from milled or processed surface mixture, binder mixture, or a combination of both mixtures uniformly blended to the satisfaction of the Engineer, in which the coarse aggregate is of Class C quality or better.

- (c) Contaminants. RAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.
- (d) Testing. All RAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 450 metric tons (500 tons) for the first 1800 metric tons (2,000 tons) and one sample per 1800 metric tons (2,000 tons) thereafter. A minimum of five tests shall be required for stockpiles less than 3600 metric tons (4,000 tons).

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

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

All of the extraction results shall be compiled and averaged for asphalt content and gradation. Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

| Parameter | Homogeneous / Conglomerate | Conglomerate "D" Quality |
|-------------------|-------------------------------|-----------------------------|
| 25 mm (1 in.) | | ± 5% |
| 12.5 mm (1/2 in.) | ± 8% | ± 15% |
| 4.75 mm (No. 4) | ± 6% | ± 13% |
| 2.36 mm (No. 8) | ± 5% | |
| 1.18 mm (No. 16) | | ± 15% |
| 600 μm (No. 30) | ± 5% | |
| 75 μm (No. 200) | ± 2.0% | ± 4.0% |
| AC | ± 0.4% | ± 0.5% |

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

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

- (e) Designs. At the Contractor's option, bituminous concrete mixtures may be constructed utilizing RAP material meeting the above detailed requirements. The amount of RAP included in the mixture shall not exceed the percentages specified in the plans.

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

- (f) Production. The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the bituminous mixture being produced.

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

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

80011

REINFORCEMENT BARS (BDE)

Effective: November 1, 2005

Revised: November 2, 2005

Revise Article 1006.10(a) of the Supplemental Specifications to read:

“(a) Reinforcement Bars. Reinforcement bars will be accepted according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reinforcement Bar and Dowel Bar Plant Certification Procedure”. The Department will maintain an approved list of producers.

(1) Reinforcement Bars (Non-Coated). Reinforcement bars shall be according to ASTM A 706M (A 706), Grade 420 (60) for deformed bars and the following.

a. Chemical Composition. The chemical composition of the bars shall be according to the following table.

| CHEMICAL COMPOSITION | | |
|-----------------------|-------------------------------|---------------------------------|
| Element ^{1/} | Heat Analysis (% maximum) | Product Analysis (% maximum) |
| Carbon | 0.30 | 0.33 |
| Manganese | 1.50 | 1.56 |
| Phosphorus | 0.035 | 0.045 |
| Sulfur | 0.045 | 0.055 |
| Silicon | 0.50 | 0.55 |
| Nickel | ^{2/} | ^{2/} |
| Chromium | ^{2/} | ^{2/} |
| Molybdenum | ^{2/} | ^{2/} |
| Copper | ^{2/} | ^{2/} |
| Titanium | ^{2/} | ^{2/} |
| Vanadium | ^{2/} | ^{2/} |
| Columbium | ^{2/} | ^{2/} |
| Aluminum | ^{2/} , ^{3/} | ^{2/} , ^{3/} |
| Tin ^{4/} | 0.040 | 0.044 |

Note 1/. The bars shall not contain any traces of radioactive elements.

Note 2/. There is no composition limit but the element must be reported.

Note 3/. If aluminum is not an intentional addition to the steel for deoxidation or killing purposes, residual aluminum content need not be reported.

Note 4/. If producer bar testing indicates an elongation of 15 percent or more and passing of the bend test, the tin composition requirement may be waived.

- b. Heat Numbers. Bundles or bars at the construction site shall be marked or tagged with heat identification numbers of the bar producer.
 - c. Guided Bend Test. Bars may be subject to a guided bend test across two pins which are free to rotate, where the bending force shall be centrally applied with a fixed or rotating pin of a certain diameter as specified in Table 3 of ASTM A 706M (A 706). The dimensions and clearances of this guided bend test shall be according to ASTM E 190.
 - d. Spiral Reinforcement. Spiral reinforcement shall be deformed or plain bars conforming to the above requirements or cold-drawn steel wire conforming to AASHTO M 32.
- (2) Epoxy Coated Reinforcement Bars. Epoxy coated reinforcement bars shall be according to Article 1006.10(a)(1) and shall be epoxy coated according to AASHTO M 284M (M 284) and the following.
- a. Certification. The epoxy coating applicator shall be certified under the Concrete Reinforcing Steel Institute's (CRSI) Epoxy Plant Certification Program.
 - b. Coating Thickness. The thickness of the epoxy coating shall be 0.18 to 0.30 mm (7 to 12 mils). When spiral reinforcement is coated after fabrication, the thickness of the epoxy coating shall be 0.18 to 0.50 mm (7 to 20 mils).
 - c. Cutting Reinforcement. Reinforcement bars may be sheared or sawn to length after coating, providing the end damage to the coating does not extend more than 13 mm (0.5 in.) back and the cut is patched before any visible rusting appears. Flame cutting will not be permitted."

80151

SEEDING AND SODDING (BDE)

Effective: July 1, 2004

Revised: August 1, 2005

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 uniform growth 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 uniform 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 | 30% |
| Buchloe Dactyloides | |
| 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 Percent Maximum | Purity Percent Minimum | Pure, Live Seed Percent Minimum | Weed Percent Maximum | Secondary Noxious Weeds No. per kg (oz) Max. Permitted* | Remarks |
| 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 CAST-IN-PLACE CONSTRUCTION (BDE)

Effective: November 1, 2005

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for cast-in-place concrete construction items involving Class MS and SI concrete. Self-consolidating concrete may also be used for drilled shafts.

Materials. Materials shall be according to the following.

- (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 concrete that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

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. Article 1020.04 of the Standard Specifications shall apply except as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications or as specified. The maximum cement factor shall be 418 kg/cu m (7.05 cwt/cu yd). The cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used.
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.
- (c) The slump requirements shall not apply.

- (d) The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 shall not be used for drilled shafts or when the Engineer approves a horizontal flow distance greater than 9 m (30 ft). The fine aggregate proportion shall be a maximum 50 percent by mass (weight) of the total aggregate used.
- (e) The slump flow range shall be ± 50 mm (± 2 in.) of the Contractor target value, and within the overall Department range of 510 mm (20 in.) minimum to 710 mm (28 in.) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 100 mm (4 in.). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-5, SCC-6, and Illinois Modified AASHTO T 22, 23, 121, 126, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mix Design Submittal. The Contractor's Level III PCC Technician shall submit a mix design according to the "Portland Cement Concrete Level III Technician" course manual, except target slump information is not applicable and will not be required. However, a slump flow target range shall be submitted. In addition, the design mortar factor may exceed 1.10 and durability test data will be waived.

A J-ring value shall be submitted if a lower mix design maximum will apply. An L-box blocking ratio shall be submitted if a higher mix design minimum will apply. The Contractor shall also indicate applicable construction items for the mix design.

Trial mixture information will also be required by the Engineer. A trial mixture is a batch of concrete tested by the Contractor to verify the Contractor's mix design will meet specification requirements. Trial mixture information shall include test results as specified in the "Portland Cement Concrete Level III Technician" course manual. Test results shall also include slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index. For the trial mixture, the slump flow shall be near the midpoint of the proposed slump flow target range.

Trial Batch. A minimum 1.5 cu m (2 cu yd) trial batch shall be produced, and the self-consolidating concrete admixture dosage proposed by the Contractor shall be used. The slump flow shall be within 25 mm (1.0 in.) of the maximum slump flow range specified by the Contractor, and the air content shall be within the top half of the allowable specification range.

The trial batch shall be scheduled a minimum of 21 calendar days prior to anticipated use, and shall be performed in the presence of the Engineer.

The Contractor shall provide the labor, equipment, and materials to test the concrete. The mixture will be evaluated by the Engineer for strength, air content, slump flow, visual stability index, J-ring value, L-box blocking ratio, column segregation index, and hardened visual stability index.

Upon review of the test data from the trial batch, the Engineer will verify or deny the use of the mix design and notify the Contractor. Verification by the Engineer will include the Contractor's target slump flow range. If applicable, the Engineer will verify the Contractor's maximum J-ring value and minimum L-box blocking ratio.

A new trial batch will be required whenever there is a change in the source of any component material, proportions, dosage of the self-consolidating concrete admixture, batch sequence, mixing speed, mixing time, or as determined by the Engineer. The testing criteria for the new trial batch will be determined by the Engineer.

When necessary, the trial batches shall be disposed of according to Article 202.03 of the Standard Specifications.

Mixing Portland Cement Concrete. In addition to Article 1020.11 of the Standard Specifications, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

Wash water, if used, shall be completely discharged from the drum or container before the succeeding batch is introduced.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall design falsework and forms for full hydrostatic head pressure of the concrete. Forms shall be tight to prevent leakage of fluid concrete.

Placing and Consolidating. Concrete placement and consolidations shall be according to Article 503.07 of the Standard Specifications except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 1.5 m (5 ft). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 9 m (30 ft), unless approved otherwise by the Engineer. For drilled shafts, free fall placement will not be permitted.”

Delete the sixth, seventh, eighth and ninth paragraphs of Article 503.07 of the Standard Specifications.

Revise the eleventh paragraph of Article 503.07 of the Standard Specifications to read:

“Concrete shall be placed in continuous layers. When it is necessary by reason of an emergency to place less than a complete horizontal layer in one operation, such layer shall terminate in a vertical bulkhead. In order that the concrete will not be injured and that there shall be no line of separation between the batches, the separate batches shall follow each other closely as recommended by the manufacturer of the self-consolidating concrete admixture(s). In no case shall the interval of time between the placing of successive batches be greater than 20 minutes. Concrete shall be rodded with a piece of lumber or conduit if the material has lost its fluidity prior to placement of additional concrete. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer. If ready-mixed concrete is used, the requirements of Article 1020.11 shall apply. Delivery of mixed concrete shall be regulated so that there will not be an interruption in the placing of concrete in the forms, as recommended by the manufacturer of the self-consolidating concrete admixture(s). In no case shall the interval of time be greater than 20 minutes.”

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract plans.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The column segregation index test and hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract plans.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 40 cu m (50 cu yd) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

The column segregation index test will not be required to be performed at the jobsite. The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 230 cu m (300 cu yd) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract plans.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract plans.

For slump flow, visual stability index, J-ring or L-box, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 25 mm (1 in.) for slump flow, and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 25 mm (1 in.) for the J-ring value and ten percent for the L-box blocking ratio.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

80152

SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)

Effective: July 1, 2004

Revised: November 1, 2005

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Usage. Self-consolidating concrete may be used for precast concrete products.

Materials. Materials shall be according to the following.

- (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 concrete that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

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 mix design criteria shall be as follows:

- (a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications or as specified. The maximum cement factor shall be 418 kg/cu m (7.05 cwt/cu yd).
- (b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.

- (c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.
- (d) The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 shall not be used when the Engineer approves a horizontal flow distance greater than 9 m (30 ft). The fine aggregate proportion shall be a maximum 50 percent by mass (weight) of the total aggregate used.
- (e) The slump flow range shall be ± 50 mm (± 2 in.) of the Contractor target value, and within the overall Department range of 510 mm (20 in.) minimum to 710 mm (28 in.) maximum.
- (f) The visual stability index shall be a maximum of 1.
- (g) The J-ring value shall be a maximum of 100 mm (4 in.). The Contractor may specify a lower maximum in the mix design.
- (h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.
- (i) The column segregation index shall be a maximum 15 percent.
- (j) The hardened visual stability index shall be a maximum of 1.

Mix Design Approval. The Contractor shall obtain mix design approval according to the Department's Policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products".

80132

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

SOIL MODIFICATION (BDE)

Effective: November 1, 2004

Revised: April 1, 2006

Revise Section 302 of the Standard Specifications to read:

“SECTION 302. SOIL MODIFICATION

302.01 Description. This work shall consist of constructing a modified soil layer composed of soil, water, and a modifier.

302.02 Materials. Materials shall meet the requirements of the following Articles of Section 1000 Materials:

| Item | Article/Section |
|---|---------------------------|
| (a) Type I Portland Cement | 1001 |
| (b) Type I (SM) Slag-Modified Portland Cement | 1001 |
| (c) Water..... | 1002 |
| (d) Hydrated Lime..... | 1012.01 |
| (e) By-Product, Hydrated Lime (Note 1) | |
| (f) By-Product, Non-Hydrated Lime (Note 2) | |
| (g) Lime Slurry (Note 3) | |
| (h) Class C Fly Ash (Note 4) | |
| (i) Soil (Note 5) | |
| (j) Bituminous Materials (Note 6)..... | 1009.07, 1009.08, 1009.09 |

Note 1. By-product, hydrated lime (hydrator tailings) shall conform to the following requirements:

| Parameter | Value |
|--|--------------|
| Total calcium and magnesium oxides (nonvolatile basis) | 90 % minimum |
| Available calcium hydroxide (rapid sugar test, ASTM C 25) plus total MgO content calculated to be equivalent Ca(OH) ₂ | 70 % minimum |
| As received loss on ignition (carbon dioxide plus moisture, combined and free) | 5 % maximum |
| Free water (as-received basis) | 4 % maximum |
| SO ₃ | 10 % maximum |

The sieve analysis of the lime residue shall be as follows:

| Sieve | Maximum Percent Retained |
|------------------|--------------------------|
| 4.75 mm (No. 4) | 0 |
| 600 μm (No. 30) | 10 |
| 150 μm (No. 100) | 60 |

Note 2. By-product, non-hydrated lime (lime kiln dust) shall conform to the following requirements:

| Parameter | Value |
|--|--------------|
| Total calcium and magnesium oxides (nonvolatile basis) | 60 % minimum |
| Available calcium hydroxide (rapid sugar test, ASTM C 25) plus total MgO content calculated to be equivalent Ca(OH) ₂ | 30 % minimum |
| As received loss on ignition (carbon dioxide plus moisture, combined and free) | 40 % maximum |
| Free water (as received basis) | 4 % maximum |
| SO ₃ | 10 % maximum |

The sieve analysis of the lime residue shall be as follows:

| Sieve | Maximum Percent Retained |
|------------------|--------------------------|
| 4.75 mm (No. 4) | 5 |
| 600 μm (No. 30) | 10 |
| 150 μm (No. 100) | 30 |

Note 3. The lime used in the slurry shall be either hydrated lime conforming to the requirements of ASTM C 207, Type N, or quicklime conforming to the requirements for calcium lime as stated in ASTM C 5. The quantity of lime (hydrated lime or quicklime) in the slurry shall be a minimum of 35 percent and a maximum of 45 percent by total mass (weight) of slurry.

Note 4. The fly ash shall meet the physical and chemical requirements of AASHTO M 295, Class C.

Note 5. When lime (slurry or dry) is used as the modifier, the soil shall have a minimum clay content of 15 percent, determined according to AASHTO T 88; and shall have a maximum organic matter content of ten percent, determined according to AASHTO T 194.

Note 6. The bituminous materials used for curing shall be emulsified asphalt RS-1, RS-2, CRS-1, CRS-2, HFE 60, HFE 90, or HFE 150; rapid curing liquid asphalt RC-70 or RC-250; or medium curing liquid asphalt MC-70 or MC-250.

302.03 Equipment. Equipment shall meet the requirements of the following Articles of Section 1100 - Equipment:

| Item | Article/Section |
|------------------------------------|-----------------|
| (a) Rotary Speed Mixer | 1101.06 |
| (b) Disk Harrow (Note 1)..... | 1101.02 |
| (c) Distributor (Note 2) | |
| (d) Lime Slurry Equipment (Note 3) | |

Note 1. A disk harrow may be used for soil modification with portland cement, slag-modified portland cement, or lime (slurry or dry) when permitted by the Engineer.

Note 2. The distributor shall be of a mechanical type and shall be approved by the Engineer.

Note 3. The equipment used for mixing, transporting, slaking, and placing lime slurry shall be approved by the Engineer.

302.04 Proportioning. Proportioning shall be as follows.

- (a) Samples. Samples of the soil modifier(s) and the project soil(s) shall be obtained and submitted to the Engineer at least 45 days prior to the construction of the modified soil. Sample sizes shall be a minimum of 12 kg (25 lb) for the modifier(s) and 90 kg (200 lb) for the project soil(s).
- (b) Mix Design. The actual proportions of modifier, soil, and water will be determined by the Engineer prior to construction using the submitted samples. The Engineer reserves the right to make such adjustments in proportions as are considered necessary during the progress of the work.

In no case shall proportions or type of modifier be changed during the progress of the work without permission by the Engineer.

CONSTRUCTION REQUIREMENTS

302.05 General. The modified soil shall be constructed when the temperature of the soil, measured 150 mm (6 in.) below the surface, is above 10 °C (50 °F); and the ambient air temperature in the shade is above 7 °C (45 °F).

The quantity of modified soil constructed shall be limited to that which can be covered by the succeeding pavement layer during the same construction season.

302.06 Preparation of Subgrade. The area to be processed shall be shaped to the proper grade and cross section. All vegetation and other objectionable material shall be removed from within the limits of modification. In cut or at grade sections, the subgrade shall be

prepared according to Article 301.03; except the minimum immediate bearing value (IBV) of the soil below the soil to be modified, shall be according to the Department's "Subgrade Stability Manual".

302.07 Application of Modifier. The modifier shall be applied uniformly on the soil. The application of modifier shall be limited to that amount which can be incorporated into the soil within the same working day.

After application of dry modifiers, but before the addition of any water, the surface of the subgrade shall be lightly scarified or disked. When lime slurry is used, the surface of the subgrade shall be lightly scarified or disked prior to application of the slurry.

Dry modifiers shall not be applied when wind conditions are such that blowing modifier becomes objectionable to adjacent property owners or creates a hazard to traffic on adjacent highways, as determined by the Engineer.

Lime slurry shall be applied within 30 days of preparing and mixing the slurry, and shall be thoroughly agitated prior to application.

Modifier which has been damaged by hydration due to rain prior to or during the mixing operations, or has been displaced by the Contractor's equipment or other traffic after application shall be replaced.

302.08 Mixing. The modifier, soil, and water shall be thoroughly mixed. Mixing shall continue until a homogeneous layer of the required thickness has been obtained and a minimum of 75 percent of the mixture is smaller than 25 mm (1 in.). The moisture content of the modified soil shall be between optimum and three percent above optimum.

For soil modification with fly ash, more than one pass of the rotary speed mixer may be necessary to obtain a homogenous mixture. If more than one pass of the rotary speed mixer is required, the application of the fly ash shall be modified such that 25 percent of the specified fly ash quantity is applied and mixed with a down-cut motion as a preparation for the final pass of the rotary speed mixer. The remaining specified quantity of fly ash shall be applied prior to the final pass of the rotary speed mixer. Mixing shall continue until a minimum 75 percent of the mixture is smaller than 25 mm (1 in.).

302.09 Compaction. Compaction of soil modified with portland cement, slag-modified portland cement, or fly ash shall be completed no later than one hour after mixing begins.

Compaction of soil modified with hydrated lime or by-product non-hydrated lime shall be completed within the same working day.

Compaction of soil modified with lime slurry shall begin within 24 hours.

Compaction of soil modified with by-product hydrated lime shall be delayed a minimum of 24 hours. The Engineer may require additional water or further mixing prior to the final compaction of soil modified with by-product hydrated lime. In no case shall compaction be

started later than three days after mixing unless approved by the Engineer. If compaction is to be delayed, the surface of the soil shall be crown-graded and sealed from moisture loss by either blade dragging or light rolling immediately after mixing.

The compacted, modified soil shall have a minimum dry density of 95 percent of the laboratory standard dry density. The in place dry density will be determined according to AASHTO T 191, or Illinois Modified AASHTO T 310 (Direct Transmission Density/Backscatter Moisture). The laboratory standard dry density will be determined according to AASHTO T 99.

302.10 Finishing and Curing. When multiple lifts are used to construct the modified soil layer, the top lift shall be a minimum of 150 mm (6 in.) thick when compacted.

When compaction of the modified soil is nearing completion, the surface shall be shaped to the required lines, grades, and cross section shown on the plans. For bituminous concrete base course and pavement (full-depth) and portland cement concrete base course and pavement, the surface of the modified soil shall be brought to true shape and correct elevation according to Article 301.06, except that well compacted earth shall not be used to fill low areas.

The modified soil shall be cured for a minimum of 24 hours. The ambient air temperature shall be above 7 °C (45 °F) during curing.

Soils modified with lime (slurry or dry) generally will not require curing unless the minimum stability requirements in Article 302.11 cannot be met. If it has been determined by the Engineer that curing is necessary, the curing requirements stated above shall apply.

During the curing period, the moisture content of the modified soil shall be maintained at optimum by sprinkling with water, use of plastic sheeting, or applying bituminous materials according to Article 312.19. During this period, no equipment or traffic will be permitted on the completed work beyond that required for maintenance of curing.

Equipment of such weight, or used in such a way as to cause a rut depth of 12 mm (0.5 in.) or more in the finished modified soil, shall be removed, or the rutting otherwise prevented, as directed by the Engineer.

302.11 Subgrade Stability. Following curing, the Engineer will determine the stability of the modified soil in terms of the immediate bearing value (IBV), according to Illinois Test Procedure 501. The IBV shall be a minimum of 10.0.

No equipment or traffic shall be on the modified soil after compaction until the required IBV is attained.

302.12 Method of Measurement. This work will be measured for payment as follows.

(a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a).

- (b) Measured Quantities. Processing modified soils will be measured for payment in place and the area computed in square meters (square yards). The width for measurement will be as shown on the plans.

Modifier will be measured for payment in metric tons (tons). The modifier will be measured in trucks or freight cars. The Contractor shall furnish or arrange for use of scales of a type approved by the Engineer. When the modifier is shipped in trucks, it shall be measured at the place of loading, at the place of unloading, or at such other place as the Engineer may designate. The Engineer may accept original signed freight bills in lieu of determining the mass (weight).

Should the Contractor's method of construction require additional earth excavation or embankment due to requiring more than one lift to construct the modified soil layer as shown on the plans, this extra earth excavation and embankment will not be measured for payment.

302.13 Basis of Payment. This work will be paid for at the contract unit price per square meter (square yard) for PROCESSING MODIFIED SOIL, of the thickness specified; and per metric ton (ton) for LIME, FLY ASH, PORTLAND CEMENT, or SLAG-MODIFIED PORTLAND CEMENT."

80135

STABILIZED SUBBASE AND BITUMINOUS SHOULDERS SUPERPAVE (BDE)

Effective: April 1, 2002

Revised: August 1, 2005

Description. This work shall consist of constructing stabilized subbase and bituminous shoulders Superpave according to Sections 312 and 482 respectively, of the Standard Specifications and the special provision, "Quality Control/Quality Assurance of Bituminous Concrete Mixtures" except as modified herein.

Revise Article 312.03(b) of the Standard Specifications to read:

"(b) RAP Material (Note 3)"

Revise Note 2 of Article 312.03 of the Standard Specifications to read:

"Note 2. Gradation CA 6, CA 10, or CA 12 shall be used."

Revise Note 3 of Article 312.03 of the Standard Specifications to read:

"Note 3. RAP shall meet the requirements of the special provision "RAP for Use in Bituminous Concrete Mixtures". RAP containing steel slag shall be permitted for use in top-lift surface mixtures only."

Revise Note 4 of Article 312.03 of the Standard Specifications to read:

"Note 4. Unless otherwise specified on the plans, the bituminous material shall be performance graded asphalt cement, PG58-22. When more than 15 percent RAP is used, a softer PG binder may be required as determined by the Engineer."

Revise Article 312.06 of the Standard Specifications to read:

"312.06 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 completed the course, "Superpave Mix Design Upgrade". 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) Job Mix Formula (JMF). The JMF shall be according to the following limits:

| <u>Ingredient</u> | <u>Percent by Dry Weight</u> |
|---------------------|------------------------------|
| Aggregate..... | 94.0 to 96.0 |
| Asphalt Cement..... | 4.0 to 6.0* |
| Dust/AC Ratio | 1.4 |

*Upper limit may be raised for the lower or top lifts if the Contractor elects to use a highly absorptive coarse and/or fine aggregate requiring more than six percent asphalt. The additional asphalt shall be furnished at no cost to the Department.

When RAP material is being used, the JMF shall be according to the following limits:

| <u>Ingredient</u> | <u>Percent by Dry Weight</u> |
|------------------------------------|------------------------------|
| Virgin Aggregate(s) | 46.0 to 96.0 |
| RAP Material(s) (Note 1)..... | 0 to 50 |
| Mineral Filler (if required) | 0 to 5.0 |
| Asphalt Cement..... | 4.0 to 7.0 |
| Dust/AC Ratio | 1.4 |

Note 1. If specified on the plans, the maximum percentage of RAP shall be as specified therein.

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

(b) Volumetric Requirements.

| Design Compactive Effort | Design Air Voids Target (%) |
|--------------------------|-----------------------------|
| $N_{DES} = 30$ | 2.0 |

(c) 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 AASHTO T 283 using 4 in. Marshall bricks. To be considered acceptable by the Engineer as a mixture not susceptible to stripping, the ratio of conditioned to unconditioned split tensile strengths (TSR) shall be equal to or greater than 0.75. Mixtures, either with or without an additive, with TSR values 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 Engineer. The method of application shall be according to Article 406.12 of the Standard Specifications."

Revise Article 312.08 of the Standard Specifications to read:

"312.08 Mixture Production. When a hot-mix plant conforming to Article 1102.01 is used, the aggregate shall be dried and heated in the revolving dryer to a temperature of 120 °C (250 °F) to 175 °C (350 °F).

The aggregate and bituminous material used in the bituminous aggregate mixture shall be measured separately and accurately by weight or by volume. When the aggregate is in the mixer, the bituminous material shall be added and mixing continued for a minimum of 35 seconds and until a homogeneous mixture is produced in which all particles of the aggregate are coated. The mixing period, size of the batch and the production rate shall be approved by the Engineer.

The ingredients shall be heated and combined in such a manner as to produce a mixture which, when discharged from the mixer, shall be workable and vary not more 10 °C (20 °F) from the temperature set by the Engineer.

When RAP material(s) is used in the bituminous aggregate mixture, the virgin aggregate(s) shall be dried and heated in the dryer to a temperature that will produce the specified resultant mix temperature when combined with the RAP material.

The heated virgin aggregates and mineral filler shall be combined with RAP material in such a manner as to produce a bituminous mixture which when discharged from the mixer shall not vary more than 15 °C (30 °F) from the temperature set by the Engineer. The combined ingredients shall be mixed for a minimum of 35 seconds and until a homogeneous mixture as to composition and temperature is obtained. The total mixing time shall be a minimum of 45 seconds consisting of dry and wet mixing. Variation in wet and dry mixing times may be permitted, depending on the moisture content and amount of salvaged material used. The mix temperature shall not exceed 175 °C (350 °F). Wide variations in the mixture temperature will be cause for rejection of the mix.

- (a) Personnel. The QC Manager and Level I Technician shall have successfully completed the Department's "Superpave Field Control Course".
- (b) Required Tests. Testing for stabilized subbase and bituminous shoulders shall be conducted to control the production of the bituminous mixture using the test methods identified and performed at a frequency not less than indicated in the following table.

| Parameter | Frequency of Tests Non-Class I Mixtures | 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), 75 µm (No. 200)) | 1 gradation per day of production. The first day of production shall be washed ignition oven test on the mix. Thereafter, the testing shall alternate between dry gradation and washed ignition oven test on the mix. The dry gradation and the 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 day | Illinois-Modified AASHTO T 308 |
| Air Voids | | |
| Bulk Specific Gravity of Gyratory Sample | 1 per day | Illinois-Modified AASHTO T 312 |
| Maximum Specific Gravity of Mixture | 1 per day | 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 1.6, 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 resumption of production.

During production, mixture containing an anti-stripping additive will be tested by the Engineer for stripping according to Illinois Modified AASHTO 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.

- (c) Control Charts/Limits. Control charts/limits shall be according to QC/QA requirements for Non-Class I Mixtures except air voids and density shall be plotted on the control charts within the following control limits:

| Individual Test Control Limits | |
|--------------------------------|--------------------------|
| Voids | ±1.2% |
| Density ^{1/} | 93.0 – 97.4% of G_{mm} |

- 1/ Except when placed as first lift over unimproved subgrade. When the exception applies, the first lift over unimproved subgrade shall be compacted to an average density of not less than 95 percent nor greater than 102 percent of the target density obtained on the growth curve.

Replace Article 312.10 of the Standard Specifications with the following:

“312.10 Placing. After the subgrade has been compacted and is acceptable to the Engineer, the bituminous aggregate mixture shall be spread upon it with a mechanical spreader. The maximum compacted thickness of each lift shall be 150 mm (6 in.) provided the required density is obtained. The minimum compacted thickness of each lift shall be according to the following table:

| Nominal Maximum Aggregate Size of Mixture | Minimum Compacted Lift Thickness |
|---|----------------------------------|
| CA 12 – 12.5 mm (1/2 in.) | 38 mm (1 1/2 in.) |
| CA 10 - 19 mm (3/4 in.) | 57 mm (2 1/4 in.) |
| CA 6 – 25 mm (1 in.) | 76 mm (3 in.) |

The surface of each lift shall be clean and dry before succeeding lifts are placed.”

Revise Article 482.02 of the Standard Specifications to read:

“**482.02 Materials.** Materials shall meet the requirements of Article 312.03. For the top lift, the aggregate used shall meet the gradation requirements for a CA 10 or CA 12. Blending of aggregates to meet these gradation requirements will be permitted.”

Revise the first paragraph of Article 482.04 of the Standard Specifications to read:

“**482.04 General.** For pavement and shoulder resurfacing projects, Superpave binder and surface course mixtures may be used in lieu of bituminous aggregate mixture for the resurfacing of shoulders, at the option of the Contractor, or shall be used when specified on the plans.”

Revise Article 482.04(c) of the Standard Specifications to read:

“(c) Mixture Production312.08”

Revise Article 482.05 of the Standard Specifications to read:

“**482.05 Composition of Bituminous Aggregate Mixture.** The composition of the mixture shall be according to Article 312.06, except that the amount of asphalt cement used in the top lift shall be increased up to 0.5 percent more than that required in the lower lifts. For resurfacing projects when the Superpave binder and surface course mixtures option is used, the asphalt cement used in the top lift shall not be increased. Superpave mixtures used on the top lift of such shoulders shall meet the gradation requirements of the special provision “Superpave Bituminous Concrete Mixtures”.

For shoulder and strip construction, the composition of the Superpave binder and surface course shall be the same as that specified for the mainline pavement.”

In the following locations of Section 482 of the Standard Specifications, change “Class I” to “Superpave”:

- the second paragraph of Article 482.04
- the first sentence of the second paragraph of Article 482.06
- the first sentence of the fourth paragraph of Article 482.06
- the second sentence of the fourth paragraph of Article 482.06
- the first sentence of the third paragraph of Article 482.08(b)

Revise the first paragraph of Article 482.06 of the Standard Specifications to read:

“**482.06 Placing.** This work shall be according to Article 312.10 as modified herein. The mechanical spreader for the top lift of shoulders shall meet the requirements of Article 1102.03 when the shoulder width is 3 m (10 ft) or greater.”

Revise Article 482.09 of the Standard Specifications to read:

"482.09 Basis of Payment. When bituminous shoulders are constructed along the edges of the completed pavement structure, this work will be paid for at the contract unit price per square meter (square yard) for BITUMINOUS SHOULDERS SUPERPAVE of the thickness specified. The specified thickness shall be the thickness shown on the plans at the edge of the pavement.

On pavement and shoulder resurfacing projects, the shoulder resurfacing will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS SHOULDERS SUPERPAVE.

The construction of shoulder strips for resurfacing pavements will be paid according to the special provision, "Superpave Bituminous Concrete Mixtures".

80070

STEEL PLATE BEAM GUARDRAIL (BDE)

Effective: November 1, 2005

Add the following to the end of the first paragraph of Article 1006.25 of the Standard Specifications:

"The thickness of the galvanized coating for each side of the guardrail shall be at least 610 g/sq m (2.00 oz/sq ft). The thickness of the zinc or zinc alloy will be determined for each side using the average of at least three non-destructive test readings taken on that side of the guardrail."

80153

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: April 2, 2005

To account for the preparatory work and operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting in accordance with Article 108.01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department.

80143

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 Gyratory Compactor. The superpave gyratory 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 Gyratory 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 Maximum Specific Gravity of Mixture | 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day) Illinois Modified AASHTO T 312 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 ≥ 90 | 92.0 – 96.0% |
| 12.5 mm / 9.5 mm | Ndesign < 90 | 92.5 – 97.4% |
| 19.0 mm / 25.0 mm | Ndesign ≥ 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

SUPERPAVE BITUMINOUS CONCRETE MIXTURES (LOW ESAL) (BDE)

Effective: January 1, 2001

Revised: April 1, 2004

Description. This work shall consist of constructing Bituminous Concrete Surface Course Superpave IL-9.5L and/or Bituminous Concrete Binder Course Superpave IL-19.0L according to Section 406 of the Standard Specifications and the special provision "Quality Control/Quality Assurance of Bituminous Concrete Mixtures", except as modified herein.

Materials.

- (a) Coarse Aggregate. Coarse aggregate for the IL-19.0L shall meet the requirements of a Class I Type 3 binder course and the gradation specified below. For the IL-9.5L mixture, the coarse aggregate shall meet the requirements of a Class I Type 3 surface course except that gravel and Class C Quality, or better, aggregate may be used.

- (b) Reclaimed Asphalt Pavement (RAP). RAP shall meet the requirements of the special provision, "RAP for Use in Bituminous Concrete Mixtures".

RAP containing steel slag will be permitted for use in top-lift surface mixtures only.

- (c) Bituminous Material. The asphalt cement (AC), unless otherwise specified on the plans, shall be performance-graded (PG) 58-22. The AC shall meet the requirements of Article 1009.05 of the Standard Specifications for the grade specified.

If the Contractor is allowed to use more than 15 percent RAP, a softer PG binder may be required, as determined by the Engineer.

Laboratory Equipment.

- (a) Superpave Gyrotory Compactor. The superpave gyrotory compactor (SGC) shall be used for all laboratory mixture compaction.
- (b) Ignition Oven. The ignition oven shall be used for determination of 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 calibration factor exceeds 1.5 percent other IDOT approved methods shall be utilized for determination of 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 job mix formula (JMF) shall fall within the following limits:

| TABLE 1. Mixture Composition | | |
|-------------------------------------|--|--|
| Sieve | Percent Passing | |
| | 9.5L | 19.0L |
| 25.0 mm (1 in.) | | 100 |
| 19.0 mm (3/4 in.) | | 95-100 |
| 12.5 mm (1/2 in.) | 100 | |
| 9.5 mm (3/8 in.) | 95 – 100 | |
| 4.75 mm (#4) | 52 – 80 | 38-65 |
| 2.36 mm (#8) | 38 – 65 | |
| 600 µm (#30) | < 50% of the percentage passing the #4 | < 50% of the percentage passing the #4 |
| 75 µm (#200) | 4.0 – 8.0 | 3.0 – 7.0 |
| AC% | 4.0 – 8.0 | 4.0 – 8.0 |
| RAP Materials | Maximum 30% (or as shown on the plans) | Maximum 30% |
| #200:AC ratio | 1.0 max. design | 1.0 max. design |

It is recommended that the selected combined aggregate gradation not pass through the restricted zones specified in Illinois Modified AASHTO MP 2.

(b) Volumetric Requirements.

| Mix | Design Compactive Effort | Design Air Voids Target (%) | VMA (Voids in the Mineral Aggregate) (min.) | VFA (Voids Filled with Asphalt) |
|----------|--------------------------------|--------------------------------------|--|---------------------------------------|
| IL 9.5L | $N_{DES} = 30$ | 3.0% | 14.0% | 70 - 80% |
| IL 19.0L | $N_{DES} = 30$ | 4.0% | 13.0% | N/A |

(c) 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 shall 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 Engineer 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 Engineer. 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 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 (Low ESAL) | | |
|--|---|---|
| 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. Maximum Specific Gravity of Mixture | 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day). Illinois Modified AASHTO T 312 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 mix shall cease. The cause shall be determined and corrective action satisfactory to the Engineer shall be initiated prior to resumption of production.

During production, any mixture containing an anti-stripping additive will be tested by the Engineer 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.

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 4. Density Control Limits | |
|---------------------------------|-----------------|
| Mixture | Individual Test |
| IL-9.5L | 92.5 – 97.4% |
| IL-19.0L | 93.0 – 97.4 % |

Construction Requirements

Placing. The minimum compacted thickness of each lift shall be according to the following table:

| Mixture | Minimum Compacted Lift Thickness, mm (in.) |
|----------|--|
| IL-9.5L | 32 (1 1/4) |
| IL-19.0L | 57 (2 1/4) |

Basis of Payment. This work will be paid for at the contract unit price per metric ton (ton) for BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE IL-9.5L (Low ESAL), or BITUMINOUS CONCRETE BINDER COURSE SUPERPAVE IL-19.0L (Low ESAL).

80039

SUSPENSION OF SLIPFORMED PARAPETS (BDE)

Effective: June 11, 2004

The slipforming option, as stated in Article 503.17(e)(1) of the Standard Specifications will not be allowed on this project.

80145

TEMPORARY CONCRETE BARRIER (BDE)

Effective: October 1, 2002

Revised: November 1, 2003

Revise Section 704 of the Standard Specifications to read:

“SECTION 704. TEMPORARY CONCRETE BARRIER

704.01 Description. This work shall consist of furnishing, placing, maintaining, relocating and removing precast concrete barrier at temporary locations as shown on the plans or as directed by the Engineer.

704.02 Materials. Materials shall meet the requirements of the following Articles of Section 1000 - Materials:

| Item | Article/Section |
|---|-----------------|
| (a) Portland Cement Concrete..... | 1020 |
| (b) Reinforcement Bars (Note 1) | 1006.10(a)(b) |
| (c) Connecting Pins and Anchoring Pins..... | 1006.09 |
| (d) Connecting Loop Bars (Note 2) | |
| (e) Rapid Set Mortar (Note 3) | |

Note 1. Reinforcement bars shall be Grade 400 (Grade 60).

Note 2. Connecting loop bars shall be smooth bars conforming to the requirements of ASTM A 36.

Note 3. Rapid set materials shall be obtained from the Department’s approved list of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs. 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. Mixing of the rapid set mortar shall be according to the manufacturer’s instructions.

CONSTRUCTION REQUIREMENTS

704.03 General. Precast concrete barrier produced after October 1, 2002 shall meet National Cooperative Highway Research Program (NCHRP) Report 350, Category 3, Test Level 3 requirements and have the F shape. Precast concrete barrier shall be constructed according to the Bureau of Materials and Physical Research’s Policy Memorandum “Quality Control/Quality Assurance Program for Precast Concrete Products”, applicable portions of Sections 504 and 1020, and to the details shown on the plans.

Precast units shall not be removed from the casting beds until a flexural strength of 2,000 kPa (300 psi) or a compressive strength of 10,000 kPa (1400 psi) is attained. When the concrete has attained a compressive strength according to Article 1020.04, and not prior to four days after casting, the units may be loaded, shipped and used.

704.04 Installation. F shape barrier units shall be seated on bare, clean pavement or paved shoulder and pinned together in a smooth, continuous line at the exact locations provided by the Engineer. The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six anchoring pins and protected with an impact attenuator as shown on the plans.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

704.05 New Jersey Shape Barrier. New Jersey shape barrier produced prior to October 1, 2002 according to earlier Department standards, may be used until January 1, 2008.

Barrier units or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced by the Contractor at his/her expense. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

F shape and New Jersey shape barrier units shall not be mixed in the same run.

The barrier unit at each end of the installation shall be secured to the pavement or paved shoulder using six dowel bars and protected with an impact attenuator as shown on the plans.

The temporary barriers shall be removed when no longer required by the contract. After removal, all anchoring holes in the pavement or paved shoulder shall be filled with a rapid set mortar. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.

704.06 Method of Measurement. Temporary concrete barrier will be measured for payment in meters (feet) in place along the centerline of the barrier. When temporary concrete barrier is relocated within the limits of the jobsite, the relocated barrier will be measured for payment in meters (feet) in place along the centerline of the barrier.

704.07 Basis of Payment. When the Contractor furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER or RELOCATE TEMPORARY CONCRETE BARRIER.

When the Department furnishes the barrier units, this work will be paid for at the contract unit price per meter (foot) for TEMPORARY CONCRETE BARRIER, STATE OWNED or RELOCATE TEMPORARY CONCRETE BARRIER, STATE OWNED.

Impact attenuators will be paid for separately.”

80092

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.

5729I

TRAINING SPECIAL PROVISIONS

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 3. 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

TRUCK BED RELEASE AGENT (BDE)

Effective: April 1, 2004

Add the following sentence after the third sentence of the first paragraph of Article 406.14 of the Standard Specifications.

"In addition to the release agent, the Contractor may use a light scatter of manufactured sand (FA 20 or FA 21) evenly distributed over the bed of the vehicle."

80123

WEIGHT CONTROL DEFICIENCY DEDUCTION

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 PUBLIC INFORMATION SIGNS (BDE)

Effective: September 1, 2002

Revised: January 1, 2005

Description. This work shall consist of furnishing, erecting, maintaining, and removing work zone public information signs.

Camera-ready artwork for the signs will be provided to sign manufacturing companies upon request by contacting the Central Bureau of Operations at 217-782-2076. The sign number is W21-I116-6048.

Freeways/Expressways. These signs are required on freeways and expressways. The signs shall be erected as shown on Highway Standard 701400 and according to Article 702.05(a) of the Standard Specifications.

All Other Routes. These signs shall be used on other routes when specified on the plans. They shall be erected in pairs midway between the first and second warning signs.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the Standard.

80090

WORK ZONE SPEED LIMIT SIGNS (BDE)

Effective: April 2, 2004

Revised: January 1, 2006

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 or sideroad. 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

Revised: November 1, 2005

Revise Article 701.07(a) to read:

“(a) Not Measured. Traffic control and protection required under Standards 701001, 701006, 701011, 701101, 701106, 701301, 701311, 701400, and 701426 will not be measured for payment.”

Revise the first paragraph of Article 701.07(b) to read:

“(b) Standards 701401, 701422, and 701446 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 not 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, 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, 701422, and 701446 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; TRAFFIC CONTROL AND PROTECTION STANDARD 701431; or TRAFFIC CONTROL AND PROTECTION STANDARD 701446 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 701401; TRAFFIC CONTROL AND PROTECTION STANDARD 701406; TRAFFIC CONTROL AND PROTECTION STANDARD 701421; TRAFFIC CONTROL AND PROTECTION STANDARD 701422; TRAFFIC CONTROL AND PROTECTION STANDARD 701446; 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

STEEL COST ADJUSTMENT (BDE) (RETURN WITH BID)

Effective: April 2, 2004

Revised: July 1, 2004

Description. At the bidder’s option, a steel cost adjustment will be made to provide additional compensation to the Contractor or a credit to the Department for fluctuations in steel prices. The bidder must indicate on the attached form whether or not steel cost adjustments will be part of this contract. This attached form shall be submitted with the bid. Failure to submit the form shall make this contract exempt of steel cost adjustments.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

- Metal Piling (excluding temporary sheet piling)
- Structural Steel
- Reinforcing Steel

Other steel materials such as dowel bars, tie bars, mesh reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), frames and grates, and other miscellaneous items will be subject to a steel cost adjustment when the pay item they are used in has a contract value of \$10,000 or greater.

Documentation. Sufficient documentation shall be furnished to the Engineer to verify the following:

- (a) Evidence that increased or decreased steel costs have been passed on to the Contractor.
- (b) The dates and quantity of steel, in kg (lb), shipped from the mill to the fabricator.
- (c) The quantity of steel, in kg (lb), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars
Q = quantity of steel incorporated into the work, in kg (lb)
D = price factor, in dollars per kg (lb)

$$D = CBP_M - CBP_L$$

Where: CBP_M = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the American Metal Market (AMM) for the day the steel is shipped from the mill. The indices will be converted from dollars per ton to dollars per kg (lb).

CBP_L = The average of the Consumer Buying Price indices for Shredded Auto Scrap (Chicago) and No. 1 Heavy Melt (Chicago) as published by the AMM for the day the contract is let. The indices will be converted from dollars per ton to dollars per kg (lb).

The unit masses (weights) of steel that will be used to calculate the steel cost adjustment for the various items are shown in the attached table.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the CBP_M will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the CBP_L and CBP_M in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(CBP_L - CBP_M) \div CBP_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the steel items are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

Attachment

| Item | Unit Mass (Weight) |
|---|-------------------------------|
| Metal Piling (excluding temporary sheet piling) | |
| Furnishing Metal Pile Shells 305 mm (12 in.), 3.80 mm (0.179 in.) wall thickness) | 34 kg/m (23 lb/ft) |
| Furnishing Metal Pile Shells 305 mm (12 in.), 6.35 mm (0.250 in.) wall thickness) | 48 kg/m (32 lb/ft) |
| Furnishing Metal Pile Shells 356 mm (14 in.), 6.35 mm (0.250 in.) wall thickness) | 55 kg/m (37 lb/ft) |
| Other piling | See plans |
| Structural Steel | See plans for weights |
| Reinforcing Steel | See plans for weights |
| Dowel Bars and Tie Bars | 3 kg (6 lb) each |
| Mesh Reinforcement | 310 kg/sq m (63 lb/100 sq ft) |
| Guardrail | |
| Steel Plate Beam Guardrail, Type A w/steel posts | 30 kg/m (20 lb/ft) |
| Steel Plate Beam Guardrail, Type B w/steel posts | 45 kg/m (30 lb/ft) |
| Steel Plate Beam Guardrail, Types A and B w/wood posts | 12 kg/m (8 lb/ft) |
| Steel Plate Beam Guardrail, Type 2 | 140 kg (305 lb) each |
| Steel Plate Beam Guardrail, Type 6 | 570 kg (1260 lb) each |
| Traffic Barrier Terminal, Type 1 Special (Tangent) | 330 kg (730 lb) each |
| Traffic Barrier Terminal, Type 1 Special (Flared) | 185 kg (410 lb) each |
| Steel Traffic Signal and Light Poles, Towers and Mast Arms | |
| Traffic Signal Post | 16 kg/m (11 lb/ft) |
| Light Pole, Tenon Mount and Twin Mount, 9 m – 12 m (30 - 40 ft) | 21 kg/m (14 lb/ft) |
| Light Pole, Tenon Mount and Twin Mount, 13.5 m – 16.5 m (45 - 55 ft) | 31 kg/m (21 lb/ft) |
| Light Pole w/Mast Arm, 9 m – 15.2 m (30 - 50 ft) | 19 kg/m (13 lb/ft) |
| Light Pole w/Mast Arm, 16.5 m – 18 m (55 - 60 ft) | 28 kg/m (19 lb/ft) |
| Light Tower w/Luminaire Mount, 24 m – 33.5 m (80 - 110 ft) | 46 kg/m (31 lb/ft) |
| Light Tower w/Luminaire Mount, 36.5 m – 42.5 m (120 - 140 ft) | 97 kg/m (65 lb/ft) |
| Light Tower w/Luminaire Mount, 45.5 m – 48.5 m (150 - 160 ft) | 119 kg/m (80 lb/ft) |
| Metal Railings (excluding wire fence) | |
| Steel Railing, Type SM | 95 kg/m (64 lb/ft) |
| Steel Railing, Type S-1 | 58 kg/m (39 lb/ft) |
| Steel Railing, Type T-1 | 79 kg/m (53 lb/ft) |
| Steel Bridge Rail | 77 kg/m (52 lb/ft) |
| Frames and Grates | |
| Frame | 115 kg (250 lb) |
| Lids and Grates | 70 kg (150 lb) |

RETURN WITH BID

**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

**OPTION FOR
STEEL COST ADJUSTMENT**

The bidder shall submit this form with his/her bid. Failure to submit the form shall make this contract exempt of steel cost adjustments. After award, this form, when submitted shall become part of the contract.

Contract No.: _____

Company Name: _____

Contractor's Option:

Is your company opting to include this special provision as part of the contract plans?

Yes No

Signature: _____ **Date:** _____

80127

PIPE UNDERDRAINS FOR STRUCTURES

Effective May 17, 2000

December 12, 2005

Description. This work shall consist of furnishing and installing a pipe underdrain system as shown on the plans, as specified herein, and as directed by the Engineer.

Materials. Materials shall meet the requirements as set forth below:

The perforated pipe drain shall be according to Article 601.02 of the Standard Specifications. Outlet pipes or pipes connecting to a separate storm sewer system shall not be perforated.

The drainage aggregate shall be a combination of one or more of the following gradations, FA1, FA2, CA5, CA7, CA8, CA11, or CA13 thru 15, according to Sections 1003 and 1004 of the Standard Specifications.

The fabric surrounding the drainage aggregate shall be Geotechnical Fabric for French Drains according to Article 1080.05 of the Standard Specifications.

Construction Requirements. All work shall be according to the applicable requirements of Section 601 of the Standard Specifications except as modified below.

The pipe underdrains shall consist of a perforated pipe drain situated at the bottom of an area of drainage aggregate wrapped completely in geotechnical fabric and shall be installed to the lines and gradients as shown on the plans.

Method of Measurement. Pipe Underdrains for Structures shall be measured for payment in meters (feet), in place. Measurement shall be along the centerline of the pipe underdrains. All connectors, outlet pipes, elbows, and all other miscellaneous items shall be included in the measurement. Concrete headwalls shall be included in the cost of Pipe Underdrains for Structures, but shall not be included in the measurement for payment.

Basis of Payment. This work will be paid for at the contract unit price per meter (foot) for PIPE UNDERDRAINS FOR STRUCTURES of the diameter specified, installed and measured as specified herein. Furnishing and installation of the drainage aggregate, geotechnical fabric, forming holes in structural elements and any excavation required, will not be paid for separately, but shall be included in the cost of the pipe underdrains for structures.

POROUS GRANULAR EMBANKMENT (SPECIAL)

Effective: September 28, 2005

Description. This work shall consist of furnishing, and placing porous granular embankment (special) material as detailed on the plans, according to Section 207 except as modified herein.

Materials. The gradation of the porous granular material may be any of the following CA 8 thru CA 18, FA 1 thru FA 4, FA 7 thru FA 9, and FA 20 according to Articles 1003 and 1004.

Basis of Payment. This work will be paid for at the contract unit price per Cubic Yard (Cubic Meter) for POROUS GRANULAR EMBANKMENT (SPECIAL).

PROJECT MANUAL

UIUC CURTIS ROAD PHASE 2 GAS LINE

RELOCATION – DUNCAN TO STALEY ROAD

For: **BOARD OF TRUSTEES**
University of Illinois at Urbana-Champaign
Urbana, IL

IDOT
District 5
13473 IL Hwy. 133
P.O. Box 610
Paris, IL 61944-0610

By: **Utility Safety & Design, Inc.**
Engineers
9 Executive Woods Ct.
Belleville, IL 62226
Phone: (618)277-1520

November, 2005
Revision #1: 11-04-05
Revision #2: 11-28-05
Revision #3: 12-2-05

COPY # _____

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Utility Safety & Design
 9 Executive Woods Drive
 Belleville, IL 62226
 (618)277-1520

PROJECT MANUAL FOR
 UIUC CURTIS ROAD PHASE 2 GAS LINE RELOCATION- DUNCAN TO STALEY ROAD
 DATE: November, 2005

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THE BIDDING AND CONTRACT PROVISIONS
Document 00100 - Notice to Bidders
(Standard Single Contract Set)

NOTICE TO BIDDERS

The Board of Trustees of the University of Illinois, hereinafter referred to as the "Owner", furnishes the following information and special instruction to prospective bidders desiring to submit proposals for the work on the following project:

1.0 PROJECT INFORMATION

- 1.1 Project Name: UIUC Curtis Road Phase 2 Gas Line Relocation- Duncan to Staley Road
- 1.2 Project Description: "The project consists of the installation of approximately 5,100 feet of 8" gas main. The project will include the repair of all streets and sidewalks. The tie-ins to the existing main will be completed between October 15 and December 1, 2006 on a weekend from 9:00 PM Friday to 6:00 AM Monday as specified by the University of Illinois.
- 1.3 Project Location: Curtis Road, between Duncan and Staley Road in the City of Champaign, Illinois.
- 1.4 Contract Documents Prepared By: Utility Safety and Design, Inc., 9 Executive Woods Drive Belleville, IL 62226, hereinafter referred to as the "Architect/Engineer".

2.0 SPECIAL INSTRUCTIONS TO BIDDERS

The following bidding instructions are a component part of each proposal wherein they are applicable:

- 2.1 Submission and Receipt of Bids:
 - A. Contract Divisions of the Project: IDOT District 5 will bid the relocation as part of the corresponding Road project:
- 2.2 Examining the Site: Arrangements to visit and examine the site in accordance with the General Instructions to Bidders may be made by contacting Keith Erickson at 217-333-8484 or Lindsay Enloe at 618-277-1520
- 2.3 Prequalification. Contractor must be prequalified through the U of I prequalification system. Copy of the contractor Operator Qualification Plan must be provided with the prequalification documents. Contractors Operator Qualification Plan must include at minimum the contractors written plan, covered task list as it applies to the work and qualification criteria for each covered task. Prior to commencement of work the contractor shall provide proof that all workers who perform a covered task are qualified and that all non-qualified personnel are supervised in ratios not exceeding those stated in their plan.

- 2.4 Prebid Conference: A prebid conference for subcontractors performing services on the gas line portion of the project will be held at 1:00 p.m. on June 6, 2006 at the First Christian Church, 3601 S. Staley Road, Champaign, IL 61822-8730. Representatives of the Owner and the Architect/Engineer will be present to answer questions regarding the project and bidding procedures. All prospective bidders are urged to attend.

END OF DOCUMENT 00100

DIVISION 1 - GENERAL REQUIREMENTS

Section 01000 - Project Requirements

PROJECT REQUIREMENTS

1. **GENERAL NOTE**

The following requirements are a component part of all contract divisions and form a part of each specification section insofar as they may be in any way applicable thereto.

2. **SCHEDULE OF DRAWINGS (Section 01015)**

The following drawings form a component part of the contract documents for this project:

Title of the Drawings: UIUC CURTIS ROAD PHASE 2 GAS MAIN RELOCATION- DUNCAN TO STALEY ROAD

Schedule of Drawings:

General

C-1 Title Sheet and Location Plan

Site Utilities

U-1 GAS LINE LOCATION STATION 0+00 TO 10+00
U-2 GAS LINE LOCATION STATION 10+00 TO 21+00
U-3 GAS LINE LOCATION STATION 21+00 TO 32+00
U-4 GAS LINE LOCATION STATION 32+00 TO 44+00
U-5 GAS LINE LOCATION STATION 44+00 TO 51+03
D-1 VALVE DETAIL
D-2 GROUND BED DETAIL

3. **PROJECT SUMMARY AND DESCRIPTION OF BASE BIDS AND ALTERNATES**

A. Base Bid

The project, for which base bids are being taken, consists of the installation of 5100 feet of 8" gas line and appurtenances.

4. **SPECIAL PROCEDURES AND REQUIREMENTS**

4.1 Fire Protection:

A. Regulations: The Contractor shall comply with the University of Illinois Regulations entitled "Fire Safety in Welding and Cutting Operations" and "Fire Prevention During Building Construction Operations". Copies of these regulations can be obtained from the Owner and shall be posted by the Contractor at the site of work.

B. Fires: The Contractor shall prohibit the lighting of fires about the premises and use due diligence to see that such prohibition is enforced. Debris and waste materials shall not be burned at the construction site but shall be promptly removed to prevent the accumulation of combustibles on the site or within the building.

C. Smoking: Smoking shall be restricted to job offices and designated break areas. The Contractor shall furnish and post "NO SMOKING" signs at appropriate locations throughout the building areas and other enclosed spaces on the site where his operations are conducted.

D. Welding and Cutting: It shall be the responsibility of the Contractor to notify the Owner's Service Department at the Operation and Maintenance Division (333-0340) at least four hours in advance of the work when welding or other fire hazardous work is to be performed and to take precautionary measures to prevent fire.

E. Heater: The heaters in Contractors' job offices shall be properly installed to protect combustible walls, floor and roof. Salamander heaters or other types of open flame heaters shall not be used except with the special permission of the Architect/Engineer and then only when such salamanders or open flame heaters are maintained under constant supervision.

F. Flammables: Gasoline and other fuels shall be kept and handled from National Board of Fire underwriter's approved safety cans and shall be stored away from hazardous work areas.

END OF SECTION 01000

SUMMARY

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of the installation of 5,100 feet of 8" steel gas main and a 8" valve for the U of I on Curtis Road between Duncan and Staley Road. in Champaign, Illinois.
 - 1. Project Location: University of Illinois- 8" Lateral natural gas main between Duncan and Staley Road in Champaign, Illinois.
 - 2. Owner: The Board of Trustees of the University of Illinois.
- B. Engineer Identification: The Contract Documents, dated November, 2005, were prepared for Project by Utility Safety and Design, Inc. 9Executive Woods Ct., Belleville, IL 62226.
- C. The Work consists of the installation of 5,100 feet of 8", .250 wall ,API-5L, Grade B gas pipe with fusion bonded epoxy coating. One valve will be located along Curtis Road.

1.3 CONTRACT

- A. Project will be constructed under a general construction contract. Any change orders will be completed thru the IDOT specifications and normal IDOT procedures.

1.4 WORK SEQUENCE

- A. The work will begin at the Duncan Road proceed west to Staley Road.

1.5 USE OF PREMISES

- A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project. Confer with Owner Representative to obtain full knowledge of all site rules affecting work.

END OF SECTION 01100

PROJECT MANAGEMENT AND COORDINATION

SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General project coordination procedures.
2. Coordination Drawings.
3. Administrative and supervisory personnel.
4. Project meetings.

- B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section "Construction Progress Documentation" for preparing and submitting the Contractor's Construction Schedule.
2. Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
3. Division 1 Section "Closeout Procedures" for coordinating Contract closeout.

1.3 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.

1. Indicate relationship of components shown on separate Shop Drawings.
2. Indicate required installation sequences.
3. Refer to Division 2 Section "Piped Utilities Basic Materials and Methods" and "Natural Gas Distribution System" for specific Coordination Drawing requirements for gas line installations.

- B. Staff Names: Within 2 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Provide copies of list to owner representative, engineer, and post in temporary field office if one provided.

1.4 PROJECT MEETINGS

- A. General: the Engineer or Owner will schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Engineer of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner Contractor and Engineer, within 2 days of the meeting.

- B. Progress Meetings: Conduct progress meetings at regular intervals.

1. Attendees: In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.

- 14) Documentation of information for payment requests.
- 3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

END OF SECTION 01310

CONSTRUCTION PROGRESS DOCUMENTATION

SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Daily construction reports.
 - 3. Construction photographs.
- B. Related Sections include the following:
 - 1. Division 1 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 - 2. Division 1 Section "Submittal Procedures" for submitting schedules and reports.
 - 3. Division 1 Section "Quality Requirements" for submitting a schedule of tests and inspections.
 - 4. Division 1 Section "Closeout Procedures" for submitting photographic negatives as Project Record Documents at Project closeout.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
- B. Event: The starting or ending point of an activity.
- C. Milestone: A key or critical point in time for reference or measurement.

1.4 SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of engineers and owners, and other information specified.
- B. Submittals Schedule: Submit 3 copies of schedule. Arrange the following information in a tabular format:

CONSTRUCTION PROGRESS DOCUMENTATION
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1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Description of the Work covered.
 5. Scheduled date for Engineer final release or approval.
- C. Contractor's Construction Schedule: Submit printed copies of initial schedule, one a reproducible print and one a blue- or black-line print, large enough to show entire schedule for entire construction period.
1. Submit an electronic copy of schedule, using software indicated, on 3 ½ inch diskettes, formatted to hold 1.44 MB of data, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.
 2. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
- D. Daily Construction Reports: Submit 2 copies at weekly intervals.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of contractor.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, Schedule, progress reports, payment requests, and other required schedules and reports.
- C. Auxiliary Services: Cooperate with photographer and provide auxiliary services requested, including access to Project site and use of temporary facilities including temporary lighting.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 1. Coordinate Submittals Schedule with list of subcontracts, the and Contractor's Construction Schedule.
 2. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."

CONSTRUCTION PROGRESS DOCUMENTATION
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- B. Time Frame: Extend schedule from date established for commencement of the Work to date of Final Completion.
- C. Activities: Treat separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Engineer.
 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 20 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - a. Pipe
 - b. Valves
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 4. Startup and Testing Time: Include not less than 7 days for startup and testing.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Engineers and Owners administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 1 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 3. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Uninterruptible services.
 - c. Partial occupancy before Substantial Completion.
 - d. Use of premises restrictions.
 - e. Seasonal variations.
 - f. Environmental control.
 4. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Submittals.
 - b. Purchases.
 - c. Fabrication.
 - d. Deliveries.
 - e. Installation.
 - f. Tests and inspections.
 - g. Adjusting.
 - h. Startup and placement into final use and operation.

5. Area Separations: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Completion of mechanical installation.
 - b. Substantial Completion.

 - E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- 2.3 PRELIMINARY CONSTRUCTION SCHEDULE
- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within 7 days of date established for the Notice to Proceed

 - B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 30 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- 2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE
- A. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 1. For construction activities that require 2 months or longer to complete, indicate an estimated completion percentage in 20 percent increments within time bar.
- 2.5 REPORTS
- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 1. Approximate count of personnel at Project site.
 2. High and low temperatures and general weather conditions.
 3. Accidents.
 4. Meetings and significant decisions.
 5. Unusual events (refer to special reports).
 6. Stoppages, delays, shortages, and losses.
 7. meter readings and similar recordings.
 8. Emergency procedures.
 9. Orders and requests of authorities having jurisdiction.
 10. Change Orders received and implemented.
 11. Construction Change Directives received.
 12. Services connected and disconnected.
 13. Equipment or system tests and startups.
 14. Partial Completions.
 15. Substantial Completions authorized.

2.6 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At bi-weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Engineer, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project temporary field office if one available.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01320

QUALITY REQUIREMENTS

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

- 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
- 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
- 3. Requirements for Contractor to provide quality-control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

- C. Related Sections include the following:

- 1. Division 1 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
- 2. Division 1 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
- 3. Divisions 2 through 13 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Engineer .
- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

QUALITY REQUIREMENTS

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1.4 REGULATORY REQUIREMENTS

- A. Copies of Regulations: Obtain copies of the following regulations and retain at Project site to be available for reference by parties who have a reasonable need:
1. State of Illinois-Illinois Steel Products Procurement Act
 2. State of Illinois-Illinois Purchasing Act
 3. IDOT-Standard Specifications for Road and Bridge Construction
 4. IDOT-Manual of Uniform Traffic Control Devices
 5. IDOT-Illinois Highway Design Standards for Traffic Control
 6. IEPA-Air Noise and Water Pollution Standards
 7. NFPA-National Fuel Gas Code
 8. DOT- Part 192 Minimum Federal Safety Standards

1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
1. Description of test and inspection.
 2. Identification of applicable standards.
 3. Identification of test and inspection methods.
 4. Number of tests and inspections required.
 5. Time schedule or time span for tests and inspections.
 6. Entity responsible for performing tests and inspections.
- C. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Complete test or inspection data.
 8. Ambient conditions at time of sample taking and testing and inspecting.
 9. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 10. Name and signature of inspector.
 11. Recommendations on retesting and reinspecting.

QUALITY REQUIREMENTS

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- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- E. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and similar regulations governing the Work, nor interfere with local trade-union jurisdictional settlements and similar conventions.
- F. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
 - 1. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Engineer, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.7 QUALITY CONTROL

- A. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
 - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

QUALITY REQUIREMENTS

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- a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- C. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- D. **Testing Agency Responsibilities:** Cooperate with Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 5. Do not perform any duties of Contractor.
- E. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field-curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Security and protection for samples and for testing and inspecting equipment at Project site.

QUALITY REQUIREMENTS

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- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- G. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 15 days of date established for the Notice to Proceed.
 - 1. Distribution: Distribute schedule to Owner, Engineer testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore .
 - 1. Provide materials and comply with installation requirements specified in other Sections of these
 - 2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400

QUALITY REQUIREMENTS

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REFERENCES

SECTION 01420 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": The term "approved," when used to convey Engineers's action on Contractor's submittals, applications, and requests, is limited to Engineers duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Engineer, requested by Engineer, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is the Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
- J. The term "experienced," when used with an entity, means having successfully completed a minimum of 10 previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

REFERENCES

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1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. "Project site" is the space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. **Applicability of Standards:** Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. **Publication Dates:** Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. **Conflicting Requirements:** If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
 1. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. **Copies of Standards:** Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.
- E. **Abbreviations and Acronyms for Industry Organizations:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

| | | |
|--------|--|----------------|
| AASHTO | American Association of State Highway and Transportation Officials www.aashto.org | (202) 624-5800 |
| ACI | American Concrete Institute/ACI International | (248) 848-3700 |

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|------|--|----------------------------------|
| | www.aci-int.org | |
| AGA | American Gas Association www.aga.org | (202) 824-7000 |
| AIA | American Institute of Architects (The) www.aiaonline.org | (202) 626-7300 |
| AISC | American Institute of Steel Construction, Inc. www.aisc.org | (800) 644-2400 (312) 670-2400 |
| ANSI | American National Standards Institute www.ansi.org | (212) 642-4900 |
| API | American Petroleum Institute www.api.org | (202) 682-8000 |
| ASCE | American Society of Civil Engineers www.asce.org | (800) 548-2723 (703) 295-6300 |
| ASTM | American Society for Testing and Materials www.astm.org | (610) 832-9585 |
| AWS | American Welding Society www.aws.org | (800) 443-9353 (305) 443-9353 |
| MSS | Manufacturers Standardization Society of The Valve and Fittings Industry, Inc. www.mss-hq.com | (703) 281-6613 |
| NACE | NACE International (National Association of Corrosion Engineers International) www.nace.org | (281) 228-6200 |
| NEMA | National Electrical Manufacturers Association www.nema.org | (703) 841-3200 |
| NFPA | National Fire Protection Association www.nfpa.org | (800) 344-3555 (617) 770-3000 |

REFERENCES

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UL Underwriters Laboratories Inc. (800) 704-4050
www.ul.com (847) 272-8800

F. Abbreviations and Acronyms for Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CFR Code of Federal Regulations (202) 512-1800
www.access.gpo.gov/nara/cfr

EPA Environmental Protection Agency (202) 260-2090
www.epa.gov

FED-STD Federal Standard
(See FS)

FS Federal Specification
(Available from DOD, GSA, and NIBS)

OSHA Occupational Safety & Health Administration (202) 219-5000
(See CFR 29)
www.osha.gov

TRB Transportation Research Board (202) 334-2933
www.nas.edu/trb

G. Abbreviations and Acronyms for State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ICC State of Illinois, Illinois Commerce Commission (217) 785-1165
www.icc.state.il.us

ADA Americans with Disabilities Act
ACGI Associated General Contractors of Illinois
CDB Capital Development Board

REFERENCES

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| | |
|-------|--|
| IAGO | Illinois Attorney Generals Office |
| IBOG | Illinois Board of Governors |
| IBOHE | Illinois Board Of Higher Education |
| IBOR | Illinois Board of Regents |
| IDOL | Illinois Department of Labor |
| IDOT | Illinois Department of Transportation |
| IDPH | Illinois Department of Health |
| IEPA | Illinois Environmental Protection Agency |
| IDPR | Illinois Department of Registration |
| ISPE | Illinois Society of Professional Engineers |
| OSFM | Office of State Fire Marshal |
| SOS | Secretary of State |
| UI | University of Illinois |

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01420

PRODUCT REQUIREMENTS

SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following administrative and procedural requirements: selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Division 1 Section "References" for applicable industry standards for products specified.
 - 2. Division 1 Section "Closeout Procedures" for submitting warranties for contract closeout.
 - 3. Divisions 2 through 13 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service

PRODUCT REQUIREMENTS

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performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

- D. **Manufacturer's Warranty:** Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- E. **Special Warranty:** Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

1.4 SUBMITTALS

- A. **Product List:** Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 - 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 - 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 - i. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 - 3. Completed List: Within 7 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - 4. Engineers's Action: Engineer will respond in writing to Contractor within 5 days of receipt of completed product list. Engineers's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Engineer's response, or lack of response, does not constitute a waiver of requirement that products comply with the Contract Documents.
- B. **Substitution Requests:** Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within one week of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within

PRODUCT REQUIREMENTS

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7 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

- a. Form of Acceptance: Change Order.
- b. Use product specified if Engineer cannot make a decision on use of a proposed substitution within time allocated.

- C. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
2. If a dispute arises between contractors over concurrently selectable but incompatible products, Engineer will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
5. Store products to allow for inspection and measurement of quantity or counting of units.
6. Store materials in a manner that will not endanger Project structure.
7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
9. Protect stored products from damage.

- B. Storage: Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

PRODUCT REQUIREMENTS

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- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.
 - 1. Provide products complete with accessories, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Engineer will make selection.
 - 5. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures: Procedures for product selection include the following:
 - 1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
 - 2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.

PRODUCT REQUIREMENTS

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3. **Products:** Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
4. **Manufacturers:** Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
5. **Available Products:** Where Specification paragraphs or subparagraphs titled "Available Products" introduce a list of names of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
6. **Available Manufacturers:** Where Specification paragraphs or subparagraphs titled "Available Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
7. **Product Options:** Where Specification paragraphs titled "Product Options" indicate that size, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide either the specific product or system indicated or a comparable product or system by another manufacturer. Comply with provisions in "Product Substitutions" Article.
8. **Basis-of-Design Products:** Where Specification paragraphs or subparagraphs titled "Basis-of-Design Products" are included and also introduce or refer to a list of manufacturers' names, provide either the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
 - a. Substitutions may be considered.
9. **Allowances:** Refer to individual Specification Sections and "Allowance" provisions in Division 1 for allowances that control product selection and for procedures required for processing such selections.

2.2 PRODUCT SUBSTITUTIONS

- A. **Timing:** Engineer will consider requests for substitution if received within 5 days after commencement of the Work. Requests received after that time may be considered or rejected at discretion of Engineer.
- B. **Conditions:** Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

PRODUCT REQUIREMENTS

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1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
2. Requested substitution does not require extensive revisions to the Contract Documents.
3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
4. Substitution request is fully documented and properly submitted.
5. Requested substitution will not adversely affect Contractor's Construction Schedule.
6. Requested substitution has received necessary approvals of authorities having jurisdiction.
7. Requested substitution is compatible with other portions of the Work.
8. Requested substitution has been coordinated with other portions of the Work.
9. Requested substitution provides specified warranty.

2.3 COMPARABLE PRODUCTS

- A. Where products or manufacturers are specified by name, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:
 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of engineers and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01600

EXECUTION REQUIREMENTS

SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. General installation of products.
 - 4. Coordination of Owner-installed products.
 - 5. Progress cleaning.
 - 6. Starting and adjusting.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.
- B. Related Sections include the following:
 - 1. Division 1 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
 - 2. Division 1 Section "Submittal Procedures" for submitting surveys.
 - 3. Division 1 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
 - 4. Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 SUBMITTALS

- A. Qualification Data: For contractor to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of engineers and owners, and other information specified.

1.4 QUALITY ASSURANCE

PART 2 - PRODUCTS (Not Used)

EXECUTION REQUIREMENTS

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PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Engineer not less than 2 days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without owner's written permission.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer promptly.
- B. General: Engineer will lay out the Work.

EXECUTION REQUIREMENTS

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C. Contractor will:

1. Establish benchmarks and control points to set lines of construction and elsewhere as needed to locate each element of Project.
2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
3. Inform installers of lines and levels to which they must comply.
4. Check the location, level and plumb, of every major element as the Work progresses.
5. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.

- D. Record Log: Maintain a log of layout work. Record deviations from required lines and levels. Include beginning and ending dates and weather conditions, types of instruments and tapes used. Make the log available for reference by Engineer.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
1. Do not change or relocate existing benchmarks or control points without prior written approval of Engineer. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer before proceeding.

"

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

EXECUTION REQUIREMENTS

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- F. Anchors and Fasteners: Provide fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Engineer.

- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 degrees F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

- B. Site: Maintain Project site free of waste materials and debris.

- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

- E. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
 - 1. Thoroughly clean piping, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

- F. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

- G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

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- H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- I. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

3.9 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

END OF SECTION 01700

CUTTING AND PATCHING

SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
 - 1. Divisions 2 through 13 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - a. Requirements in this Section apply to mechanical and electrical installations. Refer to Divisions 2 and 13 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.3 DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS

- A. Cutting and Patching Prior to cutting or patching submit written notice to Engineer requesting consent to proceed with cutting. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
 - 6. Engineer's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

CUTTING AND PATCHING

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1.5 QUALITY ASSURANCE

- A. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- B. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to interruption of services to occupied areas.

CUTTING AND PATCHING

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3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction by sawing, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cuts as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Concrete Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 3. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 4. Mechanical and Electrical Services: Cut off pipe to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

END OF SECTION 01731

CUTTING AND PATCHING

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CLOSEOUT PROCEDURES

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project Record Documents.
 - 3. Operation and maintenance manuals.
 - 4. Warranties.
 - 5. Instruction of Owner's personnel.
 - 6. Final cleaning.
- B. Related Sections include the following:
 - 1. Bidding and Contract Provisions for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Division 1 Section "Construction Progress Documentation" for submitting Final Completion construction photographs and negatives.
 - 3. Division 1 Section "Execution Requirements" for progress cleaning of Project site.
 - 4. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 5. Divisions 2 through 3 Sections for specific closeout and special cleaning requirements for products of those Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 3. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs damage or settlement surveys, and similar final record information.

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4. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 5. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 6. Complete startup testing of systems.
 7. Submit test/adjust/balance records.
 8. Terminate and remove temporary facilities from Project site, Advise Owner of changeover in heat and other utilities.
 9. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 10. Complete final cleaning requirements, including touchup painting.
 11. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Contract Provisions Section
 2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems may be completed by Engineer.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

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- A. Preparation: Submit 3 copies of list. Include name and identification of each area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1.6 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Engineers reference during normal working hours.
- B. Record Drawings: Engineer will maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings.
 - 1. Mark Record Prints to show the actual installation where installation varies from that shown originally.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
 - 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 - 3. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - 4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 - 5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Specifications: Engineer will submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Note related Change Orders, Record Drawings, where applicable.
- D. Record Product Data: Submit one copy of each Product Data submittal. Mark one set to indicate the actual product installation where installation varies substantially from that indicated in Product Data.

CLOSEOUT PROCEDURES

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1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Drawings, where applicable.
- E. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

1.7 OPERATION AND MAINTENANCE MANUALS

- A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
1. Operation Data:
 - a. Emergency instructions and procedures.
 - b. System, subsystem, and equipment descriptions, including operating standards.
 - c. Operating procedures, including startup, shutdown, seasonal, and weekend operations.
 - d. Description of controls and sequence of operations.
 - e. Piping diagrams.
 2. Maintenance Data:
 - a. Manufacturer's information, including list of spare parts.
 - b. Name, address, and telephone number of Installer or supplier.
 - c. Maintenance procedures.
 - d. Maintenance and service schedules for preventive and routine maintenance.
 - e. Maintenance record forms.
 - f. Sources of spare parts and maintenance materials.
 - g. Copies of maintenance service agreements.
 - h. Copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.8 WARRANTIES

CLOSEOUT PROCEDURES

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- A. Submittal Time: Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
 - 1. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- B. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers for final cleaning. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - e. Leave Project clean and ready for occupancy.

CLOSEOUT PROCEDURES

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- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770

PIPED UTILITIES- BASIC MATERIALS AND METHODS

SECTION 02080 - PIPED UTILITIES - BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Piping materials and installation instructions common to most piping systems.
 - 2. Transition fittings.
 - 3. Dielectric fittings.
 - 4. Sleeves.
 - 5. Identification devices.
 - 6. Piped utility demolition.
 - 7. Equipment installation requirements common to equipment sections.
 - 8. Painting and finishing.
 - 9. Concrete bases.
 - 10. Metal supports and anchorages.

1.3 DEFINITIONS

- A. Exposed Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions.
- B. Concealed Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Dielectric fittings.
 - 2. Identification devices.
- B. Samples of color, lettering style, and other graphic representation required for each identification material and device.
- C. Welding certificates.

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1.5 QUALITY ASSURANCE

- A. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."
- B. Steel Pipe Welding: Qualify processes and operators according to "API 1104 Multiple Qualifications"
 - 1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pipe and with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.
- B. Support plastic pipes to prevent sagging and bending.

1.7 COORDINATION

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
 - 2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 PIPE, TUBE, AND FITTINGS

- A. Refer to individual Division 2 piping Sections for pipe, tube, and fitting materials and joining methods.
- B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

2.3 JOINING MATERIALS

- A. Refer to individual Division 2 piping Sections for special joining materials not listed below.
- B. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.

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1. ASME B16.21, nonmetallic, flat, asbestos-free, maximum thickness unless thickness or specific material is indicated.
 - a. Full-Face Type: For flat-face, Class 125, cast-iron or steel flanges.
 - b. Narrow-Face Type: For raised-face, Class 250,300,600 cast-iron or steel flanges.
- C. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.
- D. Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

2.4 TRANSITION FITTINGS

2.5 DIELECTRIC FITTINGS

- A. Description: Combination fitting of ferrous materials with threaded, or weld-neck end connections that match piping system materials.
- B. Insulating Material: Suitable for system fluid, pressure, and temperature.
- C. Dielectric Unions: Factory-fabricated, union assembly, for 1000-psig minimum working pressure at 180 deg F
 - a. Central Plastics Company.
- D. Dielectric Flanges: Factory-fabricated, companion-flange assembly, for 150-1000-psig minimum working pressure as required to suit system pressures.
 1. Manufacturers:
 - a. Central Plastics Company.
- E. Dielectric-Flange Kits: Companion-flange assembly for field assembly. Include flanges, full-face- or ring-type neoprene or phenolic gasket, phenolic or polyethylene bolt sleeves, phenolic washers, and steel backing washers.
 1. Manufacturers:
 - a. Central Plastics Company.
 - b. Pipeline Seal and Insulator, Inc.
 2. Separate companion flanges and steel bolts and nuts shall have 150- -1000 psig minimum working pressure where required to suit system pressures.

2.6 IDENTIFICATION DEVICES

PIPED UTILITIES - BASIC MATERIALS AND METHODS
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- A. General: Products specified are for applications referenced in other Division 2 Sections. If more than single type is specified for listed applications, selection is Installer's option.
- B. Equipment Nameplates: Metal permanently fastened to equipment with data engraved or stamped.
 - 1. Data: Manufacturer, product name, model number, serial number, capacity, operating and power characteristics, labels of tested compliances, and essential data.
 - 2. Location: Accessible and visible.

PART 3 - EXECUTION

3.1 PIPED UTILITY DEMOLITION

- A. Refer to Division 1 Sections "Cutting and Patching" and for general demolition requirements and procedures.
- B. Disconnect, demolish, and remove piped utility systems, equipment, and components indicated to be removed.
 - 1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - 2. Piping to Be Abandoned in Place: All piping to be abandoned in place will be grouted. The interval of grouting will be such that the pipe is completely full.
 - 3. Equipment to Be Removed: At several locations indicated on the plans the piping will be removed to facilitate the installation of culverts. At these locations the piping will be removed for the distances noted.
- C. If pipe, insulation, or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

3.2 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. Install piping according to the following requirements and Division 2 Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Install piping to permit valve servicing.
- D. Install piping free of sags and bends.

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- E. Install fittings for changes in direction and branch connections.
- F. Select system components with pressure rating equal to or greater than system operating pressure.
- G. Sleeves are not required for core-drilled holes.
- H. Permanent sleeves are not required for holes formed by removable PE sleeves.
- I. Install sleeves for pipes passing through concrete and masonry walls and concrete floor and roof slabs.
 - 1. Cut sleeves to length for mounting flush with both surfaces.
- J. Verify final equipment locations for roughing-in.
- K. Refer to equipment specifications in other Sections of these Specifications for roughing-in requirements.

3.3 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and Division 2 Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- E. Welded Joints: Construct joints according to API 1104 and Part 192 using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.
- F. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

3.4 PIPING CONNECTIONS

- A. Make connections according to the drawings and specifications.

3.5 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

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- A. Install equipment level and plumb, unless otherwise indicated.
- B. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference with other installations. Extend grease fittings to an accessible location.
- C. Install equipment to allow right of way to piping systems installed at required slope.

3.6 PAINTING

- A. Painting of piped utility systems, equipment, and components as specified by manufacturer of equipment." All final product exposed to atmosphere will be painted according to manufacturer or U of I recommendations.
- B. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.7 IDENTIFICATION

3.8 CONCRETE BASES

- A. Concrete Bases: Anchor equipment to concrete base according to equipment manufacturer's written instructions and according to seismic codes at Project.
 - 1. Construct concrete bases of dimensions indicated, but not less than 12 inches larger in both directions than supported unit.
 - 2. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 3. Install anchor bolts to elevations required for proper attachment to supported equipment.
 - 4. Install anchor bolts according to anchor-bolt manufacturer's written instructions.
 - 5. Use 3000-psi 28-day compressive-strength concrete and reinforcement as specified in Division 3 Section Cast-in-Place Concrete (Limited Applications)."

3.9 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor piped utility materials and equipment.
- B. Field Welding: Comply with AWS D1.1.

END OF SECTION 02080

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DEWATERING

SECTION 02240 - DEWATERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes construction dewatering.
- B. Related Sections include the following:
 - 1. Division 1 Section "Temporary Facilities and Controls" for temporary utilities and support facilities.
 - 2. Division 2 Section "Earthwork" for excavating, backfilling, site grading and for site utilities.

1.3 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control ground-water flow into excavations and permit construction to proceed on dry, stable subgrades.
 - 1. Maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood,
 - 2. Prevent surface water from entering excavations by grading, dikes, or other means.
- B. Dewatering Water Quality. Dewatering activities may only discharge clear water into the storm sewer drainage system. All cloudy dewatering water must be filtered or run through a sedimentation system to remove suspended solids.

1.4 SUBMITTALS

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with water disposal requirements of authorities having jurisdiction.
- B. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

DEWATERING

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1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.
 - 1. Prevent surface water and subsurface or ground water from entering excavations, from ponding
 - 2. Protect subgrades soils from softening and damage by rain or water accumulation.
- B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

3.2 INSTALLATION

- A. Install dewatering system utilizing pump equipment, standby power and pumps, filter material, valves, appurtenances, water disposal, and surface-water controls.
- B. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water in a manner that avoids inconvenience to others. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.
- C. Provide standby equipment on-site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, restore damaged structures and foundation soils at no additional expense to Owner.
- D. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations.

END OF SECTION 02240

DEWATERING

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EARTHWORK

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section. 1.2 SUMMARY
- B. This Section includes the following:
 - 1. Preparing subgrades for slabs-on-grade, lawns, and plantings.
 - 2. Subbase course for concrete pavements.
 - 3. Base course for asphalt paving.
 - 4. Subsurface drainage backfill for trenches.
 - 5. Excavating and backfilling trenches for buried mechanical and electrical utilities and pits for buried utility structures.
- C. Related Sections include the following:
 - 1. Division 1 Section "Construction Facilities and Temporary Controls."
 - 2. Division 2 Section "Site Preparation and Grading" for site stripping, grubbing, removing topsoil, and protecting trees to remain.
 - 3. Division 2 Section "Dewatering" for lowering and disposing of ground water during construction.
 - 4. Division 3 Section "Cast-in-Place Concrete Limited Applications" for granular course over vapor retarder.
 - 5. Division 2 and 13 Sections for excavating and backfilling buried mechanical and electrical utilities and buried utility structures.

1.2 DEFINITIONS

- A. Backfill: Soil materials used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Layer placed between the subbase course and asphalt paving.
- C. Bedding Course: Layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations.

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1. Additional Excavation: Excavation below subgrade elevations as directed by Engineer.

- G. Fill: Soil materials used to raise existing grades.
- H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- I. Subbase Course: Layer placed between the subgrade and base course for asphalt paving, or layer placed between the subgrade and a concrete pavement or walk.
- J. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- K. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.3 SUBMITTALS

- A. Product Data: For the following:
 - 1. Each type of plastic warning tape.
 - 2. Drainage fabric.

1.4 QUALITY ASSURANCE

1.5 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated: The contractor will be required to repair all field tile damaged during the course of construction.
 - 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer written permission.
 - 3. Contact JULIE for locates prior to excavating. Contractor must comply with all aspects of the State of Illinois Damage Prevention Law."JULIE" law.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with owner to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

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- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT, or a combination of these group symbols.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Backfill and Fill: Satisfactory soil materials.
 - 1. Type A Coarse Stone/Gravel ANSI/ASTM C136 with 100% passing a 2 inch sieve.
 - 2. Type C -Sand- Natural river or bank sand, ANSI/ASTM C136-81 with 100 % passing a No. 4 sieve.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations. Damage to underground structures including field tile, water lines ,etc. will be the responsibility of the contractor to repair.
- B. Protect subgrades and foundation soils against freezing temperatures or frost. Provide protective insulating materials as necessary.
- C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

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3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered, including rock, soil materials, and obstructions.
1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 2. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.

3.5 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 3 inches. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under slabs pavements to indicated cross sections, elevations, and grades.

3.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
- B. Excavate trenches to uniform widths to provide a working clearance on each side of pipe. Excavate trench walls vertically from trench bottom to 60 or 96 inches higher than top of pipe, at locations indicated on drawings, unless otherwise indicated. Trench backfill will be required at stations 43 +50, 10+70, 0+80, all tie-in locations, the pipe in the ramp areas within the access control limits and all holes that are dug for the purpose of filling the old main with grout. The specification for the trench backfill will be as specified in Section 208 of the Standard Specifications for Road and Bridge Construction for the State of Illinois.
1. Clearance: As indicated.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for barrels of pipes and for joints, fittings. Remove projecting stones and sharp objects along trench subgrade.

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1. For pipes and 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
2. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.8 APPROVAL OF SUBGRADE

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer.

3.9 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavations under pipe as directed by Engineer.

3.10 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow materials and satisfactory excavated soil materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
 2. When excavating adjacent to an open drainage ditch, place all excavated material on the uphill side of the ditch to minimize runoff potential in the ditch.

3.11 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 1. Surveying locations of underground utilities for record documents.
 2. Removing concrete formwork.
 3. Removing trash and debris.
 4. Removing temporary shoring and bracing, and sheeting.
 5. Contact the Planning Construction and Maintenance-Utilities group and provide them 48 hours notice to survey all newly installed pipe before backfilling. Please contact Keith Erickson at 333-8484(office) with the 48 hour notification..

3.12 UTILITY TRENCH BACKFILL

- A. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for , joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

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- B. Provide saccrete support for piping below surface of roadways. ,
- C. Place and compact initial backfill of , free of particles larger than 2 inch, to a height of 12inches over the pipe .
 - 1. Carefully compact material under pipe haunches and bring backfill evenly up on both sides and along the full length of piping or to avoid damage or displacement.
 - 2. Coordinate backfilling with utilities testing.
- D. Place and compact final backfill of satisfactory soil material to final subgrade.
- E. Install warning tape directly above utilities, 6 inches below finished grade.

3.13 FILL

- A. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface before placing fills.
- B. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- C. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.

3.14 MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF BACKFILLS AND FILLS

- A. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, or by hand-operated tampers.
- B. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:

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1. Under slabs, walkways, steps, and pavements, scarify and recompact top subgrade and each layer of backfill or fill material at 90 percent. Bell holes for removal of pipe and grouting will be compacted to this same specification.
2. Under lawn or unpaved areas, scarify and recompact top subgrade and compact each layer of backfill or fill material at 83 percent.

3.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated. All surfaces should be returned to their original grade.
 1. Provide a smooth transition between adjacent existing grades and new grades.
 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
 3. Lawn or Unpaved Areas: Plus or minus 2 inches.
 4. Walks: Plus or minus 1 inch.
 5. Pavements: Plus or minus ½ inch.

3.17 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 02300

EARTHWORK

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BORE CONSTRUCTION

SECTION 02310 – BORE CONSTRUCTION

1. GENERAL

1.1 DESCRIPTION

- A. Extent: This specifications describes those requirements for the underground installation of the 8 “ natural gas piping by boring.
- B.
- C. Contractor shall provide the installation of the steel pipe using the bore process. The Contractor shall provide all labor, machinery, construction equipment and materials to perform in a good workmanlike manner all items herein specified.

1.2 RELATED DOCUMENTS

- A. Specified elsewhere:
 - 1. 02553 – Gas Distribution System
- B. Drawings and general provisions of the Contract, including General and Supplementary conditions and Division 1 – Specification sections, apply to work of this section.
- C. The following are minimum requirements and shall govern except that local, state and federal codes and ordinances shall govern when their requirements are in excess hereof.

1.3 QUALITY ASSURANCE

- A. Qualifications
 - 1. The contractor’s project manager, supervisor and boring machine operator assigned to this project must be qualified and experienced in work of this nature, and must have successfully completed similar projects using directional boring equipment. These personnel must have completed at least three projects of similar length and diameter and magnitude to this project within the last three years.

1.4 SUBMITTALS

- A. The Contractor shall submit the documents requested in this section for review by the Engineer and/or Owner. The Engineer will review all submittals for compliance with the requirements of this project and the other contract documents and Drawings. Such review does not relieve the Contractor in any way of his responsibilities under the Contract. Contractor shall not commence work on any work requiring a prior submission until his submittals have been reviewed and approved (if required) by the Engineer. The Contractor shall submit any and all design drawings, calculations, equipment descriptions and methods of construction as may be required by all Federal, State and Local Governmental agencies prior to initiating construction.

SECTION 02310 – BORE CONSTRUCTION

B. Pre-construction Submittals

1. Before initiating construction, the Contractor shall conduct and/or submit the following to the Engineer for review.
 - a. Equipment – Supply full details of the boring equipment to be utilized for this project including:
 - (1) Technical specifications and manufacturer of boring system.
Date of manufacture of the boring system.
 - (2) Detailed descriptions for at least five projects on which the equipment in item (1) has been used including name and phone numbers of Owner representatives for these projects.
 - b. Methods and Work Plan – Contractor shall supply full details of the procedures and resources which will be employed to carry out the work.
 - c. Company and Personnel – Contractor shall supply the names and resumes for all key personnel to be employed on this project.
 - d. Contractor shall arrange and conduct a kick-off meeting with the Engineer.

C. Documentation During and After Construction

1. Daily Logs

- a. Contractor will maintain a complete set of project records. Contractor shall maintain a daily activity log during bore operations. A copy of the log shall be submitted to the Engineer for record purposes on a daily basis. These documents shall include but not be limited to:
 - (1) Start and finish time of each section of steel pipe that is bored.
 - (2) General description for ground conditions bored.
 - (3) Details and perceived reasons for delays greater than one hour other than normal work breaks and shift changes.
 - (4) Details of any unusual conditions or events.
 - (5) Depth and distance installed.
2. Contractor shall keep and maintain at construction site a complete set of field drawings for recording of as-built conditions. Upon completion of constructions, Contractor shall be required to provide an “as-built” drawing in the

BORE CONSTRUCTION

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SECTION 02310 – BORE CONSTRUCTION

form of a plot of the steel installation with reference dimensions. The Contractor shall sign the “as-built” drawings attesting to their accuracy and provide them to the Engineer at the end of construction.

1.5 REQUIREMENTS

A. General

1. The Contractor shall assume all responsibility for his methods of construction, the stability and accuracy of the bored holes and all costs for damages resulting from any failure thereof. The Contractor shall be solely responsible for the safety of the pits and related structures and all personnel engaged in underground construction throughout the duration of the work.
2. The Contractor’s methods and schedule shall consider the overall project requirements and anticipated ground and water conditions. Contractor’s selection of inadequate, inappropriate or inefficient equipment or methods will not be cause for adjustments to the Contract Price or Contract Time.
3. Pit excavation techniques, ground water control and pit support techniques shall be selected and designed by the Contractor.
4. Where pipe is to be installed beneath streets by the bore construction shall be made in such a manner that will not interfere with the operation of the street and not weaken or damage the street, nearby utilities or structures.

B. Utility Protection

1. Utility lines and structures indicated on the Drawings which are to remain in service shall be protected by the Contractor from any damage as a result of his operations. Where utility lines or structures not shown on the Drawings are encountered, the Contractor shall immediately report them to the Engineer before proceeding with the Work. The Contractor shall bear the cost of repair or replacement of any utility lines or structures which are broken or damaged by his operations and/or due to negligence.
2. All utilities in close proximity to the bored hole must be exposed through a “pot hole” or other opening, in accordance with appropriate utility located laws and regulations, to ensure, through visual inspection, that the bored hole or pipe gas caused no damage to the utility and maintains adequate clearance.
3. Contractor shall take the following steps prior to commencing boring operations in a location which might contain underground facilities:
 - a. Contact the utility or utility location/notification service, if appropriate for the construction area

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SECTION 02310 – BORE CONSTRUCTION

- b. Positively locate and stake all existing lines, cables, pipes or other underground facilities including exposing any facilities which are located within 10 ft. of the designed bored path. Confirm elevations of existing underground facilities by non-destructive “pot holing” or other reliable means where bore operation will cross the facility.
- c. Modify boring practices to prevent damage to existing facilities.

1.6 SAFETY

- A. The Contractor shall familiarize himself with, and shall at all times conform to all applicable local, state and federal regulations for general construction safety and trench construction safety. The Contractor shall carry out his operations in strict accordance with equipment manufacturer’s safety requirements.

2. PRODUCTS

2.1 MATERIALS

A. Pipe

- 1. The steel pipes will be installed beneath the interstate road crossing using the bore and jack method. The steel pipes shall be new API-5L Grade B with outside diameter as indicated on the drawings and .250 inch wall thickness. The pipe shall be nominal 40 ft. lengths with a minimum yield of strength of 45,000 psi.

2.2 EQUIPMENT

- A. Contractor shall provide all necessary equipment required to complete the work as specified in the contract drawings and herein.

3. EXECUTION

3.1 GENERAL

- A. All work shall comply with applicable Federal, State and Local safety regulations. The Contractor shall be responsible for means and methods for pipe and shall ensure the safety of the work, the Contractor’s employees, the public and adjacent property, whether public or private. All pits shall conform to the State and Federal safety, excavation, trenching and shoring standards.
- B. All work of excavation, shoring, bracing and boring shall be executed as to minimize ground settlement.

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SECTION 02310 – BORE CONSTRUCTION

- C. When boring operations area authorized, the Contractor shall allow inspection of the project by the Owner, Engineer or his appointed representative at all times.

3.2 WORKING AREAS

- A. Working areas shall be kept clean at all times. The storage of materials or equipment not associated with the work will not be permitted within the working areas. Working areas and equipment and materials stored or in use therein shall be so guarded and secured to ensure safety to operatives and the public at all times.

3.3 SHAFTS or PITS

- A. All working shafts and pits or other excavations shall be adequately fenced at all times. Barriers shall be provided at all times to ensure the safety of all when adjacent to the shaft. All shafts shall be provided with a sump hole for pumping purposes.

3.4 MONITORING

- A. The Contractor shall provide continuous monitoring as is necessary to maintain the line and level during the boring operation.
- B. The Contractor shall record the ground surface elevation ahead of the boring operation prior to initiating the project.
- C. The Contractor shall monitor ground movements associated with the project during each shift until the pipe is installed and for a period of one week thereafter.

END SECTION - 02310

BORE CONSTRUCTION

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SHORING, SHEETING & BRACING

SECTION – 02320 SHORING, SHEETING & BRACING

1. GENERAL

1.1 DESCRIPTION

A. Work specified herein and elsewhere:

1. Work under this section includes sheeting, shoring, and bracing necessary for all earthwork.

1.2 RESPONSIBILITY

- A. The structural strength and safety of all sheeting, shoring, and bracing shall be the sole responsibility of the Contractor. Repair any damage resulting from failure to provide adequate supports.
- B. Provide timber work, shoring, bracing, sheeting, and sheet piling where necessary to retain banks of excavations, prevent cave-in of adjacent ground, support overhead utilities, support masonry walls, prevent displacement of utilities and structures, and to safely protect persons and property. All shoring will comply with OSHA requirements.

2. PRODUCTS – Not Applicable

3. EXECUTION

3.1 SHEETING, SHORING, AND BRACING

- A. Furnish, install, and maintain, without additional compensation, sheeting, bracing, and shoring support required to support the sides of excavations, to support overhead utilities, and to prevent any movement which may damage adjacent pavements or structures, damage or delay the work, or endanger life and health. Voids outside the supports shall be immediately filled and compacted.
- B. The Contractor may leave in place, to be embedded in the backfill of the excavation, any or all supports for the purpose of preventing injury to persons or property. However, no supports which are within 4 feet of the ground surface may be left in place without written permission of the Owner. No extra payment will be made for supports left in place at the Contractor's option. No timber shoring shall be left below grade.
- C. All supports not left in place shall be removed in such manner as to avoid endangering the piping, structures, utilities, or property. All voids left by the withdrawal of sheeting shall be immediately filled and compacted.

SECTION – 02320 SHORING, SHEETING & BRACING

- D. The right of the Engineer to order supports left in place shall not be construed as creating an obligation on his part to issue such orders. Failure by the Engineer to exercise this right shall not relieve the Contractor from total liability for damages to persons or property resulting from the failure of the Contractor to leave in place sufficient supports to prevent any caving or moving of the ground adjacent to the excavation.

END SECTION 02320

NATURAL GAS SYSTEM

SECTION 02553 - NATURAL GAS SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN GAS ASSOCIATION (AGA)

AGA Manual (1994; addenda/correction Jan. 1996) A.G.A. Plastic Pipe Manual for Gas Service

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI B109.2 (1992) Diaphragm Type Gas Displacement Meter
(500 Cubic Feet per Hour Capacity and Over)

ANSI B31.1 Power & Process Piping Systems

AMERICAN PETROLEUM INSTITUTE (API)

API Spec 5L (1995; Errata Dec. 1997) Line Pipe

API Spec 6D (1994; Supple 1 June 1996; Supple 2 Dec. 1997) Pipeline Valves
(Gate, Plug, Ball, and Check Valves)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 53 (1999) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

ASTM A 181/A 181M (1995b) Carbon Steel Forgings, for General Purpose Piping

ASTM D 3308 (1997) PTFE Resin Skived Tape

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B1.20.1 (1983; R 1992) Pipe Threads, General Purpose (Inch)

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| | |
|---------------------|--|
| ASME B16.5 | (1996; B16.5a) Pipe Flanges and Flanged Fittings NPS ½ Through NPS 24 |
| ASME B16.9 | (1993) Factory Made Wrought Steel Buttwelding Fittings |
| ASME B16.11 | (1996) Forged Fittings, Socket Welding and Threaded |
| ASME B16.21 | (1992) Nonmetallic Flat Gaskets for Pipe Flanges |
| ASME B16.34 | (1997) Valves – Flanges, Threaded, and Welding End |
| ASME B16.40 | (1895; R 1994) Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution System |
| ASME B31.8 | (1995) Gas Transmission and Distribution Piping System |
| ASME BPV VIII Div 1 | (1998) Boiler and Pressure Vessel Code; Section VIII, Pressure Vessels Division 1 – Basic Coverage |

CODE OF FEDERAL REGULATIONS (CFR)

| | |
|------------|---|
| 49 CFR 192 | Transportation of Natural and Other Gas By Pipeline: Minimum Federal Safety Standards |
|------------|---|

COMMERCIAL ITEM DESCRIPTION (CID)

| | |
|--------------|--------------------------------|
| CID A-A-2962 | (Rev A) Enamel, Alkyd (Metric) |
|--------------|--------------------------------|

MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS

INDUSTRY (MSS)

| | |
|-----------|---|
| MSS SP-25 | (1998) Standard Marking System for Valves, Fittings, Flanges and Unions |
|-----------|---|

NACE INTERNATIONAL (NACE)

| | |
|-------------|---|
| NACE RP0185 | (1996) Extruded, Polyolefin Resin Coating Systems with Soft Adhesives for Underground or Submerged Piping |
| NACE RP0274 | (1998) High Voltage Electrical Inspection of Pipeline Coatings Prior to Installation |

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

| | |
|---------------|--|
| SSPC Paint 25 | (1991) Red Iron Oxide, Zinc Oxide, Raw Linseed Oil and Alkyd Primer (Without Lead and Chromate Pigments) |
| SSPC SP 1 | (1982) Solvent Cleaning |

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|--------------------------------|--|
| SSPC SP 3 | (1995) Power Tool Cleaning |
| SSPC SP 6/NACE 3 | (1994) Commercial Blast Cleaning |
| SSPC SP 7/NACE 4 | (1994) Brush Off Blast Cleaning |
| UNDERWRITERS LABORATORIES (UL) | |
| UL Gas & Oil Dir | (1996; Supple) Gas and Oil Equipment Directory |

1.2 SUMMARY

A. This Section includes the following for natural gas distribution piping:

1. Piping.
2. Valves.

1.3 DEFINITIONS

- A. Gas Main: natural gas piping.
- B. Gas Service Piping from gas main to individual service-meter assemblies.
- C. Service-Meter Assembly: Piping, valves, service regulator, service meter, and specialties.
- D. Point of Delivery: Piping outlet from service-meter assembly.
- E. Natural Gas Piping: Piping that conveys natural gas from point of delivery to natural gas utilization devices inside the building.

1.4 PERFORMANCE REQUIREMENTS

A. Maximum Allowable Working Pressure:

1. Piping and Valves, 853 psig MAOP will be established on the System. The test pressure will be 1300 psig.

1.5 SUBMITTALS

A. Product Data: For the following:

1. Pipe.
2. Valves.

NATURAL GAS SYSTEM

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B. The following shall be submitted:

1. Drawings
2. Pipe, Fittings, and Associated Materials; Drawings shall contain complete schematic and piping diagrams and any other details required to demonstrate that the system has been coordinated and will properly function as a unit. Drawings shall show proposed layout and anchorage of the system and appurtenances, and equipment relationship to other parts of the work including clearances for maintenance and operation.
3. Schedules
4. Equipment and Materials; A complete list of equipment and materials, including the manufacturers descriptive and technical literature, performance charts and curves, catalog cuts, and installation instructions.
5. Spare Parts Data; Spare parts lists for each different item of material and equipment specified. The data shall include a complete list of parts and supplies, with current unit prices and source of supply.
6. Notification of the Contractor's schedule for making connections to existing gas lines, at least 10 days in advance.
7. Welding Steel Piping; A copy of qualified welding procedures along with a list of names and identification symbols of performance qualified welders and welding operators.
8. Connection and Abandonment Procedures; A copy of procedures for gas line tie in, hot taps, abandonment/removal or demolition, purging, and plugging as applicable in accordance with ASME B31.8 and CFR 192.
9. Training; A copy of each welders certification with respective test results.
10. Operation and Maintenance Data: For the following natural gas distribution equipment and accessories to include in emergency, operation, and maintenance manuals.
11.
 1. Pipe
 2. Valves

1.6 QUALITY ASSURANCE

- A. Welding: - Qualify processes and operators according to API 1104 Multiple Qualification for pipe diameters up to 12" nominal.
- B. Comply with requirements of university and the operation and maintenance manual they have filed with the Illinois Commerce Commission.
- C. Comply with CFR 192 Minimum Pipeline Safety Standards for materials, installation, testing, inspection, and purging.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Handling Flammable Liquids: Remove and legally dispose of liquids from drips in existing gas piping. Handle liquids to avoid spillage and ignition. Notify Engineer. Do not leave flammable liquids on premises overnight.

1.8 PROJECT CONDITIONS

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- A. Perform site survey, research public utility records, and verify existing utility locations. Contact JULIE (800-892-0123) for area where Project is located.
- B. Interruption of Existing Natural Gas Service: Do not interrupt natural gas service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide purging and startup of gas supply according to requirements indicated: The contractor is responsible for purging of the line for completion of tie-ins. The tie-ins will be completed during a time period as provided by the owner.
 - 1. Notify Engineer no fewer than 2 days in advance of proposed interruption of natural gas service.
 - 2. Do not proceed with interruption of natural gas service without Owner's written permission.

1.9 COORDINATION

- A. Coordinate connection to gas main with Engineer and Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 PIPES AND FITTINGS

- A. Refer to Part 3 "Piping Applications" Article for applications of pipe, fitting, and joining materials.
- B. Plastic Pipe ASTM D-2513, ASTM D-3350, high density 3408 piping for gas use.
- C. Steel Pipe: ASTM A 53/A 53M, Type E or S, API 5L, Grade B; .250 wall black fusion bonded epoxy coated., black.
 - 1. Malleable-Iron Fittings: ASME B16.3, Class 150, standard pattern, with threads complying with ASME B1.20.1.
 - 2. Steel Fittings: ASME B16.9, wrought-steel butt-welding type; and ASME B16.11, forged steel. All fittings shall be long radius- 3R or greater.
 - 3. Steel Flanges and Flanged Fittings: ASME B16.5.
 - 4. Unions: ASME B16.39, Class 150, black malleable iron; female pattern; ground joint.

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2.3 JOINING MATERIALS

- A. Components, Tapes, Gaskets, and Bolts and Nuts: Suitable for natural gas and as recommended by piping manufacturer.

2.4 VALVES

- A. Ball Valves: Cameron-Cooper trunion mounted ball valves, weld end connections ANSI 600, class, double block and bleed, internal pressure release sealant fittings with high head extension for remote operation. for 8" sizes and larger. The 4" vaves will be gear operated. Forged carbon steel body complying with API 6D or 6A. The Cameron Cooper valve is the basis of design.

2.5 PROTECTIVE COVERING MATERIALS

All steel pipe and fittings, except that six (6) inches above grade, shall be protected by coating and wrapping. It shall be the responsibility of the crews to handle pipe in such a manner so as to avoid damage to the covering. All damaged areas shall be repaired by the contractor.

Coating and wrapping shall conform to the latest revised specification for "ENCOAT" as produced by the Dekoron Process or approved equal. Fusion bonded epoxy coating will also be accepted conforming to "SCOTCHKOTE 206N" or approved equal. The pipe shall be abrasive blast cleaned prior to coating application. Adhesive thickness for all extruded pipe shall be .01 inch. Plastic thickness for all pipe shall be .030 inch. For bonded epoxy coating, the thickness shall be .012 inch. Plastic end caps shall be furnished on all pipe.

All coating shall be tested by electric "Holiday" detection before delivery, and prior to installation in ditch. Coating and wrapping shall be carried to a point six (6) inches above ground where the pipe protrudes from the ground. Field coating, other than joints and "Holidays" shall not be permitted.

All joints, service tees, welds, and similar sections shall be coated by the use of "TAPECOAT 20" or TAPECOAT H35 on shrink sleeves in accordance with the manufacturer's recommendations and specifications applicable to the mill coating of the pipe. In locations where wrapping is not feasible, TC Envirocoat shall be used, or approved equal. All exposed pipe above the grade line shall be painted as specified herein. Where bending of coating pipe is permitted, heat shall be applied to relieve stress in coating. Coating of all pipe for bores will be provided with Tapecoat 20, fusion bonded epoxy coating or shrink sleeves as approved by the engineer. A test coating will be made at all lead ends of pipe bores.

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3.0 EXECUTION

3.1 EARTHWORK

- A. Refer to Division 2 Section "Earthwork" for excavating, trenching, and backfilling. The minimum depth of cover will be 60" for all piping.

3.2 PREPARATION

- A. Inspect natural gas piping according to fuel gas code to determine that natural gas utilization devices are turned off in piping section affected.
- B. Comply with fuel gas code requirements for prevention of accidental ignition.

3.3 PIPING APPLICATIONS

- A. Flanges, unions, piping, and special fittings with pressure ratings same as or higher than system pressure rating may be used, unless otherwise indicated.
- C. Underground Piping: Steel piping with welded joints.

3.4 VALVE APPLICATIONS

- A. Drawings indicate types of valves to be used. If specific types are not indicated, the following requirements apply:
1. Connections to Existing Gas Piping: Use fitting and pipe valve and fitting assemblies made for tapping gas mains.
 2. Underground: Use steel weld valves with proper pressure rating.
 3. Aboveground, smaller than 2" nominal Ball valves.
 4. Aboveground, 4" and larger trunion mounted ball valves.

3.5 INSTALLATION

- A. Gas distribution system and equipment shall be installed in conformance with the manufacturer's recommendations and applicable sections of ASME B31.8, AGA Manual and 49 CFR 192. Unless otherwise authorized, cutting shall be done by an approved type of mechanical cutter. Wheel cutters shall be used where practicable. On steel pipe 6 inches and larger, an approved gas cutting and beveling machine may be used.
- B. Installing Pipe Underground
1. Gas mains and service lines shall be graded as indicated. Joints in steel pipe shall be welded except as in otherwise permitted for installation of valves. Mains shall have minimum cover as indicated on the drawings and shall be placed on firmly compacted selected material for the full length. Where indicated, the main shall be encased, bridged, or designed to withstand any anticipated external loads as specified in ASME B31.8. Trench shall be excavated below pipe grade, bedded with bank sand, and compacted to provide full length bearing. Laying the pipe on blocks to produce uniform grade will not be permitted. The pipe shall be clean inside before it is lowered into the trench and shall be kept free of water, soil, and all other foreign matter that might damage or obstruct the operation of the valves,

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regulators, meters, or other equipment. When work is not in progress, open ends of pipe or fittings shall be securely closed by expandable plugs or other suitable means. Minor changes in line or gradient of pipe that can be accomplished through the natural flexibility of the pipe material without producing permanent deformation and without overstressing joints may be made when approved. Changes in line or gradient that exceed the limitations specified shall be made with fittings. After laying of pipe and testing, trench shall be backfilled in accordance with Section 02300 Earthwork. Signs will be installed at 6 locations as designated by engineer and owner. Temporary signs will be installed by contractor over existing pipe for protection during excavation. These will be installed at a maximum of 8 locations as designated by engineer or owner. The contractor will provide polyethylene poles as presently used by the University of Illinois. The University will provide the signs to be added to the poles.

- C. Removal and Grouting of Existing Main
 - 1. The contractor will be required to remove the existing pipe at Stations 36+30, 26+35 and 21+15. At these locations the pipe will be removed 25' either side of these Stations. The prime contractor will be responsible for removal of pipe in conflict with any proposed piers. The existing main will be grouted using the entire length of the abandoned main. The Contractor shall furnish the engineer with a design for the flowable fill to be used for approval by the engineer. The basis of design for the grout will be controlled low strength material as (CLSM) as provided in the State of Illinois Recurring Special Provisions, Check Sheet #24. The maximum distance between grout locations will be 500'.

- D. Installing Pipe Aboveground and Valve Stations
 - 2. Aboveground piping shall be protected against dirt and other foreign matter as specified for underground piping. Joints in steel pipe shall be welded; however, joints in pipe 1 ½ inches in diameter and smaller may be threaded; joints may also be threaded to accommodate the installation of valves. Flanges shall be of the weld neck type to match wall thickness of pipe. The Valve station east of the interstate will be installed with a 6' chain link fence including a gate and three strands of barbed wire around the top.

3.6 VALVE INSTALLATION

- A. Install valves as indicated on the drawings, below ground valves will have valve boxes.

3.7 PIPE JOINTS

- A. Pipe joints shall be designed and installed to effectively sustain the longitudinal pullout forces caused by the contraction of piping or superimposed loads.
 - 1.) Threaded Steel Joints

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a. Threaded joints in steel pipe shall have tapered threads evenly cut and shall be made with UL approved graphite joint sealing compound for gas service or polytetrafluoroethylene tape applied to the male threads only. Caulking of threaded joints to stop or prevent leaks will not be permitted.

2.) Welding Steel Joints

a. Gas pipe weldments shall be as indicated. Changes in direction of piping shall be made with welding fittings only; mitering or notching pipe to form elbows and tees or other similar type construction will not be permitted. Branch connection may be made with either welding tees or forged branch outlet fittings. Branch outlet fittings shall be forged, flared for improvement of flow where attached to the run, and reinforced against external strains. Beveling, alignment, heat treatment, and inspection of welds shall conform to ASME B31.8 or CFR-192 which shall include radiographic inspection of 100% of field butt welds from each days construction. Each weld shall be examined over its entire circumference. Weld defects shall be removed and repairs made to the weld, or the weld joints shall be entirely removed and rewelded. After filler material has been removed from its original package, it shall be protected or stored so that its characteristics or welding properties are not affected adversely. Electrodes that have been wetted or have lost any of their coating shall not be used.

3.8 LABELING AND IDENTIFYING

A. Refer to Division 2 Section "Piped Utilities – Basic Materials and Methods" for equipment nameplates and signs.

3.9 PROTECTIVE COVERING FOR ABOVEGROUND PIPING SYSTEMS

1. Finish painting shall be done in a professional manner, smoothly and evenly applied, and free from defects in the following manner:

a. Ferrous Surfaces

(1) shop primed surfaces shall be touched up with ferrous metal primer of same type point as the shop primer. Surfaces that have not been shop primed shall be solvent-cleaned in accordance with SSPC SP 1. Surfaces that contain loose rust, loose mill scale, and other foreign substances shall be mechanically cleaned by power wire brushing in accordance with SSPC SP3 or brush-off blast cleaned in accordance with SSPC SP7/NACE4 and primed with ferrous metal primer in accordance with SSPC Paint 25. Primed surfaces shall be finished with two (2) coats of exterior alkyd paint conforming to CID A-A-2962 Type 1, Class (A)(B), Grade B. No succeeding coats will be applied until the preceding coat is thoroughly dry. Apply only in dry conditions at temperatures approved by paint manufacturer. Coordinate paint manufacturer and color selection with the Owner.

3.11 FIELD QUALITY CONTROL

Testing of gas mains and service lines shall be done with due regard for safety of employees and the public during the test. Persons not working on the test operations shall be kept out of the testing area while testing is proceeding. The tests shall be made on the system as a whole or on sections that can be isolated. The steel piping test shall continue for at least 24 hours from the time of the initial readings to the final readings of pressure

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and temperature. The initial test readings of the instrument shall not be made for at least 1 hour after the pipe has been subjected to the full test pressure, and neither the initial nor final readings shall be made at times of rapid changes in atmospheric conditions. The temperatures shall be representative of the actual trench conditions. The temperatures shall be representative of the actual trench conditions. There shall be no indication of reduction of pressure during the test after corrections have been made for changes in atmospheric conditions in conformity with the relationship $T (1) P (2) = T (2) P (1)$, in which T and P denote absolute temperature and pressure, respectively, and the numbers denote initial and final readings. During the test, the entire system shall be completely isolated from all compressors and other sources of pressure.

The testing instruments shall be approved by the Contracting Officer or Engineer. Testing, purging and inspection shall be done in accordance with requirements of all codes and the O&M manual of the owner. Test pressures on the 853 psig MAOP system will be 1300 psig. Hydrostatic testing will be used for the testing. The contractor is responsible for all water removal. The installed pipe will be pigged with a cleaning pig. Following the test the pipe will then be pigged till the pig has no measurable difference in weight from when the pig enters the pipe till it leaves the pipe. All labor, materials and equipment for conducting the tests shall be furnished by the Contractor and shall be subject to inspection at all times during the test.

CATHODIC PROTECTION

SECTION 13100 – CATHODIC PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. The Contractor shall connect a #2 HMWPE cable from the rectifier to the new pipe at location designated by engineer. The cable will be 200' maximum in length. The connection to the main will be made by a thermoweld for the size cable used. The cathodic protection system shall include test stations, at four locations along the pipe between Duncan Road and Staley Road. Signs will also be provided at these locations.

1.3 SUBMITTALS

- A. Product Data: For anodes, test stations and mounting accessories.
- B. Shop Drawings: Detail cathodic protection system, including cable and test stations for complete operating system. The system must be in compliance with National Association of Corrosion Engineers recommended practices and CFR Part 192. The work will include the installation of adjusting system and verification of adequate protection. Details of test stations and cable will be provided by Contractor.
- C. Qualification data for individual conducting test shall include certification by NACE and or a P.E. engaged in this work.
- D. Field inspection will be conducted to determine adequacy of system following installation.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer.
- B. Pre-Design survey will be conducted which will include soil resistance measurements to determine location and number of anodes to be installed.

1.5 COORDINATION

- A. Coordinate installation of cathodic protection system with installation of other piping structures and components.

CATHODIC PROTECTION

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PART 2 - PRODUCTS AND INSTALLATION

2.1 TEST STATIONS

- A. Test stations will be installed on the system to protect and maintain electrical contact. Two #12 TW coated wires will be connected from the test station to the pipe and terminated in the test station. Connection of the wires to the gas pipe will be completed by an exothermic weld(cadweld). A CA 15 charge will be used for these connections. The weld will be allowed to cool and a coating will be placed on the weld. Test Stations will be located at direction of the Engineer with a maximum of 6 test stations and installed. Test stations will be "Cott-Fink Let" or equal. All test stations will be installed with a concrete collar to support the test stations. The collars will be at minimum 12" in diameter and 12" deep.

2.2 GROUND BED INSTALLATION

A. The ground bed will be installed at the location indicated on the plans. The bed will consist of the following material, 10 SHA anodes w/10' #8 lead packaged in 8" X 84" canisters, 3M 90B1 splice kits, 400' #2 HMWPE cable. The anodes will be attached to the header cable and the tops of the anodes buried to a depth of 3' minimum below the ground surface. Splice kits will be used on the connections. The lead from the anodes will be terminated to the positive connection of the rectifier. The negative lead will be connected from the rectifier to the pipe. The rectifier will be relocated from the present location by the contractor and the U of I will provide electrical service to the rectifier unit.

Do not combine materials that can form an electrolytic couple that will accelerate corrosion in the presence of moisture unless moisture is permanently excluded from junction of such materials.

END OF SECTION 13100

CATHODIC PROTECTION

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UIUC CURTIS ROAD PHASE 2 GAS LINE RELOCATION

**UIUC CURTIS ROAD PHASE 2 GAS LINE
RELOCATION – DUNCAN TO STALEY
ROAD
November, 2005
MATERIAL LIST**

| <u>Item</u> | <u>Quantity</u> |
|---|-----------------|
| 1. 8" Steel Pipe 8.625 O.D.,.250 wall, API 5L Grade B fusion bonded epoxy coating | 5200 l.f. |
| 2. 4" Steel Pipe 4.500 O.D.,.250 wall, API 5L Grade B fusion bonded epoxy coating | 20 l.f. |
| 3. 8" Long radius-3R ell | 2 ea. |
| 4. 8" Long radius- 3R 45 | 1 ea. |
| 5. 8" weld tee with pig bars. | 2 ea. |
| 6. 8"x 4" weld reducer | 2 ea. |
| 7. 4" 600# weld neck flange | 2 ea. |
| 8. 4" 600# blind flanges | 2 ea. |
| 9. Cooper Cameron 8" weld x weld ,class 600# full opening gear operated ball valves with high head extension. | 1 ea. |
| 10. Cooper Cameron 4" weld x flange ,class 600# full opening gear operated ball valves | 2 ea. |
| 11. SHA anodes w/10' #8 lead packaged in 8" X 84" canisters. | 10 ea. |
| 12. 3M 90B1 slice kits | 10 ea. |

13. #2 HMWPE cable

400 l.f.

This list may not be all inclusive but is provided as an aid to the contractors. Contractor will be responsible to provide all material to complete work as indicated in specifications.

MAJOR EQUIPMENT SUPPLIERS

1. COOPER CAMERON VALVES

COOPER CAMERON VALVES
1315 FARM VALLEY ROAD
P.O. BOX 894
ST. PETERS, MO 63376

GIB BUSH
636-447-7232-OFFICE
314-703-5976-CELL
bushg@ccvalve.com

SPECIAL PROVISION
FOR
SIGN FACE AND SIGN LEGEND

Effective April 6, 2005

Revise in part Article 1091.02(a) of the Standard Specifications to read:

All reflectorized signs and supplemental panels shall be fabricated using faces of ASTM Type III or better reflective sheeting. This shall include mainline, ramp, crossroad interchange approach directional signing, route markers and all signs within the interchange. The signs shall be fabricated such that the copy or text will be applied in the preferred orientation for the maximum angularity per the manufacturer's recommendation.

Revise in part Section 1092 of the Standard Specifications to read:

The legend on all guide signs and supplemental panels, including shields, shall be fabricated using ASTM Type IX sheeting. The signs shall be fabricated such that the copy or text will be applied in the preferred orientation for the maximum angularity per the manufacturer's recommendation.

Demountable legend will no longer be required as stated in Article 1092.02.

All legend and borders shall be direct applied to the extrusion in accordance with the applicable parts of Article 1092.02(a) and the recommendation of the manufacturer.

The sign face sheeting, the legend and border shall be provided by the same manufacturer in the fabrication of a sign.

This special provision shall apply to all colors of sheeting used in the fabrication of all guide signs.

FORM LINER TEXTURED SURFACE

Effective: November 15, 1996

This item consists of providing a textured surface for cast in place concrete according to the details shown in the plans.

The forms shall be constructed so that the completed concrete structures conform to the shape, lines and dimensions of the members as shown on the Plans. The forms shall be properly braced or tied together to maintain position and shape. Forms shall be made sufficiently tight to prevent leakage of concrete. Forms and form liners shall be according to Section 503 of the Standard Specifications.

The Contractor shall submit plans for the form liner pattern and installation procedure for examination and approval by the Engineer. If such plans are not satisfactory to the Engineer, the Contractor shall make such changes as may be required. The Engineer's concurrence will in no way relieve the Contractor of responsibility for obtaining satisfactory results.

All form liner joints and tie holes shall be sealed in a manner approved by the Engineer to prevent leakage.

Form release agents shall be according to the recommendations of the form liner manufacturer and must be applied the same day as concrete placement. The form release agent shall be compatible with all curing agents and admixtures.

The temperature differential between the form liner and concrete shall not be greater than 5°C (9°F) for normal ambient conditions. During cold weather, the form liner must be applied in the same ambient conditions as concrete placement is to take place. In ambient conditions above 32°C (90°F), form liner attachment must allow for thermal expansion.

Variations in dimensions for the cast-in-place concrete with a textured surface shall be within the following tolerances: the width and depth of textured joints shall be within ± 3 mm (1/8 inch), the location of the joints shall be within ± 13 mm (1/2 inch); the maximum variation of a joint from a straight line shall be ± 6 mm (1/4 inch) in 3 meters (10 feet).

Test samples that include the proposed textured surface shall be cast by the Contractor and supplied to the Engineer for his approval 30 days prior to pouring the cast in place concrete.

The Contractor shall notify the Engineer at least 40 hours prior to placing concrete.

Concrete shall not be placed until the Engineer has inspected the form work and the placement of reinforcing bars for compliance with the plans.

External surfaces of all concrete shall be thoroughly worked during the operations of placing in such a manner as to work the mortar against the forms to produce a smooth finish free of honeycomb and with a minimum of water and air pockets.

Depressions resulting from the removal of ties and holes left by attachments to rod or bolt anchorage's shall be carefully and neatly pointed with a color matched, non-shrink patching grout, as described below.

Color Matched, Non-Shrink Patching Grout

Patching grout shall be a prepackaged mixture of Portland and Hydraulic cements with shrinkage compensating admixtures, graded sands and polymer modifiers. Samples of the grout shall be prepared utilizing gray and white cement in various ratios. After the samples have dried, the cement ratio producing a color that most closely matches the area of textured surface to be repaired shall be utilized for the repairs, subject to the Engineer's approval.

Patching grout shall also meet the following requirements:

| | |
|-------------------|--------------------|
| Flexural Strength | 1.4 MPa (200 psi) |
| Bond Strength | 9.0 MPa (1300 psi) |

Air pockets larger than 25 mm (1 inch) in diameter in any form liner textured surface shall be repaired. Honey combed areas larger the 50 mm (2 inches) in diameter (surface area) or 15 mm (1/2 inch) in depth shall be chipped out by the Contractor and inspected by the Engineer before being repaired. Repaired areas less than 150 mm (6 inches) in diameter shall be rubbed as described under Patch Rubbed to Match below. Larger areas shall be finished as described under Formed Patch.

a. Formed Patch

Grind patch area to an even plane with surface laitence removed. Color match grout as described in "color-matched, non-shrink patching grout" above before application. Cast grout into form liner, matching area to be repaired, strike off at nearest reveal or joint of form liner. Brace form liner. Cure for 48 hours and remove form. Butter back edges of patch and repair as noted in "Patch Rubbed to Match" below.

b. Patch Rubbed to Match

Surface requiring a rubbed finish shall be thoroughly wet with a brush and rubbed with a No. 16 carborundum stone, or an abrasive of equal quality, bringing the surface to a paste. The rubbing shall be continued sufficiently to produce a surface matching the surrounding textured surface. The finish rubbing shall continue until the entire surface is of a smooth texture and uniform in color.

Patching material shall first be color matched, as described in "Color matched, non-shrink patching grout" above before application.

Fins and form lines which project more than 10 mm (3/8 inch) shall be removed by chipping. If hand tools are not sufficient, a No. 16 carborundum stone or equal abrasive may be used.

When the surface of concrete that will be exposed to view shows a film of oil left from an excess of oil on the forms, or the concrete is oil-stained, or is otherwise not of uniform color, the Engineer may require the Contractor to patch as described above.

Method of Measurement. The limits used to measure the area of textured surface will be those dimensions indicated on the plans or as directed by the Engineer and the area computed in square meters (square yards).

Basis of Payment. This work will be paid for at the contract unit price per square meter (square yard) for FORM LINER TEXTURED SURFACE.

**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

listed on the wage determination unless the Administrator of the

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.