## 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 that 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.

RETURN WITH BID

99

| Proposal Submitted By<br><br>Name |
|---|
| Address |
| City |

# Letting March 9, 2007

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. 98950**
**WILLIAMSOM County**
**Section (X1-6-2)VB-2,(X1-6)HBK-2**
**Routes FAI 57 & FAU 9629**
**Project ACIM-HSIP-572(146)53**
**District 9 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

☐ A Bid Bond is included.

☐ A Cashier's Check or a Certified Check is included

Prepared by

Checked by F

(Printed by authority of the State of Illinois)

## INSTRUCTIONS

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

**WHO CAN BID**?: Bids will be accepted from only those companies that request and receive written **Authorization to Bid** from IDOT's Central Bureau of Construction. To request authorization, a potential bidder must complete and submit Part B of the Request for Authorization to Bid/or Not For Bid Status form (BDE 124 INT) and submit an original Affidavit of Availability (BC 57).

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

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

1. All documents from the Proposal Cover Sheet through the Proposal Bid Bond

2. Other special documentation and/or information that may be required by the contract special provisions

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 CD-ROMS | 217/782-7806 |

**RETURN WITH BID**

Illinois Department of Transportation

# 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. 98950**
**WILLIAMSOM County**
**Section (X1-6-2)VB-2,(X1-6)HBK-2**
**Project ACIM-HSIP-572(146)53**
**Routes FAI 57 & FAU 9629**
**District 9 Construction Funds**

**Interchange reconstruction, bridge removal and replacement including the structures carrying I-57 over Old IL Route 13 and Crab Orchard and Eqyptian Railroad, overlay on the structures carrying I57 over IL Route 13, rubblizing pavement and resurfacing on I-57, ramp reconstruction and other improvements, all located at the FAI Route 57/Old IL Route 13 interchange in Marion (SN 100- 0005, 0008, 0009, 0084, 0085, 0086, 0087).**

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.

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:

| Amount of Bid | | | Proposal Guaranty | Amount of Bid | | | Proposal Guaranty |
|---|---|---|---|---|---|---|---|
| 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)

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 - 98950

**State Job # -** C-99-050-06
**PPS NBR -** 9-94860-0100
**County Name -** WILLIAMSON- -
**Code -** 199 - -
**District -** 9 - -
**Section Number -** (X1-6-2)VB-2,(X1-6)HBK-2

**Project Number**
ACIM-HSIP-0572/146/053

**Route**
FAI 57
FAU 9629

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| XX003813 | ELCBL C 10 3/C | FOOT | 1,529.000 | | | | |
| XX006661 | UNINTERRUPT POWER SUP | EACH | 2.000 | | | | |
| X0300203 | CLEAN & FILL EXPAN JT | EACH | 8.000 | | | | |
| X0300471 | RUBBLIZING PCC PAVT | SQ YD | 17,159.000 | | | | |
| X0300737 | RADIO TRANSCEIVER | EACH | 2.000 | | | | |
| X0322066 | PROTECT SHIELD PERM | SQ YD | 878.000 | | | | |
| X0322662 | TEMPORARY SIGNING | EACH | 3.000 | | | | |
| X0322729 | MATL TRANSFER DEVICE | TON | 2,362.000 | | | | |
| X0322879 | GRAD & SHAP FORESLOPE | SQ YD | 431.000 | | | | |
| X0323991 | SURF MOUNT LANE SEP | FOOT | 792.000 | | | | |
| X0325683 | STAB SUB-BASE HMA VD | TON | 9,365.000 | | | | |
| X0325684 | CORING GUARDRAIL INST | FOOT | 400.000 | | | | |
| X0325685 | SUB-BASE GRAN MAT 6 | SQ YD | 37,426.000 | | | | |
| X0325686 | SUB-BASE GRAN MAT 10 | SQ YD | 1,722.000 | | | | |
| X6060500 | CORRUGATED MED REM | SQ FT | 34.000 | | | | |

**ILLINOIS DEPARTMENT OF TRANSPORTATION**
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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| X6370940 | CONC BAR 2F 42HT | FOOT | 3,116.000 | | | | |
| X7050169 | TEMP TRBT T1 SPL FLAR | EACH | 1.000 | | | | |
| X7240205 | REMOV SIGN COMPLETE | EACH | 21.000 | | | | |
| X7330105 | OSS WALKWAY TY A | FOOT | 57.000 | | | | |
| X7330110 | OSS WALKWAY CANT TA | FOOT | 14.000 | | | | |
| X7340100 | CONC FOUNDATION GR MT | CU YD | 24.400 | | | | |
| X8420220 | REM EX HI MAST LT TOW | EACH | 10.000 | | | | |
| X8420300 | LGTING FDN REM LT TOW | EACH | 6.000 | | | | |
| Z0006000 | BR DECK CONC OVERLAY | SQ YD | 2,097.000 | | | | |
| Z0006204 | BR DECK HY-SCAR 1/2 | SQ YD | 1,052.000 | | | | |
| Z0006231 | BR DECK HY-SCAR 3 1/2 | SQ YD | 1,045.000 | | | | |
| Z0016001 | DECK SLAB REP (FD-T1) | SQ YD | 2.400 | | | | |
| Z0016002 | DECK SLAB REP (FD-T2) | SQ YD | 81.500 | | | | |
| Z0016200 | DECK SLAB REP (PART) | SQ YD | 100.000 | | | | |
| Z0017202 | DOWEL BARS 1 1/2 | EACH | 1,768.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| Z0030130 | IMPACT ATTEN PRD TL3 | EACH | 1.000 | | | | |
| Z0030250 | IMP ATTN TEMP NRD TL3 | EACH | 11.000 | | | | |
| Z0030260 | IMP ATTN TEMP FRN TL3 | EACH | 8.000 | | | | |
| Z0030330 | IMP ATTN REL FRD TL3 | EACH | 7.000 | | | | |
| Z0030350 | IMP ATTN REL NRD TL3 | EACH | 6.000 | | | | |
| Z0040400 | P CULV (EROS CONT) | FOOT | 1,712.000 | | | | |
| Z0040530 | PIPE UNDERDRAIN REMOV | FOOT | 19,949.000 | | | | |
| Z0048665 | RR PROT LIABILITY INS | L SUM | 1.000 | | | | |
| Z0073500 | TEMP SUPPORT SYSTEM | L SUM | 1.000 | | | | |
| Z0076600 | TRAINEES | HOUR | 2,000.000 | | 0.800 | | 1,600.000 |
| 20100110 | TREE REMOV 6-15 | UNIT | 1,915.000 | | | | |
| 20100210 | TREE REMOV OVER 15 | UNIT | 1,259.000 | | | | |
| 20100500 | TREE REMOV ACRES | ACRE | 13.200 | | | | |
| 20200100 | EARTH EXCAVATION | CU YD | 60,010.000 | | | | |
| 20400100 | BORROW EXCAV | CU YD | 102,541.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 20700400 | POROUS GRAN EMB SPEC | CU YD | 838.000 | | | | |
| 20800150 | TRENCH BACKFILL | CU YD | 3,507.000 | | | | |
| 21101665 | TOPSOIL F & P 18 | SQ YD | 392.000 | | | | |
| 25000115 | SEEDING CL 1B | ACRE | 23.800 | | | | |
| 25000350 | SEEDING CL 7 | ACRE | 25.900 | | | | |
| 25000400 | NITROGEN FERT NUTR | POUND | 3,824.000 | | | | |
| 25000500 | PHOSPHORUS FERT NUTR | POUND | 2,833.500 | | | | |
| 25000600 | POTASSIUM FERT NUTR | POUND | 2,833.500 | | | | |
| 25000700 | AGR GROUND LIMESTONE | TON | 47.500 | | | | |
| 25100115 | MULCH METHOD 2 | ACRE | 45.500 | | | | |
| 25100630 | EROSION CONTR BLANKET | SQ YD | 65,816.000 | | | | |
| 25101005 | HD EXCELSIOR BLANKET | SQ YD | 2,929.000 | | | | |
| 28000200 | EARTH EXC - EROS CONT | CU YD | 45.000 | | | | |
| 28000250 | TEMP EROS CONTR SEED | POUND | 2,564.000 | | | | |
| 28000300 | TEMP DITCH CHECKS | EACH | 110.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 28000400 | PERIMETER EROS BAR | FOOT | 16,635.000 | | | | |
| 28000500 | INLET & PIPE PROTECT | EACH | 31.000 | | | | |
| 28001000 | AGGREGATE - EROS CONT | TON | 168.200 | | | | |
| 28100205 | STONE RIPRAP CL A3 | TON | 366.000 | | | | |
| 28100207 | STONE RIPRAP CL A4 | TON | 74.000 | | | | |
| 28200200 | FILTER FABRIC | SQ YD | 428.000 | | | | |
| 30200650 | PROCESS MOD SOIL 12 | SQ YD | 22,003.000 | | | | |
| 30201500 | LIME | TON | 212.000 | | | | |
| 31100300 | SUB GRAN MAT A 4 | SQ YD | 762.000 | | | | |
| 31100500 | SUB GRAN MAT A 6 | SQ YD | 514.000 | | | | |
| 31101900 | SUB GRAN MAT C | TON | 1,998.000 | | | | |
| 31200500 | STAB SUBBASE HMA 4 | SQ YD | 4,851.000 | | | | |
| 35100300 | AGG BASE CSE A 4 | SQ YD | 392.000 | | | | |
| 40600100 | BIT MATLS PR CT | GALLON | 34,988.000 | | | | |
| 40600300 | AGG PR CT | TON | 80.500 | | | | |

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Route
FAI 57
FAU 9629

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 40600400 | MIX CR JTS FLANGEWYS | TON | 3.000 | | | | |
| 40600895 | CONSTRUC TEST STRIP | EACH | 3.000 | | | | |
| 40600982 | HMA SURF REM BUTT JT | SQ YD | 3,414.000 | | | | |
| 40600985 | PCC SURF REM BUTT JT | SQ YD | 187.000 | | | | |
| 40600990 | TEMPORARY RAMP | SQ YD | 1,586.000 | | | | |
| 40603090 | HMA BC IL-19.0 N90 | TON | 29,441.000 | | | | |
| 40603245 | P HMA BC IL19.0 N105 | TON | 11,759.000 | | | | |
| 40603550 | P HMA SC "D" N105 | TON | 1,535.000 | | | | |
| 40603575 | P HMA SC "E" N105 | TON | 3,205.000 | | | | |
| 40701966 | HMA PAVT FD 14 1/4 | SQ YD | 5,331.000 | | | | |
| 40800050 | INCIDENTAL HMA SURF | TON | 144.000 | | | | |
| 42000301 | PCC PVT 8 JOINTED | SQ YD | 661.000 | | | | |
| 42000501 | PCC PVT 10 JOINTED | SQ YD | 4,853.000 | | | | |
| 42001200 | PAVEMENT FABRIC | SQ YD | 183.000 | | | | |
| 42001300 | PROTECTIVE COAT | SQ YD | 15,304.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 42001400 | BR APPROACH PAVT SPL | SQ YD | 2,073.000 | | | | |
| 42300200 | PCC DRIVEWAY PAVT 6 | SQ YD | 176.000 | | | | |
| 42300300 | PCC DRIVEWAY PAVT 7 | SQ YD | 172.000 | | | | |
| 42400200 | PC CONC SIDEWALK 5 | SQ FT | 10,373.000 | | | | |
| 42400800 | DETECTABLE WARNINGS | SQ FT | 91.000 | | | | |
| 44000100 | PAVEMENT REM | SQ YD | 21,142.000 | | | | |
| 44000169 | HMA SURF REM 5 | SQ YD | 17,173.000 | | | | |
| 44000198 | HMA SURF REM VAR DP | SQ YD | 2,519.000 | | | | |
| 44000200 | DRIVE PAVEMENT REM | SQ YD | 783.000 | | | | |
| 44000500 | COMB CURB GUTTER REM | FOOT | 4,404.000 | | | | |
| 44001114 | HMA SURFACE REM (ASB) | SQ YD | 1,052.000 | | | | |
| 44003800 | MEDIAN SURF REMOVAL | SQ FT | 13,428.000 | | | | |
| 44004000 | PAVED DITCH REMOVAL | FOOT | 139.000 | | | | |
| 44004250 | PAVED SHLD REMOVAL | SQ YD | 21,596.000 | | | | |
| 44200970 | CL B PATCH T2 10 | SQ YD | 488.000 | | | | |

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Code - 199 - -
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Route
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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 44200974 | CL B PATCH T3 10 | SQ YD | 17.000 | | | | |
| 44200976 | CL B PATCH T4 10 | SQ YD | 123.000 | | | | |
| 44201007 | CL B PATCH T2 13 | SQ YD | 108.000 | | | | |
| 44201011 | CL B PATCH T3 13 | SQ YD | 43.000 | | | | |
| 44212900 | PVT PATCHING (PD) | SQ YD | 260.000 | | | | |
| 44213200 | SAW CUTS | FOOT | 3,851.000 | | | | |
| 44300200 | STRIP REF CR CON TR | FOOT | 1,253.000 | | | | |
| 48100700 | AGGREGATE SHLDS A 8 | SQ YD | 2,229.000 | | | | |
| 48101200 | AGGREGATE SHLDS B | TON | 9.000 | | | | |
| 48203023 | HMA SHOULDERS 6 1/2 | SQ YD | 4,235.000 | | | | |
| 48203029 | HMA SHOULDERS 8 | SQ YD | 8,156.000 | | | | |
| 48203031 | HMA SHOULDERS 8 1/2 | SQ YD | 86.000 | | | | |
| 48203035 | HMA SHOULDERS 9 1/2 | SQ YD | 1,610.000 | | | | |
| 48203100 | HMA SHOULDERS | TON | 1,153.000 | | | | |
| 50100300 | REM EXIST STRUCT N1 | EACH | 1.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 50100400 | REM EXIST STRUCT N2 | EACH | 1.000 | | | | |
| 50100500 | REM EXIST STRUCT N3 | EACH | 1.000 | | | | |
| 50100600 | REM EXIST STRUCT N4 | EACH | 1.000 | | | | |
| 50100700 | REM EXIST STRUCT N5 | EACH | 1.000 | | | | |
| 50100800 | REM EXIST STRUCT N6 | EACH | 1.000 | | | | |
| 50102400 | CONC REM | CU YD | 10.000 | | | | |
| 50104400 | CONC HDWL REM | EACH | 17.000 | | | | |
| 50105220 | PIPE CULVERT REMOV | FOOT | 447.000 | | | | |
| 50157300 | PROTECTIVE SHIELD | SQ YD | 1,276.000 | | | | |
| 50200100 | STRUCTURE EXCAVATION | CU YD | 2,195.000 | | | | |
| 50300100 | FLOOR DRAINS | EACH | 40.000 | | | | |
| 50300225 | CONC STRUCT | CU YD | 1,133.200 | | | | |
| 50300255 | CONC SUP-STR | CU YD | 1,614.700 | | | | |
| 50300260 | BR DECK GROOVING | SQ YD | 8,974.000 | | | | |
| 50300280 | CONCRETE ENCASEMENT | CU YD | 37.900 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 50300285 | FORM LINER TEX SURF | SQ FT | 1,542.000 | | | | |
| 50300300 | PROTECTIVE COAT | SQ YD | 7,765.000 | | | | |
| 50500105 | F & E STRUCT STEEL | L SUM | 1.000 | | | | |
| 50500505 | STUD SHEAR CONNECTORS | EACH | 30,567.000 | | | | |
| 50800105 | REINFORCEMENT BARS | POUND | 967.000 | | | | |
| 50800205 | REINF BARS, EPOXY CTD | POUND | 492,825.000 | | | | |
| 50800515 | BAR SPLICERS | EACH | 3,096.000 | | | | |
| 51100100 | SLOPE WALL 4 | SQ YD | 1,845.000 | | | | |
| 51100500 | BIT CT AG SLOPEWALL 6 | SQ YD | 2,020.000 | | | | |
| 51201600 | FUR STL PILE HP12X53 | FOOT | 2,739.000 | | | | |
| 51201800 | FUR STL PILE HP14X73 | FOOT | 5,340.000 | | | | |
| 51202305 | DRIVING PILES | FOOT | 8,079.000 | | | | |
| 51203600 | TEST PILE ST HP12X53 | EACH | 6.000 | | | | |
| 51203800 | TEST PILE ST HP14X73 | EACH | 3.000 | | | | |
| 51205200 | TEMP SHT PILING | SQ FT | 1,430.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 51500100 | NAME PLATES | EACH | 4.000 | | | | |
| 52000030 | PREF JOINT SEAL 2 1/2 | FOOT | 427.000 | | | | |
| 52100520 | ANCHOR BOLTS 1 | EACH | 276.000 | | | | |
| 52100540 | ANCHOR BOLTS 1 1/2 | EACH | 46.000 | | | | |
| 54001001 | BOX CUL END SEC C1 | EACH | 1.000 | | | | |
| 54002060 | EXPAN BOLTS 3/4 X 12 | EACH | 18.000 | | | | |
| 54003000 | CONC BOX CUL | CU YD | 21.000 | | | | |
| 54010804 | PCBC 8X4 | FOOT | 83.000 | | | | |
| 542A0226 | P CUL CL A 1 21 | FOOT | 38.000 | | | | |
| 542A1069 | P CUL CL A 2 24 | FOOT | 146.000 | | | | |
| 542A1081 | P CUL CL A 2 36 | FOOT | 88.000 | | | | |
| 542A1921 | P CUL CL A 3 36 | FOOT | 40.000 | | | | |
| 542A1933 | P CUL CL A 3 48 | FOOT | 15.000 | | | | |
| 542A1957 | P CUL CL A 3 72 | FOOT | 12.000 | | | | |
| 542A2755 | P CUL CL A 4 30 | FOOT | 60.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 542A2773 | P CUL CL A 4 48 | FOOT | 25.000 | | | | |
| 542A3427 | P CUL CL A 5 72 | FOOT | 30.000 | | | | |
| 54207153 | P CUL 1 RC-E EQRS 18 | FOOT | 157.000 | | | | |
| 54207162 | P CUL 1 RC-E EQRS 27 | FOOT | 26.000 | | | | |
| 54207195 | P CUL 1 RC-E EQRS 60 | FOOT | 200.000 | | | | |
| 54213443 | END SECTIONS 8 | EACH | 82.000 | | | | |
| 54213657 | PRC FLAR END SEC 12 | EACH | 4.000 | | | | |
| 54213663 | PRC FLAR END SEC 18 | EACH | 1.000 | | | | |
| 54213666 | PRC FLAR END SEC 21 | EACH | 6.000 | | | | |
| 54213669 | PRC FLAR END SEC 24 | EACH | 5.000 | | | | |
| 54214713 | PRCF END S EL EQRS 18 | EACH | 1.000 | | | | |
| 54214722 | PRCF END S EL EQRS 27 | EACH | 1.000 | | | | |
| 54214755 | PRCF END S EL EQRS 60 | EACH | 1.000 | | | | |
| 54215430 | CIP RC END SEC 30 | EACH | 1.000 | | | | |
| 54215436 | CIP RC END SEC 36 | EACH | 5.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 54215448 | CIP RC END SEC 48 | EACH | 2.000 | | | | |
| 54215472 | CIP RC END SEC 72 | EACH | 2.000 | | | | |
| 54215979 | R C PIPE ELBOW 24 | EACH | 2.000 | | | | |
| 54216180 | R C PIPE TEE 12P 12R | EACH | 1.000 | | | | |
| 54244405 | FL INLT BX MED 542546 | EACH | 3.000 | | | | |
| 54248510 | CONCRETE COLLAR | CU YD | 11.800 | | | | |
| 550A0050 | STORM SEW CL A 1 12 | FOOT | 1,741.000 | | | | |
| 550A0070 | STORM SEW CL A 1 15 | FOOT | 572.000 | | | | |
| 550A0090 | STORM SEW CL A 1 18 | FOOT | 1,007.000 | | | | |
| 550A0110 | STORM SEW CL A 1 21 | FOOT | 280.000 | | | | |
| 550A0120 | STORM SEW CL A 1 24 | FOOT | 441.000 | | | | |
| 550A0130 | STORM SEW CL A 1 27 | FOOT | 93.000 | | | | |
| 550A0160 | STORM SEW CL A 1 36 | FOOT | 336.000 | | | | |
| 550A0180 | STORM SEW CL A 1 42 | FOOT | 62.000 | | | | |
| 550A0340 | STORM SEW CL A 2 12 | FOOT | 72.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 550A0400 | STORM SEW CL A 2 21 | FOOT | 73.000 | | | | |
| 550A0410 | STORM SEW CL A 2 24 | FOOT | 26.000 | | | | |
| 55100500 | STORM SEWER REM 12 | FOOT | 33.000 | | | | |
| 55100700 | STORM SEWER REM 15 | FOOT | 12.000 | | | | |
| 55100900 | STORM SEWER REM 18 | FOOT | 171.000 | | | | |
| 55101200 | STORM SEWER REM 24 | FOOT | 538.000 | | | | |
| 55101400 | STORM SEWER REM 30 | FOOT | 314.000 | | | | |
| 55101900 | STORM SEWER REM 48 | FOOT | 134.000 | | | | |
| 59100100 | GEOCOMPOSITE WALL DR | SQ YD | 449.000 | | | | |
| 60100060 | CONC HDWL FOR P DRAIN | EACH | 22.000 | | | | |
| 60100074 | SHOULDER REM & REPL 8 | FOOT | 90.000 | | | | |
| 60107600 | PIPE UNDERDRAINS 4 | FOOT | 26,360.000 | | | | |
| 60108100 | PIPE UNDERDRAIN 4 SP | FOOT | 1,882.000 | | | | |
| 60109580 | P UNDR FOR STRUCT 4 | FOOT | 744.000 | | | | |
| 60218400 | MAN TA 4 DIA T1F CL | EACH | 1.000 | | | | |

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| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 60218900 | MAN TA 4 DIA T6F&G | EACH | 2.000 | | | | |
| 60221000 | MAN TA 5 DIA T1F OL | EACH | 1.000 | | | | |
| 60223700 | MAN TA 6 DIA T1F OL | EACH | 1.000 | | | | |
| 60224030 | MAN TA 6 DIA T15F&L | EACH | 1.000 | | | | |
| 60236200 | INLETS TA T8G | EACH | 2.000 | | | | |
| 60237420 | INLETS TA T20F&G | EACH | 3.000 | | | | |
| 60238900 | INLETS TA SPL T1F OL | EACH | 2.000 | | | | |
| 60240215 | INLETS TB T1F CL | EACH | 1.000 | | | | |
| 60240240 | INLETS TB T6F&G | EACH | 4.000 | | | | |
| 60240301 | INLETS TB T8G | EACH | 1.000 | | | | |
| 60243300 | INLETS SPL T3 5 | EACH | 12.000 | | | | |
| 60243500 | INLETS SPL T3 6 | EACH | 6.000 | | | | |
| 60247200 | JUNCTION BOX | EACH | 1.000 | | | | |
| 60260100 | INLETS ADJUST | EACH | 3.000 | | | | |
| 60270050 | DR STR T4 W/2 T20F&G | EACH | 20.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 60406100 | FR & LIDS T1 CL | EACH | 1.000 | | | | |
| 60500060 | REMOV INLETS | EACH | 20.000 | | | | |
| 60500105 | FILL MANHOLES | EACH | 3.000 | | | | |
| 60603500 | COMB CC&G TB6.06 | FOOT | 556.000 | | | | |
| 60605000 | COMB CC&G TB6.24 | FOOT | 4,253.000 | | | | |
| 60618300 | CONC MEDIAN SURF 4 | SQ FT | 8,217.000 | | | | |
| 60623714 | CONC MEDIAN SPL | SQ FT | 733.000 | | | | |
| 60624600 | CORRUGATED MED | SQ FT | 34.000 | | | | |
| 60900515 | CONC THRUST BLOCKS | EACH | 1.000 | | | | |
| 63000000 | SPBGR TY A | FOOT | 4,157.000 | | | | |
| 63100045 | TRAF BAR TERM T2 | EACH | 5.000 | | | | |
| 63100070 | TRAF BAR TERM T5 | EACH | 4.000 | | | | |
| 63100085 | TRAF BAR TERM T6 | EACH | 4.000 | | | | |
| 63100169 | TR BAR TRM T1 SPL FLR | EACH | 5.000 | | | | |
| 63200310 | GUARDRAIL REMOV | FOOT | 9,374.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 63500105 | DELINEATORS | EACH | 176.000 | | | | |
| 63500120 | DELINEATOR REMOVAL | EACH | 176.000 | | | | |
| 64200105 | SHOULDER RUMBLE STRIP | FOOT | 17,263.000 | | | | |
| 66410400 | CH LK FENCE REM & RE | FOOT | 130.000 | | | | |
| 67000400 | ENGR FIELD OFFICE A | CAL MO | 19.000 | | | | |
| 67100100 | MOBILIZATION | L SUM | 1.000 | | | | |
| 70100320 | TRAF CONT-PROT 701422 | L SUM | 1.000 | | | | |
| 70100420 | TRAF CONT-PROT 701411 | EACH | 5.000 | | | | |
| 70100800 | TRAF CONT-PROT 701401 | L SUM | 1.000 | | | | |
| 70100805 | TRAF CONT-PROT 701402 | L SUM | 1.000 | | | | |
| 70101700 | TRAF CONT & PROT | L SUM | 1.000 | | | | |
| 70102622 | TR CONT & PROT 701502 | L SUM | 1.000 | | | | |
| 70102625 | TR CONT & PROT 701606 | L SUM | 1.000 | | | | |
| 70102632 | TR CONT & PROT 701602 | L SUM | 1.000 | | | | |
| 70102635 | TR CONT & PROT 701701 | L SUM | 1.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 70103815 | TR CONT SURVEILLANCE | CAL DA | 14.000 | | | | |
| 70106700 | TEMP RUMBLE STRIP | EACH | 12.000 | | | | |
| 70106800 | CHANGEABLE MESSAGE SN | CAL MO | 118.000 | | | | |
| 70300100 | SHORT-TERM PAVT MKING | FOOT | 17,251.000 | | | | |
| 70300505 | PAVT MARK TAPE T3 SPL | FOOT | 9,478.000 | | | | |
| 70300610 | TEMP PT PAVT MK L&S | SQ FT | 584.000 | | | | |
| 70300625 | TEMP PT PVT M LINE 4 | FOOT | 148,665.000 | | | | |
| 70300635 | TEMP PT PVT M LINE 6 | FOOT | 445.000 | | | | |
| 70300640 | TEMP PT PVT M LINE 8 | FOOT | 4,650.000 | | | | |
| 70300645 | TEMP PT PVT M LINE 12 | FOOT | 1,083.000 | | | | |
| 70300660 | TEMP PT PVT M LINE 24 | FOOT | 333.000 | | | | |
| 70301000 | WORK ZONE PAVT MK REM | SQ FT | 3,404.000 | | | | |
| 70400100 | TEMP CONC BARRIER | FOOT | 9,750.000 | | | | |
| 70400200 | REL TEMP CONC BARRIER | FOOT | 23,992.000 | | | | |
| 70500100 | TEMP SPBGR TY A | FOOT | 2,326.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 70500655 | TEMP TR BAR TERM T5 | EACH | 4.000 | | | | |
| 70500665 | TEMP TR BAR TERM T6 | EACH | 1.000 | | | | |
| 70500685 | TEMP TR BAR TERM T10 | EACH | 4.000 | | | | |
| 72000100 | SIGN PANEL T1 | SQ FT | 18.000 | | | | |
| 72000300 | SIGN PANEL T3 | SQ FT | 2,121.100 | | | | |
| 72700100 | STR STL SIN SUP BA | POUND | 12,779.500 | | | | |
| 73300100 | OVHD SIN STR-SPAN T1A | FOOT | 80.000 | | | | |
| 73302170 | OSS CANT 2CA 3-0X5-6 | FOOT | 30.000 | | | | |
| 73400100 | CONC FOUNDATION | CU YD | 17.200 | | | | |
| 73400200 | DRILL SHAFT CONC FDN | CU YD | 21.700 | | | | |
| 73600100 | REMOV OH SIN STR-SPAN | EACH | 1.000 | | | | |
| 73600200 | REMOV OH SIN STR-CANT | EACH | 1.000 | | | | |
| 73700200 | REM CONC FDN-GR MT | EACH | 34.000 | | | | |
| 73700300 | REM CONC FDN-OVHD | EACH | 3.000 | | | | |
| 78000100 | THPL PVT MK LTR & SYM | SQ FT | 421.000 | | | | |

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|---|---|---|---|---|---|---|---|
| 78000200 | THPL PVT MK LINE 4 | FOOT | 18,113.000 | | | | |
| 78000400 | THPL PVT MK LINE 6 | FOOT | 478.000 | | | | |
| 78000500 | THPL PVT MK LINE 8 | FOOT | 424.000 | | | | |
| 78000600 | THPL PVT MK LINE 12 | FOOT | 231.000 | | | | |
| 78000650 | THPL PVT MK LINE 24 | FOOT | 242.000 | | | | |
| 78003110 | PREF PL PM TB LINE 4 | FOOT | 23,697.000 | | | | |
| 78003140 | PREF PL PM TB LINE 8 | FOOT | 2,707.000 | | | | |
| 78003150 | PREF PL PM TB LINE 12 | FOOT | 560.000 | | | | |
| 78008300 | POLYUREA PM T2 LTR-SY | SQ FT | 178.000 | | | | |
| 78008310 | POLYUREA PM T2 LN 4 | FOOT | 6,048.000 | | | | |
| 78008330 | POLYUREA PM T2 LN 6 | FOOT | 48.000 | | | | |
| 78008350 | POLYUREA PM T2 LN 12 | FOOT | 399.000 | | | | |
| 78008370 | POLYUREA PM T2 LN 24 | FOOT | 131.000 | | | | |
| 78100100 | RAISED REFL PAVT MKR | EACH | 1,425.000 | | | | |
| 78200420 | GUARDRAIL MKR TYPE B | EACH | 92.000 | | | | |

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Route
FAI 57
FAU 9629

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 78200520 | BAR WALL MKR TYPE B | EACH | 268.000 | | | | |
| 78201000 | TERMINAL MARKER - DA | EACH | 6.000 | | | | |
| 78300100 | PAVT MARKING REMOVAL | SQ FT | 35,477.000 | | | | |
| 78300200 | RAISED REF PVT MK REM | EACH | 1,204.000 | | | | |
| 80300100 | LOCATE UNDERGR CABLE | FOOT | 435.000 | | | | |
| 80400100 | ELECT SERV INSTALL | EACH | 1.000 | | | | |
| 80501000 | SERV INSTALL SPL | EACH | 2.000 | | | | |
| 81012500 | CON T 1 1/2 PVC | FOOT | 593.000 | | | | |
| 81012600 | CON T 2 PVC | FOOT | 557.000 | | | | |
| 81012700 | CON T 2 1/2 PVC | FOOT | 287.000 | | | | |
| 81012800 | CON T 3 PVC | FOOT | 325.000 | | | | |
| 81012900 | CON T 3 1/2 PVC | FOOT | 58.000 | | | | |
| 81013000 | CON T 4 PVC | FOOT | 152.000 | | | | |
| 81020500 | CON P 2 IM | FOOT | 640.000 | | | | |
| 81020700 | CON P 3 IM | FOOT | 90.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 98950

State Job # - C-99-050-06
PPS NBR - 9-94860-0100
County Name - WILLIAMSON- -
Code - 199 - -
District - 9 - -
Section Number - (X1-6-2)VB-2,(X1-6)HBK-2

Project Number
ACIM-HSIP-0572/146/053

Route
FAI 57
FAU 9629

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 81021550 | CON AUGERED 2 PVC | FOOT | 43.000 | | | | |
| 81021560 | CON AUGERED 2 1/2 PVC | FOOT | 185.000 | | | | |
| 81021580 | CON AUGERED 3 1/2 PVC | FOOT | 98.000 | | | | |
| 81021590 | CON AUGERED 4 PVC | FOOT | 76.000 | | | | |
| 81100600 | CON AT ST 2 GALVS | FOOT | 445.000 | | | | |
| 81200230 | CON EMB STR 2 PVC | FOOT | 268.000 | | | | |
| 81300800 | JUN BX SS AS 18X12X6 | EACH | 11.000 | | | | |
| 81400700 | HANDHOLE PCC | EACH | 10.000 | | | | |
| 81500100 | GULFBOX JUNCTION | EACH | 10.000 | | | | |
| 81603000 | UD 2#8 #8G XLPUSE 3/4 | FOOT | 2,530.000 | | | | |
| 81603025 | UD 2#4 #4G XLPUSE 1 | FOOT | 4,135.000 | | | | |
| 81603035 | UD 2#6 #6G XLPUSE 1 | FOOT | 3,950.000 | | | | |
| 81702410 | EC C XLP USE 3-1C 4 | FOOT | 190.000 | | | | |
| 81702420 | EC C XLP USE 3-1C 8 | FOOT | 175.000 | | | | |
| 81900200 | TR & BKFIL F ELECT WK | FOOT | 11,415.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 98950

State Job # - C-99-050-06
PPS NBR - 9-94860-0100
County Name - WILLIAMSON- -
Code - 199 - -
District - 9 - -
Section Number - (X1-6-2)VB-2,(X1-6)HBK-2

Project Number
ACIM-HSIP-0572/146/053

Route
FAI 57
FAU 9629

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 82102250 | LUM SV HOR MT 250W | EACH | 34.000 | | | | |
| 82102400 | LUM SV HOR MT 400W | EACH | 19.000 | | | | |
| 82107300 | UNDERPAS LUM 150W HPS | EACH | 6.000 | | | | |
| 82500540 | LT CONT CBRCS 100-480 | EACH | 1.000 | | | | |
| 82500605 | LT CONTROL PC RELAY | EACH | 2.000 | | | | |
| 83003600 | LT P A 45MH 15DA | EACH | 27.000 | | | | |
| 83004100 | LT P A 50MH 4DA | EACH | 4.000 | | | | |
| 83004600 | LT P A 50MH 15DA | EACH | 15.000 | | | | |
| 83600355 | LP F M 15BC 8" X 6' | EACH | 27.000 | | | | |
| 83600357 | LP F M 15BC 8" X 8' | EACH | 15.000 | | | | |
| 83800650 | BKWY DEV COU SS SCRN | EACH | 168.000 | | | | |
| 85700200 | FAC T4 CAB | EACH | 2.000 | | | | |
| 87301225 | ELCBL C SIGNAL 14 3C | FOOT | 287.000 | | | | |
| 87301245 | ELCBL C SIGNAL 14 5C | FOOT | 1,312.000 | | | | |
| 87301255 | ELCBL C SIGNAL 14 7C | FOOT | 4,595.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 98950

State Job # - C-99-050-06
PPS NBR - 9-94860-0100
County Name - WILLIAMSON- -
Code - 199 - -
District - 9 - -
Section Number - (X1-6-2)VB-2,(X1-6)HBK-2

Project Number
ACIM-HSIP-0572/146/053

Route
FAI 57
FAU 9629

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 87301305 | ELCBL C LEAD 14 1PR | FOOT | 7,039.000 | | | | |
| 87501200 | TS POST 16 | EACH | 2.000 | | | | |
| 87600100 | PED PUSH-BUT POST T1 | EACH | 2.000 | | | | |
| 87700180 | S MAA & P 28 | EACH | 1.000 | | | | |
| 87702860 | STL COMB MAA&P 26 | EACH | 1.000 | | | | |
| 87702930 | STL COMB MAA&P 40 | EACH | 2.000 | | | | |
| 87703000 | STL COMB MAA&P 55 | EACH | 2.000 | | | | |
| 87800100 | CONC FDN TY A | FOOT | 6.000 | | | | |
| 87800210 | CONC FDN TY D SPL | FOOT | 6.000 | | | | |
| 87800400 | CONC FDN TY E 30D | FOOT | 20.000 | | | | |
| 87800415 | CONC FDN TY E 36D | FOOT | 56.000 | | | | |
| 88040070 | SH P LED 1F 3S BM | EACH | 3.000 | | | | |
| 88040090 | SH P LED 1F 3S MAM | EACH | 9.000 | | | | |
| 88040150 | SH P LED 1F 5S BM | EACH | 1.000 | | | | |
| 88040160 | SH P LED 1F 5S MAM | EACH | 3.000 | | | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 98950

State Job # - C-99-050-06
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Section Number - (X1-6-2)VB-2,(X1-6)HBK-2

Project Number
ACIM-HSIP-0572/146/053

Route
FAI 57
FAU 9629

| Item Number | Pay Item Description | Unit of Measure | Quantity | x | Unit Price | = | Total Price |
|---|---|---|---|---|---|---|---|
| 88040260 | SH P LED 2F 1-3 1-5BM | EACH | 4.000 | | | | |
| 88040290 | SH P LED 2F 5S BM | EACH | 2.000 | | | | |
| 88102810 | PED SH P LED 1F BM | EACH | 2.000 | | | | |
| 88200100 | TS BACKPLATE | EACH | 12.000 | | | | |
| 88500100 | INDUCTIVE LOOP DETECT | EACH | 16.000 | | | | |
| 88500200 | IND LOOP DET SYS OUT | EACH | 9.000 | | | | |
| 88600100 | DET LOOP T1 | FOOT | 3,000.000 | | | | |
| 88800100 | PED PUSH-BUTTON | EACH | 2.000 | | | | |

**CONTRACT NUMBER** **98950**

**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.

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.

(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:

_____

_____

**RETURN WITH BID/OFFER**

# 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. _____
_____

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 71/2% 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 statues of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ___No __

---

(f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes ___No __

---

(g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government. Yes ___No __

---

## RETURN WITH BID/OFFER

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

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

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

### APPLICABLE STATEMENT

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

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

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

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

### 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

**RETURN WITH BID/OFFER**

# ILLINOIS DEPARTMENT OF TRANSPORTATION

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

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

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

**DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION**

**1. Identifying Other Contracts & Procurement Related Information.** The BIDDER shall identify whether it has any pending contracts (including leases), bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency: Yes ___ No __
**If "No" is checked,** the bidder only needs to complete the signature box on the bottom of this page.

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

**THE FOLLOWING STATEMENT MUST BE SIGNED**

_____
Name of Authorized Representative (type or print)

_____
Title of Authorized Representative (type or print)

_____ _____
Signature of Authorized Representative Date

**RETURN WITH BID**

## SPECIAL NOTICE TO CONTRACTORS

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

## CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

(a) All bidders on construction contracts shall complete and submit, along with and as part of their bids, a Bidder's Employee Utilization Form (Form BC-1256) setting forth a projection and breakdown of the total workforce intended to be hired and/or allocated to such contract work by the bidder including a projection of minority and female employee utilization in all job classifications on the contract project.

(b) The Department of Transportation shall review the Employee Utilization Form, and workforce projections contained therein, of the contract awardee to determine if such projections reflect an underutilization of minority persons and/or women in any job classification in accordance with the Equal Employment Opportunity Clause and Section 7.2 of the Illinois Department of Human Rights' Rules and Regulations for Public Contracts adopted as amended on September 17, 1980. If it is determined that the contract awardee's projections reflect an underutilization of minority persons and/or women in any job classification, it shall be advised in writing of the manner in which it is underutilizing and such awardee shall be considered to be in breach of the contract unless, prior to commencement of work on the contract project, it submits revised satisfactory projections or an acceptable written affirmative action plan to correct such underutilization including a specific timetable geared to the completion stages of the contract.

(c) The Department of Transportation shall provide to the Department of Human Rights a copy of the contract awardee's Employee Utilization Form, a copy of any required written affirmative action plan, and any written correspondence related thereto. The Department of Human Rights may review and revise any action taken by the Department of Transportation with respect to these requirements.

**RETURN WITH BID**

Illinois Department of Transportation

**Contract No. 98950**
**WILLIAMSOM County**
**Section (X1-6-2)VB-2,(X1-6)HBK-2**
**Project ACIM-HSIP-572(146)53**
**Routes FAI 57 & FAU 9629**
**District 9 Construction Funds**

**PART I. IDENTIFICATION**

Dept. Human Rights # _____ Duration of Project: _____

Name of Bidder: _____

**PART II. WORKFORCE PROJECTION**

A. The undersigned bidder has analyzed minority group and female populations, unemployment rates and availability of workers for the location in which this contract work is to be performed, and for the locations from which the bidder recruits employees, and hereby submits the following workforce projection including a projection for minority and female employee utilization in all job categories in the workforce to be allocated to this contract:

TABLE A

| TOTAL Workforce Projection for Contract | | | | | | | | | | | | | TABLE B: CURRENT EMPLOYEES TO BE ASSIGNED TO CONTRACT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MINORITY EMPLOYEES | | | | | | TRAINEES | | | | | | | |
| JOB CATEGORIES | TOTAL EMPLOYEES | | BLACK | | HISPANIC | | *OTHER MINOR. | | APPREN-TICES | | ON THE JOB TRAINEES | | TOTAL EMPLOYEES | | MINORITY EMPLOYEES | |
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| OFFICIALS (MANAGERS) | | | | | | | | | | | | | | | | |
| SUPERVISORS | | | | | | | | | | | | | | | | |
| FOREMEN | | | | | | | | | | | | | | | | |
| CLERICAL | | | | | | | | | | | | | | | | |
| EQUIPMENT OPERATORS | | | | | | | | | | | | | | | | |
| MECHANICS | | | | | | | | | | | | | | | | |
| TRUCK DRIVERS | | | | | | | | | | | | | | | | |
| IRONWORKERS | | | | | | | | | | | | | | | | |
| CARPENTERS | | | | | | | | | | | | | | | | |
| CEMENT MASONS | | | | | | | | | | | | | | | | |
| ELECTRICIANS | | | | | | | | | | | | | | | | |
| PIPEFITTERS, PLUMBERS | | | | | | | | | | | | | | | | |
| PAINTERS | | | | | | | | | | | | | | | | |
| LABORERS, SEMI-SKILLED | | | | | | | | | | | | | | | | |
| LABORERS, UNSKILLED | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | | |

TABLE C

| TOTAL Training Projection for Contract | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| EMPLOYEES IN TRAINING | TOTAL EMPLOYEES | | BLACK | | HISPANIC | | *OTHER MINOR. | |
| | M | F | M | F | M | F | M | F |
| APPRENTICES | | | | | | | | |
| ON THE JOB TRAINEES | | | | | | | | |

FOR DEPARTMENT USE ONLY

*Other minorities are defined as Asians (A) or Native Americans (N).

Please specify race of each employee shown in Other Minorities column.

**Note: See instructions on the next page**

**PART II. WORKFORCE PROJECTION -** continued

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

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

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

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

**PART III. AFFIRMATIVE ACTION PLAN**

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

B. The undersigned bidder understands and agrees that the minority and female employee utilization projection submitted herein, and the goals and timetable included under an Affirmative Action Plan if required, are deemed to be part of the contract specifications.

Company _____ Telephone Number _____

_____

Address _____

**NOTICE REGARDING SIGNATURE**

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

Signature: _____ Title: _____ Date: _____

Instructions: All tables must include subcontractor personnel in addition to prime contractor personnel.

Table A - Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work.

Table B - Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed.

Table C - Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A.

**RETURN WITH BID**

## ADDITIONAL FEDERAL REQUIREMENTS

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

A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.

B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:

1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____

2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES _____ NO _____

**RETURN WITH BID**

**Contract No. 98950**
**WILLIAMSOM County**
**Section (X1-6-2)VB-2,(X1-6)HBK-2**
**Project ACIM-HSIP-572(146)53**
**Routes FAI 57 & FAU 9629**
**District 9 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.

Firm Name _____

(IF AN INDIVIDUAL) Signature of Owner _____

Business Address _____

_____

---

Firm Name _____

By _____

(IF A CO-PARTNERSHIP) Business Address _____

_____
Name and Address of All Members of the Firm:

_____ _____

---

Corporate Name _____

By _____
Signature of Authorized Representative

(IF A CORPORATION)

_____
Typed or printed name and title of Authorized Representative

Attest _____
Signature

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

---

Corporate Name _____

By _____
Signature of Authorized Representative

(IF A JOINT VENTURE)

_____
Typed or printed name and title of Authorized Representative

Attest _____
Signature

Business Address _____

_____

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

**RETURN WITH BID**

Illinois Department of Transportation

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

Item No. _____
Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

_____

as PRINCIPAL, and _____

_____ as SURETY, are held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in Article 102.09 of the "Standard Specifications for Road and Bridge Construction" in effect on the date of invitation for bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

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

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

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

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this _____ day of _____ A.D., _____.

| **PRINCIPAL** | **SURETY** |
|---|---|
| _____ (Company Name) | _____ (Company Name) |
| By: _____ (Signature & Title) | By: _____ (Signature of Attorney-in-Fact) |

**Notary Certification for Principal and Surety**

STATE OF ILLINOIS,
COUNTY OF _____

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

_____and _____

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

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

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

My commission expires _____ _____
Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing 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

Illinois Department of Transportation

# 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. 98950**
**WILLIAMSOM County**
**Section (X1-6-2)VB-2,(X1-6)HBK-2**
**Project ACIM-HSIP-572(146)53**
**Routes FAI 57 & FAU 9629**
**District 9 Construction Funds**

Illinois Department of Transportation

Illinois Department of Transportation

# NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., March 9, 2007. 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. 98950**
   **WILLIAMSOM County**
   **Section (X1-6-2)VB-2,(X1-6)HBK-2**
   **Project ACIM-HSIP-572(146)53**
   **Routes FAI 57 & FAU 9629**
   **District 9 Construction Funds**

**Interchange reconstruction, bridge removal and replacement including the structures carrying I-57 over Old IL Route 13 and Crab Orchard and Eqyptian Railroad, overlay on the structures carrying I57 over IL Route 13, rubblizing pavement and resurfacing on I-57, ramp reconstruction and other improvements, all located at the FAI Route 57/Old IL Route 13 interchange in Marion (SN 100- 0005, 0008, 0009, 0084, 0085, 0086, 0087).**

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 January 1, 2007

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

## SUPPLEMENTAL SPECIFICATIONS

## RECURRING SPECIAL PROVISIONS

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

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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, 2007, 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 57 & FAU 9629 (Old Ill. 13), Section (X1-6-2)VB-2, (X1-6)HBK-2, Williamson County, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

## LOCATION OF PROJECT

This project is located at the FAI 57/ FAU 9629 (Old Ill. 13) interchange in Marion. The length of the project is 0.671 mile.

## DESCRIPTION OF PROJECT

The proposed project consists of the removal of the structures carrying FAI 57 over Old Ill. 13 and the C.O. & E. R.R., construction of new structures, rubblizing the existing pavement on FAI 57, and placing hot-mix asphalt pavement. The structures carrying FAI 57 over Ill. 13 will be hydro-scarified, patched, and a standard concrete overlay placed. All of the existing ramps will be removed and reconstructed on new alignments with full depth hot—mix asphalt pavement and 10” PCC pavement. The existing sign trusses will be removed and replaced as well as the existing ground mount signs. A permanent concrete barrier with a storm sewer system will be constructed down the median of FAI 57. An additional EB lane will be constructed on Old Ill. 13 with full depth hot-mix asphalt pavement. Proposed work also includes patching, resurfacing, storm sewers, inlets, combination curb and gutter, and sidewalk. New signals will be constructed at the intersections of Old Ill. 13 with the NB FAI 57 ramps and SB FAI 57 ramps. The existing tower lighting will be removed along FAI 57 and Old Ill. 13. New lighting using 45’ poles will be placed. Existing culverts will be extended, earthwork, tree removal, seeding, erosion control, and pavement markings will also be included in the contract.

## UTILITIES

Effective 1984 Revised 1/2/97

Add the following after the first paragraph of Article 105.07 of the Standard Specifications:

Underground utilities have been plotted from available surveys and records and, therefore, their locations must be considered approximate only. There also may be utilities for which the

locations are unknown. Verification of locations of underground utilities, shown or not shown, will be the responsibility of the Contractor. The following utility companies have facilities within the project limits which will require adjustment:

| Name and Address of Utility | Type | Locations | Estimated Date Adjustment Completed |
|---|---|---|---|
| Verizon<br>208 West Union<br>Marion, IL 62959 | Buried phone | Old Ill. 13:<br>RT. Sta. 753+20 to<br>RT. Sta. 773+45 | April 2007 |
| City of Marion<br>Water and Sewer Departments<br>1102 Tower Square<br>Marion, IL 62959 | Water | Old Ill. 13:<br>LT. Sta. 760+67 to LT. Sta. 761+53.; LT. Sta. 774+31 to LT. Sta. 784+40 | Prior to or during construction |
| City of Marion<br>Water and Sewer Departments<br>1102 Tower Square<br>Marion, IL 62959 | Sanitary Sewer | Old Ill. 13:<br>RT. Sta. 782+50 to<br>RT. Sta. 784+00 | No adjustments anticipated |
| Ameren CIPS<br>1800 West Main Street<br>Marion, IL 62959 | Buried electric<br><br><br>Gas | Old Ill. 13:<br>RT. Sta. 753+20 to RT. 773+45<br>Old Ill. 13:<br>LT. Sta. 753+20 to LT. Sta. 755+85;<br>RT. Sta. 755+85 to RT. Sta. 765+40;<br>LT. Sta. 775+23 to LT. Sta. 783+50;<br>RT. Sta. 782+35 to RT. Sta. 784+00 | Prior to or during construction |
| Mediacom<br>1603 East DeYoung Street<br>Marion, IL 62959 | Buried Cable TV | Old Ill. 13: LT. Sta. 753+20 to LT. Sta. 753+95; RT. Sta. 753+95 to RT. Sta. 773+45 | Prior to or during construction |
| Southeastern Illinois Electric Coop<br>P.O. Box 251<br>Eldorado, IL 62930 | Aerial Electric | | No Adjustments anticipated |

Additional utility information may be obtained by calling the "Joint Utility Location Information for Excavators" phone number, 800-892-0123. This project is located in the West Marion Township.

Add the following after the first paragraph of Article 107.31 of the Standard Specifications:

The Contractor is advised that this project includes areas of highway illumination. These areas have underground cable or conduit throughout which is to remain in service. Before driving any posts or beginning any excavation operations, the Contractor shall locate, uncover by hand and relocate any wiring which conflicts with the proposed work. Any cable or conduit which is damaged as a result of the Contractor's operations shall be replaced by him at his expense. Replacement material and methods shall meet or exceed the original specifications for the wiring. Splicing will be permitted.

**VERIZON MANHOLES**

The Contractor shall take care in working around the Verizon manholes right of Stations 759+00, 764+50, 769+00, and 773+00. These stations are approximate.

The Contractor shall also consider in their bid that the Verizon manhole lids, at the approximate Stations 764+50 and 769+00, will need to be incorporated into the sidewalk at these locations.

This work shall not be paid for separately, but shall be included in the contract unit price for PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH.

**TRAFFIC CONTROL PLAN**
Effective 1985 Revised 2/17/99

Traffic control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the guidelines contained in the National Manual on Uniform Traffic Control Devices for Streets and Highways, the Supplemental Specifications, 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 and Section 701 of the Standard Specifications for Road and Bridge Construction and the following traffic control related (1) Highway Standards; (2) Supplemental Specifications and Recurring Special Provisions; (3) other Special Provisions; and (4) Plan Details which are included in this contract:

1. Highway Standards:
   701311 701411 701602 701101 701400 701422 701606 701106
   701401 701426 701701 701301 701402 701502

2. Supplemental Specifications and Recurring Special Provisions:
   Work Zone Public Information Signs

3. Special Provisions:
   (a) Traffic Control and Protection
   (b) Traffic Control SN 100-0005 and SN 100-0009
   (c) Portable Changeable Message Signs
   (d) Lane Rental
   (e) Equipment Parking and Storage
   (f) Rubblized Pavement Stage Construction Requirements

4. Plan Details:
   (a) Bridge Rehabilitation Ill. 13 Prestage 1
   (b) Bridge Rehabilitation Ill. 13 Prestage 2
   (c) Bridge Rehabilitation Old Ill. 13 Prestage 3
   (d) Bridge Rehabilitation Old Ill. 13 Prestage 4
   (e) Bridge Rehabilitation Ill. 13 PreStage 1A
   (f) Bridge Rehabilitation Ill. 13 Prestage 1B
   (g) Bridge Rehabilitation Ill. 13 Prestage 1C
   (h) Stages 1,1A, 2,3,4,5,6,7,7A, 7B, 7C and 8 I-57 Plan Sheets
   (i) Stages 1,2,3,4, and 5 Old Ill. 13 Plan Sheets
   (j) Detour Plan Ramp FF Closed
   (k) Detour Plan Ramp E & FF Closed
   (l) Detour Plan Ramp E, F, & FF Closed
   (m) Detour Plan Ramp E & EE Closed

Traffic control standards shall be applied as directed by the Engineer. Suggested applications for each standard are as follows:

701101 This standard should be used for work operations along FAI 57 such as guardrail installation, seeding, sign installation, and other operations that fall within the region 15' to 2' from the pavement edge.

701106 This standard should be used for work operations along FAI 57 that are more than 15' from the edge of the pavement. Work shall include seeding, earth excavation, and box culvert extensions.

701301 This standard should be used along Old Ill. 13 when short time work operations are being performed. Typical operations are hot mix density testing, application of temporary pavement marking, marking patches, and miscellaneous survey operations.

701311 This standard should be used along Old Ill. 13 for pavement marking or other continous or intermittent moving operations where the average speed is greater than 3 mph.

701400 This standard should be used along FAI 57 where at any time a lane is closed.

701401 This standard should be used along FAI 57 for night time work operations requiring a lane closure.

701402 This standard should be used along FAI 57 for work requiring lane closures using temporary concrete barrier. Bridge Rehabilitation Ill. 13 Prestage 1 and 2, Bridge Rehabilitation Old Ill. 13 Prestage 3 and 4.

701411 This standard should be used along FAI 57 for any work operations requiring a lane closure near an entrance or exit ramp.

701422 This standard should be used along Ill. 13 for any work operations requiring a lane closure. Work shall include the removal of the existing protective shield under structures 100-0008 and 100-0009 and placement of the proposed protective shield.

701426 This standard shall be used along FAI 57 for any work that is continuous or intermittent moving operations where the average speed is greater than 1 mph.

701502 This standard should be used along Old Ill. 13 for work operations requiring a lane closure in the region from Station 776+00 to Station 784+40.

701602 This standard should be used along westbound Old Ill. 13 for work operations requiring a lane closure in the region from Station 753+20 to Station 776+00. Case IV of this standard shall also be used for the eastbound lane addition. The arrow board will not be required and the existing lane shall be shifted a few feet. The “Right Lane Closed Ahead” sign shall be replaced with a lane shift sign W1-4L(0).

701606 This standard should be used along Old Ill. 13 for work requiring a lane closure. Work shall include final resurfacing.

701701 This standard should be used along Old Ill. 13 for work encroaching on the pavement during radius work and shoulder work at the intersections with Ramp E/EE and Ramp F/FF.

During the entire construction period, the road shall be kept open to traffic as follows:

(a) During Bridge Rehabilitation Ill. 13 Prestage 1 and 2 FAI 57 shall be kept open to at least one lane in each direction. Exit ramps, Ramps AA, B, CC, and D, shall remain open at all times. Entrance ramps, Ramps BB, and DD, shall be closed.

(b) During Bridge Rehabilitation Old Ill. 13 Prestage 3 and 4 FAI 57 shall be kept open to at least one lane of traffic in each direction. Exit ramps, Ramps EE and F, shall remain open at all times. Entrance ramps, Ramp E and FF shall be closed.

(c) FAI 57 shall be kept open to two lanes of traffic during daylight hours for Stages 1-8. FAI 57 may be closed to one lane in each direction during night time work during the hours of 7:00 PM to 7:00 AM for Stages 1-8.

(d) Old Ill. 13 shall be kept open to at least one lane of traffic in each direction to the greatest extent possible.

(e) Old Ill. 13 shall be closed to traffic during the removal of the existing beams on SN 100-0004 and SN 100-0005 and setting the proposed beams for SN 100-0084 and SN 100-0085. The maximum time of closure shall be 30 minutes.

(f) Entrance Ramp FF shall be closed to traffic. This ramp shall not be closed until all the detour signing shown in the plans is in place. The maximum closure time for Ramp FF shall be 14 months.

(g) Entrance Ramp E shall be closed to traffic. This ramp shall not be closed until all the detour signing shown in the plans is in place. The maximum closure time shall be 14 months.

(h) Exit Ramp F shall remain open to traffic during stages 1-8. Ramp F will be allowed to be closed for a period of two weeks to complete the staging for this ramp.

(i) Exit Ramp EE shall remain open to traffic during stages 1-8. Ramp EE will be allowed to be closed for a period of one week to complete the staging for this ramp.

(j) Access to all public roads and private entrances shall be maintained during all stages of the work.

(k) Cones, drums or barricades shall be placed on the closed lane, not the open lane. They may be moved over to the open lane to allow paving equipment to pass but shall be immediately moved back to the closed lane after the last roller pass.

**TRAFFIC CONTROL AND PROTECTION**

This work shall consist of furnishing, installing, maintaining, and removing all traffic control devices shown in the plans for Stages 1-8 for FAI 57 and Stages 1-5 for Old Ill. 13. Items such as temporary concrete barrier, pavement marking, removal of pavement markings, and impact attenuators will be paid for separately.

Traffic control closing a lane on FAI 57 at night will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701401.

Traffic Control and Protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION.

**TRAFFIC CONTROL SN 100-0005 AND SN 100-0009**

The plans show separate traffic control for work on SN 100-0005 and SN100-0009. The Contractor may place traffic control that will include both structures. If the Contractor elects this option he/she shall notify the Engineer in writing. No additional compensation will be allowed for choosing this option.

**TRAFFIC CONTROL AND PROTECTION STANDARD 701422**

This work shall include traffic control items required to close a lane on Ill. 13 to remove the existing protective shield under structures 100-0008 and 100-0009. This work shall be completed at night. No lane closures will be allowed between the hours of 8:00 AM and 8:00 PM. All ramps for the FAI 57/ Ill. 13 interchange shall remain open during this work. Additional flaggers and signs shall be required as shown in the plans for Bridge Rehabilitation Ill. 13 Pre-Stage 1A, Bridge Rehabilitation Pre-Stage 1B, and Bridge Rehabilitation Pre-Stage 1C.

This work will be measured for payment as lump sum.

This work be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION, STANDARD 701422 which price shall include all items shown on standard 701422 as well as the additional flaggers, signs, and barricades as shown in the plans.

**PORTABLE CHANGEABLE MESSAGE SIGNS**

Portable changeable message signs shall be placed on FAI 57 at 1, 5, and 8 miles in advance of the work zone. Six signs are required.

Portable changeable message signs shall be placed on Ill. 13 for Bridge Rehabilitation Ill. 13 Prestage 1 and Prestage 2 for the ramp entrance closures. Two signs are required. Signs shall also be required for Bridge Rehabilitation Ill. 13 Prestage 1A, Bridge Rehabilitation Ill. 13 Prestage 1B, and Bridge Rehabilitation Ill. 13 Prestage 1C. Two signs are required for each of these stages.

Portable changeable message signs shall be placed on Old Ill. 13 for Bridge Rehabilitation Old Ill. 13 Prestage 3 and Prestage 4 for the entrance ramp closures.

Two signs are required. These signs shall be used for the long term closures of Ramp E and Ramp FF.

Message signs for northbound traffic shall contain the wording “ROAD WORK AHEAD”, “EXIT RAMPS OPEN” and “RETURN VIA IL 13”. Messages containing the wording “ramp closures” or “return access via detour” shall not be used.

Message signs shall be used to direct traffic to the Ill. 13 exit if traffic backs up on the exit ramps during periods of one lane closures and closures on Old Ill. 13.

**RUBBLIZED PAVEMENT STAGE CONSTRUCTION REQUIREMENTS**

1. Only Method I rubblization will be allowed.
2. The Material Transfer Device will be allowed on the rubblized pavement.
3. Truck traffic or a Material Transfer Device will not be allowed upon the pavement until the bituminous has cooled for 12 hours except for delivery of materials.
4. Traffic will be limited on the final lift of binder for 12 days.

**EQUIPMENT PARKING AND STORAGE**

Revise the first paragraph of Article 701.04(b)(3) to read: During working hours, all vehicles and/or non-operating equipment which are parked, 2 hours or less, shall be parked at least 8 feet from the open traffic lane. For other periods of time during working or non-working hours, all vehicles, materials, and equipment shall be parked or stored in a protected area, if the

protected area is within a distance of 1,000 feet of the work operation. If there is no protected area within the 1,000 feet, the Contractor may park the equipment 30 feet from the edge of the open lane providing there is no part of the equipment within the 30 feet. The 30 feet is acceptable for 4:1 slopes and flatter. If the distance to a protected area or clear zone region requires the equipment to be moved more than the 1,000 feet, then the Contractor shall load and transport the equipment to the protected area or beyond clear zone region. A protected area is defined as behind temporary concrete barrier, temporary bridge rail, or other man-made or natural barriers.

**THREE WEEK NOTIFICATION PRIOR TO STARTING WORK**
Effective December 2005

Revise the first sentence of Article 107.09 Public Convenience and Safety to the following "The Contractor shall notify the Engineer at least 21 days in advance of starting any construction work.

This additional notification is required so that the public can be notified of the pending construction.

**PROSECUTION AND PROGRESS**

Time is of the essence in this contract. It may be necessary for the Contractor to work longer hours, use additional crews, and work during weekends in order to complete the work within the required time limit. The Contractor will not be allowed any extra compensation for working longer hours, using extra shifts or working on weekends to meet the specified Completion Date.

The Contractor shall complete all Prestage 1,1A,1B, 1C, 2,3, and 4 work before any other work begins.

**DATE OF COMPLETION**

The Contractor shall schedule his/her operations so as to complete all work on this contract by January 1, 2009. The Contractor will be allowed 10 additional days to work beyond the completion date for cleanup and punchlist items.

**FAILURE TO COMPLETE THE WORK ON TIME**

Should the Contractor fail to complete the work on or before January 1, 2009 or within such extended time allowed by the Department, the Contractor shall be liable and shall pay to the Department $2,550 per calendar day, not as a penalty, but as liquidated damages, for each day of overrun in the contract time or such extended time as may have been allowed.

**LANE RENTAL**

Description. The Contractor will be charged a monetary assessment for each day or part of a day that each northbound and southbound lane is closed to traffic in excess of an accumulated total allowed of 30 days to perform all patching to SN 100-0005, all bridge deck hydro-scarification, deck patching, and bridge deck concrete overlay to SN 100-0008, all bituminous concrete surface removal (asbestos), bridge deck hydro-scarification, deck patching, and bridge deck concrete overlay to SN 100-0009. Lane Rental will be assessed a minimum of one day for the time the Contractor occupies or obstructs part of the roadway. Lane Rental in excess of allotted number of days will be deducted from the monthly progress payments.

Lane Rental. The Contractor will be assessed a minimum of a one day Lane Rental charge for each lane closure or obstruction during the calendar day or partial calendar day.

A Lane Rental closure will be measured as a 12 foot wide traffic lane, or any part thereof per direction of travel that is closed to traffic. If a northbound and a southbound lane are both closed, then two closures will be assessed.

The Contractor is advised that there may be another adjacent contract in progress.

Incentive Payment Plan. The Contractor shall be entitled to an Incentive Payment for the completion of all work necessary to open all lanes to traffic as set forth by the number of days allowed for Lane Rental in the Contract.

The Incentive Payment shall be paid at the Rate of $14,000 for each day of Lane Rental less than the amount Lane Rental days allowed by the Contract. The maximum number of incentive days under this plan will be 5 days.

No Lane Rental Incentive Payment will be made if the Contractor fails to complete the work within the days allowed for Lane Rental or within such extended time allowed for Lane Rental by the Department. Failure of the Contractor to complete all work as required by the Contract within the days allowed for Lane Rental shall release and discharge the State, the Department and all of its officers, agents, and employees from any and all claims and demands for the payment of any incentive amount of damages arising from the refusal to pay any incentive amount.

Disincentive Plan (Lane Rental Days Exceeding Allotted Days). The Contractor shall be liable to the Department in the amount of $14,000 for each Lane Rental day beyond the number of Lane Rental days allowed in the Contract. There is no limit to the number of Lane Rental days assessed that exceed the allotted days.

**BORROW EXCAVATION**

A Contractor request for approval of a proposed borrow pit shall contain:

(a) An 8 ½ X 11 topographic map or sketch containing the dimensions of the area proposed and the locations of pertinent landmarks, the name(s) of the property owner(s), and the proposed depth of cut. (b) A statement that approval has been obtained from the property owner to allow entry upon his/her property for material investigation.

The Contractor shall provide access for truck mounted drilling equipment, if required, to all areas where he/she requests material investigations.

Borrow excavation furnished by the Contractor that is to be used in the roadway embankment without restrictions must meet the following requirements:

| | |
|---|---|
| Minimum Standard Dry Density | 90 pcf |
| Maximum Organic Content | 10% |
| Minimum Plasticity Index | 10% |
| Maximum Liquid Limit | 50% |

Material not meeting these requirements will be assigned varying degrees of restriction up to and including complete rejection depending on the engineering properties of the material. These restrictions if any will be set forth in the proposed borrow material report.

Depending upon the workload at the time, the field sampling and laboratory testing of the proposed borrow may take up to 15 working days.

**DEMOLITION PLAN**

The Contractor shall submit a demolition plan for the removal of existing structures 100-0004, 100-0005, 100-0006, and 100-0007. This plan shall include a removal sequence, supporting calculations, and shall be sealed by an Illinois Licensed Structural Engineer. This plan shall be approved by the Engineer in writing before and removal begins.

**REMOVAL OF UNSTABLE SOILS**

The following location was identified as containing material that will not provide a stable platform for paving operations:

| | | |
|---|---|---|
| I-57 | Station 1520+00 to 1528+50 | (Additional lanes in existing median) |
| I-57 | Station 1536+50 to 1542+00 | (Additional lanes in existing median) |

This area shall be undercut 18” to stable material as determined by the Engineer. The excavated soils shall be replaced with aggregate, suitable borrow, or earth excavation. The material placed in the undercuts is considered part of the embankment and shall be placed and compacted in accordance with the requirements of Article 205 of the Standard Specifications.

The excavated undercut material may be used elsewhere in the embankment subject to the following restrictions: 1) the placement location of the undercut soils must be approved by the Engineer, and 2) the moisture content of the undercut material must be reduced by thorough disking to not more than 110% of Standard Proctor Optimum.

Excavation of the undercut material will be paid for at the contract unit price for EARTH EXCAVATION. No additional compensation will be allowed for the additional drying and/or haul distance required to meet the requirements of this special provision.

The undercut location listed above is approximate and may be increased or reduced by the Engineer as field conditions warrant.

**MUCK REMOVAL**

The existing ditch located right of ramp “E” from Station 0+50 to 6+50 will be relocated and filled with embankment. This ditch normally contains standing water and cattails. There is at least 1 foot of muck in the ditch. The Contractor shall remove and waste this material outside the embankment prior to placing the embankment.

This work shall be paid for at the contract unit price per cubic yard for EARTH EXCAVATION.

**SUBGRADE**
Effective 1984 Revised 1/2/97

In addition to the provisions of Article 301.03 of the Standard Specifications which require that the entire subgrade shall be compacted to not less than 95% of the standard laboratory density, in cut sections the top 150mm (6") of the subgrade shall not contain more than 120% of the optimum moisture determined in accordance with AASHTO T 99 (Method A or C). The cost of this work will not be paid for directly but shall be included in the cost of the various pay items for the pavement structure.

**SUB-BASE GRANULAR MATERIAL 6”**

This work shall be done in accordance with the applicable portions of Section 207 of the Standard Specifications. The material shall conform to Article 1004.05 of the Standard Specifications except as follows:

1. Crushed Stone, Crushed Blast Furnace Slag, and Crushed Concrete will be permitted. Steel slag and other expansive materials as determined through testing by the Department will not be permitted.

| Sieve Size | Percent Passing |
|---|---|
| 3 inches | 97±3 |
| 2 inches | 90±10 |
| 1 inches | 45±25 |
| #200 | 5±5 |

2. Crushed Gravel

| Sieve Size | Percent Passing |
|---|---|
| 3 inches | 97±3 |
| 2 inches | 90±10 |
| 1 inches | 55±25 |
| #4 | 30±20 |
| #200 | 5±5 |

3. Crushed Concrete with Bituminous Materials**

| Sieve Size | Percent Passing |
|---|---|
| 3 inches | 97±3 |
| 2 inches | 90±10 |
| 1 inches | 45±25 |
| #4 | 20±20 |
| #200 | 5±5 |

**The bituminous material shall be separated and mechanically blended with the crushed concrete so the bituminous material does not exceed 40% of the final product. The top size of the bituminous material in the final product shall be less than 3 inches and shall not contain steel slag or any material that is considered expansive by the Department.

The material shall be placed in a single lift. A vibratory roller meeting the requirements of Article 1101.01 of the Standard Specifications shall be used to roll the material to obtain the desired keying or interlock and necessary compaction. The Engineer will verify that adequate keying has been obtained.

Method of Measurement. Sub-base granular material 6" will be measured for payment in square yards.

Basis of Payment. This work will be paid for at the contract unit price per square yard for SUB-BASE GRANULAR MATERIAL 6".

**SEEDING AND MULCH**

This work shall be performed in accordance with Sections 250 and 251 of the Standard Specifications, as shown in the plans, and as follows:

(a) Class 1B Seeding (Low Maintenance Lawn Mixture) shall be used at the locations shown in the plans. The following seed mixture and rates per acre shall be used during the time of year indicated:

| Seed Mixture | Spring 3/1 to 6/1 Lbs./Acre | Fall 8/1 to 10/1 Lbs./Acre | Dormant 11/15 to 3/1 Lbs./Acre |
|---|---|---|---|
| Turf Type Fescue | 150 | 150 | 150 |
| Perennial Ryegrass | 20 | 20 | 20 |
| Redtop | 10 | 10 | 10 |
| Creeping Red Fescue | 20 | 20 | 20 |

(b) Fertilizer and agricultural ground limestone shall be uniformly spread over the designated areas immediately prior to seed bed preparation at the following rates per acre:

120 lbs. of Nitrogen Fertilizer Nutrients
120 lbs. of Phosphorus Fertilizer Nutrients
120 lbs. of Potassium Fertilizer Nutrients

2 tons of Agricultural Ground Limestone

(c) Straw mulch shall be applied to all seeded areas at the rate of 2 tons per acre of Method 2.

Basis of Payment. This work shall be paid for at the contract unit price per acre for SEEDING CLASS 1B; at the contract unit price per pound for NITROGEN FERTILIZER NUTRIENT, PHOSPHORUS FERTILIZER NUTRIENT, AND POTASSIUM FERTILIZER NUTRIENT; at the contract unit price per ton for AGRICULTURAL GROUND LIMESTONE; at the contract unit price per acre for MULCH, METHOD 2; and at the contract unit price per square yard for EROSION CONTROL BLANKET.

**TEMPORARY SEEDING AND MULCH**

This work shall be performed in accordance with Sections 250 and 251 of the Standard Specifications, as shown in the plans, and as follows:

(a) Class 7 Seeding (Temporary Turf Cover Mixture) shall be used as a temporary erosion control method when permanent seeding cannot be accomplished so as to limit the surface area of erodible earth material exposed by clearing, grubbing, excavation, borrow, and embankment operations. The following seed mixture and rates per acre shall be used during the time of year indicated:

| Seed Mixture | Spring 3/1 to 6/1 Lb./Acre | Fall 8/1 to 10/1 Lb./Acre | Winter 11/15 to 2/28 |
|---|---|---|---|
| Perennial Ryegrass | 50 | 50 | Temporary Straw Mulching Only |
| Spring Oats | 64 | - | |
| Winter Wheat | - | 64 | |

(b) Fertilizer and agricultural ground limestone shall be uniformly spread over the designated areas immediately prior to seed bed preparation at the following rates per acre:

40 lbs. of nitrogen Fertilizer Nutrients
0 lb. of Phosphorus Fertilizer Nutrients
0 lb. of Potassium Fertilizer Nutrients
0 tons of Agricultural Ground Limestone

(c) Straw mulch shall be applied to all seeded areas at the rate of 2 tons per acre of Method 2.

Basis of Payment. This work shall be paid for at the contract unit price per acre for SEEDING CLASS 7 ; at the contract unit price per pound for NITROGEN FERTILIZER NUTRIENT; and at the contract unit price per acre for MULCH, METHOD 2.

**RAILROAD CONTACT**

The Contractor shall contact Mr. Hugh W. Crane, President and Chief Engineer, of the Crab Orchard and Egyptian Railroad at 618-993-5769 as well as the Engineer when any work on the project encroaches on Railroad right-of-way.

**SN 100-0008**

The depth of the surface removal for SN 100-0008 will expose the deck reinforcement. It is crucial no equipment is allowed on the deck once the reinforcement is exposed. A concrete pump truck will be required for the proposed work. This work shall not be paid for separately, but shall be included in the contract unit cost for BRIDGE DECK CONCRETE OVERLAY.

**BRIDGE DECK CONCRETE OVERLAY**

Bridge Deck Hydro-Scarification of the depth specified in the plans is required for structures 100-0008 and 100-0009. The special provision BRIDGE DECK MICROSILICA CONCRETE OVERLAY shall be followed except the Microsilica Concrete mix shall be replaced with the mix requirements for Bridge Superstructure as specified in the standard specifications.

The final finish shall be in accordance with the last paragraph of Article 420.09 (e) (1) of the Standard Specifications.

**TEMPORARY CONCRETE BARRIER (STATE RETAINED)**
Effective 1988 Revised 6/10/02

The work of furnishing, placing, maintaining and relocating temporary concrete barrier shall be performed and paid for in accordance with the applicable portions of Section 704 of the Standard Specifications, except as follows:

1. All temporary barrier shall be the F shape design.

2. At the conclusion of the work, the temporary barriers shall become the property of the State.

3. The barrier shall be stored on the job site behind guardrail along the NB lanes of FAI 57 LT. Station 1531+75 to Station 1534+50.

This work will be paid for at the contract unit price per foot for TEMPORARY CONCRETE BARRIER and RELOCATE TEMPORARY CONCRETE BARRIER.

**TEMPORARY CONCRETE BARRIER RELOCATION**
Effective 1988 Revised 7/17/03

This item shall be performed in accordance with the plans, the applicable portions of Section 704 of the Standard Specifications, and as specified herein.

The Contractor shall plan the operations involved in removing and relocating the temporary concrete barrier so as to minimize the period when the work zone will be unprotected; and to assure that, in the opinion of the Engineer, sufficient barrier will be in place at the end of each work day to shield traffic from all hazards. During the relocation operations, cones, drums or barricades shall be placed at 10 foot centers across all gaps in the barrier.

Prior to the relocation of the temporary concrete barrier from its initial location, the Contractor shall submit and obtain the Engineer's approval of a work plan for relocating the barrier which will meet the above requirements. The Engineer may require the Contractor to first furnish and install separate additional temporary concrete barrier of sufficient length to assure that the remaining needed barrier can be relocated from the initial installation in one daylight period.

Any additional barrier which must be furnished shall be paid for at the contract unit price per foot for RELOCATE TEMPORARY CONCRETE BARRIER. No additional compensation will be allowed on account of the above requirements.

**THRIE BEAM SALVAGE**

All thrie beam, posts, and thrie beam end sections shall be salvaged. Once removed the material shall be stacked neatly on the right of way. The Engineer shall notify the Bureau of Operations when all the thrie beam material has been removed. The Bureau of Operations will load and transport the material.

The Contractor shall use care when removing these items.

This work will not be paid for separately, but shall be included in the contract unit cost for GUARDRAIL REMOVAL.

**REMOVAL OF LOOSE CONCRETE ON BRIDGE OVERHANGS**

In areas where permanent protective shield is being placed the region from the outside beam of the structure to the outside of the structure shall be chip hammered to remove loose concrete. This work shall be paid for in accordance with Article 109.04 of the Standard Specifications.

**CORING FOR GUARDRAIL INSTALLATION**

This work shall consist of removing existing pavement to install the proposed guardrail posts. The existing pavement varies in thickness from 1.0’ to 1.5’ in depth.

The Contractor shall use a core barrel for the top 8” of removal. The Contractor has the option of using the core barrel or an auger to remove the remaining pavement.

After driving the guardrail post, the void around the post shall be backfilled with earth or aggregate and capped with 3” of hot-mix asphalt shoulders or grout. The hot-mix asphalt shoulders shall be compacted to the satisfaction of the Engineer.

This work shall be paid for at the contract unit price per foot for CORING FOR GUARDRAIL INSTALLATION. Which price shall include all equipment and labor to remove the pavement and all material to backfill around the post.

When driving guardrail posts through stabilized shoulders or other paved areas that are 8” in depth or less, the work shall conform to Article 630.06 of the Standard Specifications.

**PAVEMENT PATCHING**

Add the following to Article 442.06(a)(2) of the Standard Specifications:

> "The Contractor shall drill a minimum of four cores during the first 50 square yards of patching through dowel bars or tie bars in the existing pavement using procedures and equipment that shall provide undamaged, undistorted cores of a diameter of no less than 3½ inches. Subsequently one core will be required every 400 square yards. The Engineers will designate the locations where cores will be taken. If the dowel bar or tie bar is not bonded sufficiently to the existing concrete additional cores may be required to determine the extent of the deficiency. Any patches where the bars are not bonded to the existing pavement will be removed and replaced at the Contractor's expense. If in the removal process it is discovered that more than 90% of the bars are in fact bonded sufficiently to the existing concrete, the removal and replacement patch will be measured for payment at the concrete unit price for the type of patch specified.
>
> All core holes will be filled with cement grout or other patching mixture meeting the approval of the Engineer."

Add the following to Article 442.11 of the Standard Specifications:

"The cost of coring dowel bars or tie bars and the subsequent patching of core holes will not be paid for separately, but shall be considered included in the unit price bid for CLASS B PATCHES."

**PARTIAL DEPTH PAVEMENT PATCHING**

Description. This work shall consist of partial depth removal of the existing PCC pavement structure, and replacement with bituminous concrete or concrete at the locations shown in the plans, or as directed by the Engineer. This work does not include partial depth patching on bridge decks.

Materials. The bituminous prime coat and hot-mix asphalt shall be according to Section 406 of the Standard Specifications. The mixture for the hot mix asphalt for partial depth patches shall be surface of the same type as the proposed resurfacing. Portland cement concrete shall be according to Section 1020.

Equipment. The machine used for milling shall be a self-propelled milling machine capable of milling to the specified depth without damaging the adjacent pavement that is to remain in place. A wheel saw according to Article 442.03 (e) of the Standard Specifications may also be used for partial depth pavement removal. When required, the concrete saw shall be according to Article 442.03 (d) of the Standard Specifications, except it shall be equipped with a blade of sufficient diameter to saw the pavement to the thickness required in the plans. Rollers used to compact the hot-mix asphalt shall be according to Article 442.03 of the Standard Specifications. Cleaning equipment shall be a mechanical sweeper according to Article 1101.03 of the Standard Specifications or air equipment capable of applying compressed air, at a minimum 690 kPa (100 psi), and shall have sufficient flow rate to remove all disturbed pavement debris. Air equipment shall meet the requirements of ASTM D 4285.

**Construction Requirements**

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

Partial depth removal of the pavement shall be accomplished by the use of a milling machine and/or the wheel saw. The minimum patch dimension shall be 2 feet X 2 feet. Debris from the milling or wheel saw operation shall be removed from the patch area by air equipment or mechanical sweeper and shall remove all disturbed pavement debris and any loose and/or unsound concrete. Exposed reinforcement shall be removed back to the point where the steel is in contact with sound PCC concrete. Where high steel is encountered, the depth of milling may be reduced as directed by the Engineer.

When the Engineer determines the exposed pavement will be suitable for a partial depth patch and hot-mix asphalt will be used, a bituminous prime coat shall be applied according to Article 406.05(b) of the Standard Specifications.

The prepared patch shall be filled with hot-mix asphalt with a maximum lift thickness of 3 inches. Where more than one lift is needed, the top lift shall be a minimum of 2 inches thick. The hot-mix asphalt shall be compacted to the satisfaction of the Engineer.

Hot-mix asphalt patches opened to traffic which are high or become rough by rutting, shoving, or heaving shall be corrected by trimming off high areas and/or filling depressions. Filled areas shall be rolled again. Trimming high patches or filling in depressions on rough patches shall be at the Contractor's expense.

When the Engineer determines the exposed pavement will not be suitable for a partial depth patch, or removal is one half or more of the pavement thickness, the Contractor shall remove the remaining portion of the pavement and place a full depth patch according to Section 442 of the Standard Specifications for the Class of full depth patches included in the contract. The partial removal shall be included in the cost of the full depth patch.

Method of Measurement. Partial depth patches will be measured in place and the area computed in square yards.

Basis of Payment. Partial depth patching will be paid for at the contract unit price per square yard for PAVEMENT PATCHING (PARTIAL DEPTH) which price shall include pavement removal, hot-mix asphalt or concrete, and all other materials and work necessary to complete the patch.

**DELINEATORS**
Revised 6/11/02

This work consists of furnishing and installing flexible delineator posts. The posts shall consist of a two-piece post system.

The two-piece post will meet the following requirements:

> The post shall be 2½" in diameter and approximately 62" in length. A tubular metal sleeve for ground embedment, 18" in length shall be required.
>
> The post shall be constructed of impact resistant polyethylene tubing capable of self-erecting after 10 vehicle impacts at a temperature of 0°F or above without loss of serviceability. Impacts shall be made at an angle of 25° (±5°) at a vehicle speed of 50 MPH. An inner support tube to aid in recovery after impact shall be provided. The ground anchor of heavy gauge galvanized steel, approximately 18" long with bottom end flattened for driving convenience, will be required for each post.

The top of each post shall be flattened to accommodate the required sheeting.

The posts shall be white or yellow with a matching strip of 3"x12" of high intensity reflective sheeting. Posts located on the right side shall be white; posts located on the left side shall be yellow.

Post placement shall be in accordance with Standard 635001.

The furnishing and installation of flexible delineator posts shall be paid for per each as DELINEATORS.

**FULL-ACTUATED CONTROLLER STANDARD SEQUENCE IV, IN TYPE IV CABINET**

The installation of a Traffic Actuated Controller shall meet the requirements of Sections 857, except as revised by this special provision.

A traffic actuated solid state digital controller shall comply with the requirements of NEMA Standards for Traffic Control Systems, TS1-1983, Sections 1, 2, 13 and 14. One possible start up mode shall be an all red display for a minimum of 20 seconds.

The controller shall be capable of telemetry for controller to controller and controller to computer system or solo operation data transfer. Through telemetry the system or solo operation shall be capable of being monitored on an IBM AT or compatible personal computer. Typically the controller shall be completely uploaded or downloaded through telemetry either from a remote location or side by side from the computer. The latest computer software, shall be provided so data, including all timing parameters, can be transferred. The controller will use non-volatile EEPROM memory. All harnesses shall be furnished, if different than provided previously, for the controller to controller and controller to computer data transfer. The controller shall contain all normal connectors and any special connectors required for data transfer. The controller's "D" connector termination panel, and all other connectors shall be completely terminated, even if not required in this application. The loop detector conductors shall be twisted and shielded from the cabinet terminals to the single channel loop amplifier connectors. Multiple channel amplifiers may be used provided each channel is connected by a standard single channel connector. The loop amplifier harness shall be labeled with phase number and location in the intersection. The labels shall be durable and placed to be readable while viewing the loop amplifier. The twisted shielded field cables should remain shielded to within 1" of the cabinet terminals.

The controller(s) supplied must be fully compatible with the existing Eagle Traffic Signal System, complete with internal modem(s) for connection to a ENcom radio transceiver type of remote monitoring system. Any additional components necessary for connection to the radio transceiver shall be included in this pay item. The controller shall be provided with an RS232 Port 3 as well as an RS232 Port 2. Connections on the "D" panel, Aux. one output should be connected to Pre-empt 3 and 4. Aux. three should be connected to the special status 3 input. Special status 1 shall be connected to report if the cabinet door is open. Special status 2 shall be connected to report if the cabinet temperature is over the preset temperature. Special Status 4 shall be connected to report when the ups battery is low. Special status 5 shall be connected to report if the ups is on due to a power failure. Special Status 6 shall be connected to report to check the surge arrestor.

The controller shall contain an internal time base coordinator (TBC) in accordance with Section 1073.01(c)(1). One mode of operation should be Sequential Omit using software Rev. 3.32k.

The controller(s) supplied shall be complete with internal modem(s). The controller(s) shall be programmed and put into operation by the Contractor or his agent to provide the signal and coordination sequence as specified by the IDOT District 9 Traffic Section.

Pedestrian Channels will not require special monitoring. Short Clearance and Dual Indication monitoring will be used on all channels. Loading of unused load switch outputs may be necessary to prevent false failures. The monitor shall have a connector for accessing stored data by the controller. The flash transfer relays shall not be energized during flash operation (conflict or manual). The controller's "D" connector termination panel shall be provided and fully connected to provide information to the controller, of manual or monitor flash status, and cabinet door open or closed status. A door switch shall be provided if necessary. A thermo sensing device shall be installed and connected to alert remote monitoring systems when the cabinet is overheated. During conflict monitor flash a means shall be provided to restart the controller at the beginning of start up, just as if the power had been removed, and reset the monitor with a momentary pulse. The signal to restart/reset shall be delivered by telemetry and/or a momentary switch, labeled RESET, located in the police door. The pulse shall only be functional while the signals are in a monitor flash mode. Jumpers shall be installed in the unused load switch sockets to prevent false red fail reports. Hardwiring of this feature on the back panel will not be permitted. The cabinet series / parallel surge protector shall be the plug in type. The controller cabinet shall be equipped with a 16 load switch, load bay using a 12 channel conflict monitor.

The traffic signal controller will not be approved for installation until the requirements of Articles 801.10 and 801.07 are satisfied.

This work will be paid for at the contract unit price each for FULL-ACTUATED CONTROLLER AND CABINET of the type specified which price shall be payment in full for furnishing and installing the controller complete with the necessary connections for proper operation.

**GULFBOX JUNCTION**

This item shall conform to the requirements of Section 815 of the Standard Specifications for Road and Bridge Construction, and the following requirements. The gulfbox shall be made of cast iron. The lid of the box shall be a locking type with two keys furnished on each project.

Basis of Payment. Art. 815.04 of the Standard Specifications.

**HANDHOLE SPECIAL**

Composite Concrete Handholes shall conform to the requirements of Section 1088.05 of the Standard Specifications for Road and Bridge Construction, and the following requirements.

Composite Concrete Handholes shall a have a minimum eight inch deep by eight inch wide concrete collar poured completely around the handhole. The cost of this work will be considered included in the cost of the Handhole.

Basis of Payment. Art. 814.06 of the Standard Specifications.

**SERVICE INSTALLATION, TYPE A (SPECIAL)**

This work shall consist of furnishing and installing a service installation on the side of the traffic signal controller cabinet, in accordance with Article 805. The material shall meet the requirements of Article 1086.02 of the Standard Specifications. A fused disconnect shall be installed instead of the circuit breaker. Galvanized steel conduit and electrical cable as required by the utility company shall be furnished from the controller cabinet to the point of service.

This TYPE A service will be paid for at the contract unit price each for SERVICE INSTALLATION (SPECIAL), which price shall be payment in full for furnishing and installing the service installation where indicated on the plans. Any additional work or materials not covered by this special provision shall be considered included in the contract. Any charges by the utility
company to provide electrical service to the service installation will be paid for in accordance with Article 109.05 of the Standard Specifications.

**INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT**

This work shall consist of furnishing and installing an inductive loop system detector amplifier, inside a traffic controller cabinet, in accordance with Section 885, and the following:

The amplifier shall provide system output using pins "G" and "I": of the standard single channel MS connector. Pin "G" shall be the system output relay (common), and pin "I" shall be the system output relay (normally open). The system output shall not be conditioned by the delay or extend timing features. The system output shall only be conditioned by the presence or pulse mode selected on the amplifier.

This work will be paid for at the contract unit price each for INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT which price shall be payment in full for furnishing and installing the detector amplifier complete, with necessary connections and adjustments for proper operation.

**RADIO TRANSCEIVER**

This work shall consist of furnishing and installing a radio transceiver inside a traffic signal controller cabinet. The transceiver shall be microprocessor based and comply with the applicable requirements of Section 859 of the Standard Specifications for Road and Bridge Construction adopted January 1, 2007, and the following requirements:

The radio interconnect system shall consist of a data telemetry radio transceiver unit mounted in the traffic signal controller cabinet. The local transceiver shall be connected to a directional multi-element yagi type antenna aimed at the master antenna site. The antenna shall have directional characteristics that make the maximum use of the radio signal. The transceiver at the master location will have an omni-directional type antenna with 4db gain, mounted completely above any metal on the support pole.

The data telemetry radio transceiver shall draw its power from the same auxiliary power source that powers other equipment in the traffic signal cabinet. The unit shall operate on 120VAC 60HZ.

The data telemetry transceiver shall contain a PC Based Control circuitry, and connectors for advanced diagnostics. The portable diagnostic unit shall remain during the warranty period. The data telemetry transceiver shall contain a data management system, which shall interface the controller or master FSK TDM 1200-baud data to the radio transmitter and radio receiver. In effect, the data telemetry radio transceiver unit shall function as the radio equivalent of a two-wire interconnect cable. Operation of the data telemetry radio transceiver shall be completely transparent to the traffic signal controller or master. The data telemetry radio transceiver shall be capable of transmitting data at the normal 1200-baud rate of the traffic signal control equipment.

The data telemetry transceiver shall comply with all applicable NEMA Environmental Standards TS1-83 for traffic signal controllers and should have a warranty for one year.

The radio transmitter and receiver characteristics are detailed below.

DATA TELEMETRY TRANSMITTER

The transmitter shall operate according to the following specifications:

| | |
|---|---|
| Frequency Range | 900-950 MHz |
| Channels | 1 |
| Transmit/Receive Separation | 20 MHz |
| Channel Spacing | 25 kHz |
| RF Power Output | 5 Watts @ 950 MHz |
| Output Impedance | 50 Ohms |
| Frequency Stability | +/-5 PPM |
| Spurious Emissions | -50 dBc |
| FM Hum and Noise | -33 dBc |
| Duty Cycle | 100% |

DATA TELEMETRY RECEIVER

The receiver shall operate according to the following specifications:

| | |
|---|---|
| Sensitivity | .35 Microvolt (12 dB Sinad)<br>.50 Microvolt(20dBB Quieting) |
| RF Input Impedance | 50 Ohms |
| Frequency Stability | ±5 PPM |
| Selectivity | 65 dB |
| Intermodulation | 60 dB |
| Spurious and Image Reject | 60 dB |
| Modulation Acceptance | ±7.5 kHz |
| Hum and Noise | 50 dB |

The omni-directional antenna shall be mounted above the luminaries(s) and the directional antenna(s) shall be mounted near the top of the steel combination mast arm pole or highway lighting pole closest to their respective controllers or as shown on the plans.

The antenna shall be attached to the pole by stainless steel bands or other approved devices of sufficient size and strength to resist torque. A 3/4" diameter hole (for 1/2" rubber grommet) shall be drilled in the pole to accommodate the coaxial cable from the radio transceiver to the antenna. The cable to the antenna may share the same conduit as the signal and or lighting cable to the mast arm and or highway lighting pole. The antenna cable normally will not be greater than 100 feet long. The coaxial cable shall be either Times Microwave Type LMR-400 or Andrew Type CNT-400The coaxial cable connector shall be the crimp on type using only the proper crimp on device.

The manufacturer representative should be present at the intersections to inspect the installation and turn on the radio transceivers. The manufacturer of both the transceivers and the signal controllers shall cooperate to correct any communications problems. Additional equipment should be on site during the warranty period with diagnostic capabilities of both the master and local transceivers used on the ENcom Communication Software.

Basis of Payment. This work will be paid for at the contract unit price each for RADIO TRANSCEIVER, which price shall be payment in full for furnishing and installing the radio transceiver, antennas, and coaxial cable complete, with necessary connections for proper operation.

**UNINTERRUPTIBLE POWER SUPPLY**

This work shall consist of furnishing and installing an uninterruptible power supply, herein after referred to as the "UPS", in the local controller cabinet.

The UPS shall be capable of providing battery backup power to the intersection using all LED indications during periods of utility power failure. If the cabinet is equipped with a Master Controller, Local Controller, Dial up Modem and/or Radio Transceiver then the UPS will also be required to provide power to these units during periods of utility power failure. A relay shall be provided to bypass the UPS when commercial power is available. The backup batteries shall be equipped with a battery balanced charging system. The UPS shall meet the following requirements:

1. Maintain power for a minimum of 6 hours upon power failure.

2. Electrical inputs:

| | |
|---|---|
| AC Input Voltage | 95-135 Volts |
| AC Input Current | 30 Amps Max |
| Frequency | 60 ± 1Hz |

3. Electrical outputs:

| | |
|---|---|
| AC Output Voltage | 120 VAC ± 5% |

A plug type connection (if possible) should output to the controller's "D" panel when the UPS battery is on line or is about to fail.

Basis of Payment. This work will be paid for at the contract unit price each for UNINTERRUPTIBLE POWER SUPPLY, which price shall be payment in full for furnishing and installing the UPS complete with necessary connections for proper operation at the intersection.

**PEDESTRIAN PUSH-BUTTON**

This item shall conform to the requirements of Section 888 of the Standard Specifications for Road and Bridge Construction and the following requirements. The

pedestrian push buttons shall be freeze and vandal proof. The button when pushed should emit a sound and flash to indicate operation. This feature should not require any additional equipment or circuitry. In addition, two signs (R10-4b-912) will be required with each pedestrian push-button. Basis of payment: 888.04.

**STANDARD 880006 TRAFFIC SIGNAL MOUNTING DETAIL**

The traffic signals shall be mounted as detailed on this standard except a bracket mounted traffic signal face with a pedestrian signal face will require a terminal compartment at or near the top of the post.

**VERTICAL TYPE TERMINAL BLOCK AND HOUSING**

A bare aluminum terminal compartment and mounting hardware, attached with stainless steel bands, shall be mounted on the vertical shaft of each mast arm. The compartment shall be mounted approximately 10 feet above the surface. This terminal shall only contain the cables for the horizontal mast arm signal faces.

One federal yellow vertical terminal block shall be provided on the vertical shaft of each mast arm pole if more than one (vehicle or pedestrian) face is to be mounted. This terminal shall contain the cables for the signal faces mounted on the vertical shaft of the mast arm.

Cables for the pedestrian push buttons or for highway lighting should not terminate in either terminal compartment.

Basis of Payment. The furnishing and installation of the vertical terminal block(s) and housing shall be included in the contract unit price of the electric cable involved.

**SURFACE MOUNT LANE SEPARATOR SYSTEM**

This work shall consist of furnishing and placing a surface mount lane separator system at the locations shown on the plans or as directed by the Engineer.

The surface mount lane separator system shall consist of the following:

Surface mount lane separator– Constructed of high-density polyethylene curb section with UV stabilization or rubber that meet the physical characteristics listed below. Curb section shall possess gently sloping sides in order to facilitate crossover by vehicles. An 18 inch tapered end section shall be used where transition is visually desirable. Curbs shall be solid yellow or have 5 inch double yellow stripes installed. Curbs shall also have scuppers to allow water to drain freely.

- Height: 3 inch minimum, 4 inch maximum
- Width: 9 inch minimum, 13 inch maximum
- Weight: Greater than or equal to 7 pounds per lineal foot.

Delineators – High impact resistant plastic capable of serving as a media for reflective sheeting. The reflective sheeting shall be Type III flexible and have a smooth weather resistant outer surface. The delineator shall be between 30 and 48 inches in height and shall conform to all applicable Federal Highway Specifications and Standards. Reflective sheeting shall be capable of being seen from any approach direction and connected to the curb section in a manner that allows it to return to a vertical position if struck from any angle by a vehicle. Spacing of the panels shall be 3 foot minimum or 7 foot maximum. Delineators shall be easily and quickly replaceable from the curb section.

The surface mount lane separator shall be bolted to the pavement according to the manufacturer's installation instruction for placement of Surface Mount Lane Separators.

Surface mount lane separator sections, including end sections and delineator panels will be measured for payment in lineal feet in place along the centerline of the separator.

This work will be paid for at the contract unit price per foot for SURFACE MOUNT LANE SEPARATOR.

**CRISP DRIVE**

The existing private drive RT. Station 762+86 has existing buried electric lines and water lines for a sprinkler system. Both systems may extend to the proposed entrance RT. Station 762+09.35. The Contractor shall locate both the electric lines and the sprinkler system. The Contractor shall cut the electric line at the edge of the construction limits and terminate the line in accordance with current electrical codes. The Contractor shall cut the water line to the sprinkler system at the edge of the construction limits and shall cap the line.

Plastic pipe, 4" in diameter, is used to drain the landscaped area and region around the drives. These pipes shall be removed. Removal of the plastic pipe, locating and capping the sprinkler system shall not be paid for separately, but shall be included in the unit cost for EARTH EXCAVATION.

Locating the existing electric lines shall be paid for per foot for LOCATING UNDERGROUND CABLE. A quantity of 100' has been estimated for this work.

**DRAINAGE STRUCTURES TYPE 1 (SPECIAL)**

This work shall consist of furnishing and installing a drainage structure to be located on I-57 Ramp E at Station 3+00 and Station 5+00 according to section 602 of the Standard Specifications. This Drainage Structure shall also include a Frame and Grate Type 6.

This work will be paid for at the contract price each for DRAINAGE STRUCTURES, TYPE 1, (SPECIAL).

**FILLING EXISTING BOX CULVERT**

This work shall consist of removing the top slab from an existing culvert and filling the remaining barrel with porous granular embankment.

The existing culvert is not visible, but is believed to be a 6'X3'X50' box located at Old Route 13 Station 771+47. The ends of the box were plugged and the culvert was abandoned during a previous contract.

Prior to beginning any actual operations towards removing the culvert, the contractor shall excavate along the south shoulder to determine whether it actually exists. If it is determined there is no abandoned culvert, the contract quantities related to this work shall be deleted from the contract, and no payment shall be made.

If it is determined the culvert does exist as believed, the overlying pavement shall be removed to one foot beyond each side of the culvert and the top slab of the culvert shall be removed. The remaining culvert shall then be filled with porous granular embankment in accordance with Section 207 of the Standard Specifications up to the elevation of the proposed pavement sub-grade.

All broken pavement and concrete resulting from removal operations shall be disposed of in accordance with Article 202.03 of the Standard Specifications.

This work shall be measured and paid for at the contract price per square yard for CLASS B PATCHES, 10", at the contract price per cubic yard for CONCRETE REMOVAL, and at the contract price per ton for POROUS GRANULAR EMBANKMENT.

**PROTECTION OF EXISTING LIGHT TOWERS**

All existing light towers shall remain functional throughout the project. Four towers, RT. Station 1509+55 SB FAI 57 , RT. Station 1514+54 SB FAI 57, LT. Station 1527+37 NB FAI 57, and RT. Station 4+65 Ramp F fall within embankment regions where the fill around them varies from 3 feet to 11 feet.

To ensure the light towers are not damaged the Contractor shall place a casing around the light tower that extends from the concrete base to at least 1 foot above th proposed fill elevation.

The casing shall have clearance around the light tower by at least 6 inches in all directions. The casing shall have a sufficient wall thickness and strength to resist the confining pressure of the proposed embankment and any other forces caused by the compaction efforts, operation of equipment or lateral earth pressure. The casing halves may be bolted or welded together at the Contractor's option.

Heavy equipment shall not be operated within 4 feet of the casing. Embankment within 4 feet of the casing shall be placed in 8 inch loose lifts and compacted with a mechanical tamper of a type approved by the Engineer before the next layer is placed and shall be compacted to the density specified in Article 205.06.

The Contractor shall provide a means for dewatering the casing to prevent flooding of electrical components. The top of the casing shall be covered to keep out precipitation.

After the new lighting is operational the existing towers shall be removed. Removal of the casing and tower shall extend to at least 2 feet below the final grade. The void

inside the casing shall be filled with clean aggregate approved by the Engineer. Alternatively, the Contractor may remove the entire length of the tower and casing and shall fill the void with clean aggregate approved by the Engineer.

This work shall not be paid for separately by shall be included in the unit cost for REMOVE EXISTING HIGH MAST LIGHT TOWER.

One tower along Old Ill. 13, RT. Station 771+70 is near a cut section. The buried electrical line shall be located and moved before the ditch cut is made. The line should be located RT. Station 768+53 to RT. Station 771+70. This work shall be paid for per foot for LOCATING UNDERGROUND CABLE.

All light towers and luminaries shall become the property of the Contractor.

**COOPERATION BETWEEN CONTRACTORS**

The Contractor is to be aware that at the northern limits of this project additional projects may be under construction. Contract 99272 (I-57 Overpass construction at Morgan Avenue in Marion), with a letting date of March 9, 2007. Contract 98948 (I-57 rubblization of the northbound lanes from 0.2 miles north of the Marion Ill. 13 interchange to a point 7.99 miles north), with a letting date of September 22, 2006. Contract 98982 (I-57 Safety Project), with a letting date of November 17, 2006 is located to the north and south limits of this contract.

The Contractor shall coordinate his/her work with the Contractors of Contracts 99272, 98948, and 98982 to minimize any possible conflicts. The Contractor shall also notify the Engineer 5 working days in advance of any work that may affect Contracts 99272, 98948, and 98982.

**SMOOTHNESS SURFACE TESTING OF FINAL SURFACE OVER RUBBLIZED PCC**

The smoothness requirements in the BDE special provision Surface Testing of Pavements for full-depth pavement shall apply to this project.

It is understood that the cost of complying with these requirements is included in the unit prices of the various pay items involved, and no additional compensation will be allowed.

**RUBBLIZING PCC PAVEMENT**
Effective June 1, 2001

Description. This work shall consist of rubblizing the existing Portland cement concrete (PCC) pavement.

Materials. Aggregate replacement material, for areas of approximately 1 sq m (10 sq ft) or less, shall be a Class D Quality (or better) crushed stone, crushed slag,

crushed concrete, or crushed gravel meeting a CA 6 or CA 10 gradation; according to Section 1004 of the Standard Specifications. Hot-mix asphalt used for repairs shall be the same as noted in the mixture requirements for mainline binder.

Equipment. Equipment shall be according to the following Articles of Section 1100:

| Item | Article/Section |
|---|---|
| (a) Vibratory Steel Wheel Roller..(Note 1)..... | 1101.01 |
| (b) Pneumatic Tired Rollers.....(Note 2)..... | 1101.01 |

(c) Multi-head Breaker (MHB). The equipment shall consist of a self-contained, self-propelled MHB. Hammer heads shall be mounted laterally in a single row or inpairs with half the hammers in a forward row, and the remainder diagonally offset in a rear row so there is continuous pavement breaking from side to side. This equipment shall have the capability of rubblizing pavement up to 4 m (13 ft) in width, in a single pass. Hammer drop height shall have the ability to be independently controlled. (Note 3)

(d) Resonant Breaker. The equipment shall consist of a self-contained, self-propelled resonant frequency pavement breaking unit capable of producing low amplitude, 8,880 N (2,000 lb) blows, at a rate of not less than 44 per second.

(e) Z-Pattern Steel Grid Roller. The equipment shall consist of a self-contained, self-propelled vibratory steel wheel roller with a Z-pattern grid cladding mounted transversely to the surface of the drum. The vibratory roller shall have a minimum gross weight of 9 metric tons (10 tons).

Note 1. The vibratory roller shall have a minimum gross weight of 9 metric tons (10 tons).

Note 2. The pneumatic tired rollers shall develop a compression of not less than 50 N/mm (300 lb/in.), nor more than 90 N/mm (500 lb/in.), of width of the tire tread in surface contact.

Note 3. When the MHB is used, a Z-pattern steel grid roller shall be used for additional particle break down as described herein.

## CONSTRUCTION REQUIREMENTS

General. If a drainage system is specified on the plans, the system shall be installed and functioning before rubblizing begins. Rubblizing shall commence after removal of any existing bituminous concrete overlay in the area to be rubblized. Any hot-mix asphalt overlay left on the pavement (after the milling process) shall be removed prior to rubblizing to the satisfaction of the Engineer.

Partial-depth hot-mix asphalt patches may be left in place and impacted by rubblizing equipment. If breaking is not satisfactory under partial-depth hot-mix asphalt patches, alternate methods shall be used to break the pavement with approval of the Engineer. Full-depth hot-mix asphalt patches will be reviewed by the Engineer prior to rubblizing. Unsound patches will be removed and replaced with a Class C or D patch. If the patch is concrete it shall be rubblized. Lane width, full-depth hot-mix asphalt patches that exceed 3 m (10 ft) in length shall not be impacted by breaking equipment. The Engineer will direct the removal of any unstable material, and method of replacement.

If the unsound patch is greater than 1 sq m (10 sq ft), hot-mix asphalt binder mixture shall be used. When the road is closed to traffic and the unsound patch is less than or equal to 1 sq m (10 sq ft), the replacement material may be aggregate.

PCC pavement or other PCC appurtenances to remain in place shall be severed from the pavement to be rubblized with a full-depth saw cut. Rubblized pavement less than or equal to 1 sq m (10 sq ft) dislodged by construction traffic shall be repaired with aggregate replacement material and compacted prior to the paving operation. Rubblized pavement greater than 1 sq m (10 sq ft) dislodged by construction traffic shall be repaired with hot-mix asphalt binder mixture.

The Contractor shall prevent damage to underground utilities and drainage structures during rubblizing. Approved alternate breaking methods shall be used over underground utilities and drainage structures as specified on the plans or directed by the Engineer.

Reinforcement shall be left in place, except that reinforcement projecting from the surface after breaking or compaction shall be cut off below the surface and removed. Any loose joint filler, expansion material, or other similar items shall also be removed.

Pavement Breaking. Above the reinforcing steel or upper one-half of the pavement, the equipment shall break the pavement such that at least 75 percent of the pieces are a maximum of 75 mm (3 in.). Below the reinforcing steel or in the lower one-half of the pavement, at least 75 percent of the pieces shall be a maximum of 225 mm (9 in.). Concrete to steel bond shall be broken. Uniform breaking shall be maintained through successive passes of the breaking equipment.

Breaking shall be accomplished only by the method(s) specified on the plans and defined as follows:

Method I - This method uses the MHB and Z-pattern steel grid roller to break the pavement, as specified herein.

Method II - This method uses the resonant breaker to break the pavement, as specified herein. This resonant breaker utilizes high flotation tires, which shall be maintained under 415 MPa (60 psi). The breaking shall begin at the centerline and proceed to the edge of the pavement.

Method III - This method uses the resonant breaker to break the pavement, as specified herein, without restriction on tire pressure.

Method IV - This method uses either the MHB with Z-pattern steel grid roller or the resonant breaker to break the pavement, as specified herein.

Prior to the acceptance of the proposed breaking procedure, the Contractor shall complete a strip for evaluation by the Engineer. To ensure the pavement is being broken to the specified dimensions; the Contractor shall excavate a broken area of 1 sq m (10 sq ft), in two separate locations during the first day of breaking, as directed by the Engineer. Modifications to the breaking procedure must be made if the size requirements are not met. These excavations may be repaired with replacement material. If breaking procedures or conditions change, additional excavations to inspect the broken pavement dimensions shall be made, as directed by the Engineer.

Any large concrete pieces that result from inadequate breaking shall be treated as follows:

| Size and Location of Pieces | Action |
|---|---|
| Greater than 225 mm (9 in.) at surface of broken pavement. | Reduce size to less than 225 mm (9 in.), or remove and replace. |
| Greater than 300 mm (12 in.) Below steel or lower 1/2 of Broken pavement. | Reduce size to less than 300 mm (12 in.), or remove and replace. |

Unsuitable or unstable material encountered during the breaking process shall be removed and disposed of, according to Article 202.03 of the Standard Specifications. Areas of approximately 1 sq m (10 sq ft) or less may be repaired by use of aggregate replacement material. Larger unstable areas require removal and replacement, as directed by the Engineer. Following subgrade repairs, bituminous concrete binder mixture shall be placed to the depth of the original PCC pavement, and compacted to the satisfaction of the Engineer.

Compaction. Prior to placing the bituminous overlay, the complete width of the broken pavement shall be compacted by vibratory steel wheel and pneumatic tired rollers in the following sequence:

After breaking:

1. Minimum of four passes with Z-pattern steel grid roller (only with the MHB).
2. Four passes with a vibratory roller.
3. Two passes with a pneumatic-tired roller.

The contractor shall not trim the broken or rubblized pavement, or otherwise attempt to grade the broken or rubblized pavement to improve grade lines.

Immediately prior to overlay:

Two passes with a vibratory roller.

Any unstable material encountered while compacting or under construction trafficking shall be treated as defined in the section entitled Pavement Breaking. If a large area of unstable material is identified during the rubblizing process, work shall be halted and the Engineer notified. Any depressions greater than 50 mm (2 in.) in depth shall be filled with replacement material and compacted. When specified by the Engineer, replacement material shall be used to reestablish the pavement crown. Water may be used to aid in compaction of the replacement material, when approved by the Engineer.

Opening Roadway to Traffic. Public traffic will not be allowed on the rubblized pavement before the required binder layers are in place, except at crossovers and/or access points. Public traffic will not be allowed on a rubblized crossover or access point for more than 24 hours. Maintenance of crossovers and/or access points shall be as specified by the Engineer. Crossovers and/or access points shall be maintained in the same compacted state as the other areas, until the bituminous concrete overlay is in place. Construction traffic on the rubblized base shall be limited to delivery of materials directly ahead of the paver.

Paving Limitations. A tracked paver shall be used to place the first lift of hot-mix asphalt binder over the prepared rubblized pavement. During stage construction, the overlay width shall be such that it will not interfere with subsequent rubblizing operations. At a given location, the overlay shall be placed within 48 hours of the pavement breaking operation. If rain occurs between rubblizing and paving, the rubblized pavement shall be dry and stable to the satisfaction of the Engineer before the paving operation begins.

If a material transfer device is proposed, the Contractor shall submit equipment specifications with axle loading configurations and proposed paving sequence to the Engineer three weeks prior to paving. The Engineer will provide any equipment restrictions based on device loadings and proposed paving sequence.

Method of Measurement. Rubblizing will be measured for payment in square yards of existing pavement in place.

Basis of Payment. This work will be paid for at the contract unit price per square yard for RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT, of the method shown in the plans.

Any required removal of unsuitable or unstable material, subgrade repair, and hot-mix asphalt placement will be paid for according to Article 109.04 of the Standard Specifications.

Action taken to address any large concrete pieces resulting from inadequate breaking will not be paid for separately.

**PROGRESS SCHEDULE**
Effective September 1, 2001

Description

This work shall consist of preparing, revising and updating a detailed progress schedule based upon the Critical Path Method (CPM). This work shall also consist of performing

time impact analysis of the progress schedule based upon the various revisions and updates as they occur.

Requirements

The software shall be Primavera SureTrak 3.0 Project Manager, published by Primavera Systems, Inc.

Format

The schedule format shall contain the following:

(a) Project Name: (Optional).

(b) Template: Construction.

(c) Type: SureTrak: Native file format for stand-alone contracts.

(d) Planning Unit: Day (calendar/working).

(e) Number/Version: Original or updated number.

(f) Start Date: Not later than ten days after execution of the contract.

(g) Must Finish Date: Completion date for completion date contracts.

(h) Project Title: Contract number.

(i) Company Name: Contractor's name.

Calendars

(a) Completion Date Contracts. The base calendar shall show the proposed working days of the week and the proposed number of work hours per day.

(b) Working days Contracts. The base calendar shall show the distribution of working days according to the following table:

| MONTH | WORKING DAYS |
|---|---|
| May | 15 |
| June | 17 |
| July | 17 |
| August | 17 |
| September | 16 |
| October | 16 |
| November | 14 |

The number of days shown above shall not be exceeded. The proposed number of hours to be worked per day shall also be shown. No work shall be shown during the period of December 1 and April 30.

Schedule Development

The detailed schedule shall incorporate the entire contract time. The minimum number of activities shown on the schedule shall represent the work incorporating the pay items that aggregate contract value constitutes 80 percent of the total contract value. These pay items shall be determined by starting with the pay item with the largest individual contract value and adding subsequent pay item contract values in descending order until 80 percent of the contract value has been attained. Any additional activities required to complete the contract beyond 95 percent and any additional activities required to maintain the continuity of the schedule logic shall also be shown.

The schedule shall be limited exclusively to Finish-to-Start (FS) relationships with no lead or lag duration between schedule activities. Start-to-Start (SS), Start-to-Finish (SF) or Finish-to-Finish (FF) relationships will not be allowed. Activity constraints shall not be used without the approval of the Engineer.

The following shall be depicted in the schedule for each activity:

(a) Activity Identification (ID) Numbers. The Contractor shall utilize numerical designations to identify each activity. Numbering of activities shall be in increments of not less than ten digits.

(b) A description of the work represented by the activity (maximum forty-five characters). The use of descriptions referring to a percentage of a multi-element item (i.e., construct deck 50%) shall not be used. Separate activities shall be included to represent different elements of multi-element items (i.e., forms, reinforcing, concrete,etc.). Multiple activities with the same work description shall include a location as part of the description.

(c) Proposed activity duration shall be shown in whole days. The Contractor shall provide production rates to justify the activity duration. Schedule duration shall be contiguous and not interruptible.

The schedule shall indicate the sequence and interdependence of activities required for the prosecution of the work. The schedule logic shall not be violated.

Total Float shall be calculated as finish float. The schedule shall be calculated using retained logic. The Contractor shall not sequester float by calendar manipulation or extended duration. Float is not for the exclusive use or benefit of either the Department or the Contractor.

Tabular Reports

(a) The following tabular reports will be required with each schedule submission:

Classic Gantt

Pert with Time Scale

(b) The heading of each tabular report shall include, but not be limited to, the project name, contract number, Contractor name, report date, data date, report title and page number.

(c) Each of the tabular reports shall also contain the following minimum information for each activity.

1) Activity ID

2) Activity Description

3) Original Duration (calendar day/working day)

4) Remaining Duration (calendar day/working day)

5) Activity Description

6) Early Start Date

7) Late Start Date

8) Early Finish Date

9) Late Finish Date

10) Percent Complete

11) Total Float

12) Work performed by DBE Subcontractors and Trainees shall be shown in the Gantt Report.

(d) Reports shall be printed in color on 8.5 in. x 14 in. (minimum) size sheets. The Classic Gantt shall show all columns, bars, column headings at the top, time scale at the top and shall show relationships.

Submission Requirements

The initial schedule shall be submitted prior to starting work but no later than five calendar days after execution of the contract. Updated schedules shall be submitted according to Article 108.02 except that as a minimum, updated schedules will be required at the 25, 50, and 75 percent completion points of the contract.

The schedule shall be submitted in the Sorted by Activity Layout (SORT4). The activities on the schedule shall be plotted using early start, late start, early finish, late finish and total float.

For every schedule submission, the Contractor shall submit to the Engineer, four IBM compatible compact disks of all schedule data. Included on the disks shall be all of the tabular and graphic reports, network diagrams and bar chart data. Two copies shall be submitted on CD/R disks and two copies shall be submitted on CD/RW disks. In addition, four plots of the schedule shall be submitted with the disks. When reviewed and approved by the Engineer, the CD/R disks will be the approved initial or revised progress schedule for the contract. The approval will be documented by the Engineer on a corresponding plot of the schedule and returned to the Contractor.

Four copies of each schedule submission shall be printed in color on 8.5 in. x 14 in. (minimum) size sheets showing all columns, bars, column headings at the top, time scale at the top and showing relationships.

The schedule shall indicate the critical path to contract completion. Only one controlling item shall be designated at any point in time on the schedule.

Basis of Payment

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

**EXISTING SIGN STRUCTURES**

The existing overhead cantilever sign structure LT. Station 1519+00 SB FAI 57 and the overhead sign truss structure over NB FAI 57 at Station 1527+40 shall be removed and become the property of the Contractor.

**INSURANCE NOTICE**

In addition to insurance required by the Illinois Department of Transportation's Standard Specifications For Road and Bridge Construction (adopted January 1, 2007), the successful bidder will be required to name the Federal Government (Department of Veterans Affairs) as an additional named insured party as to damages arising out of bodily injuries to, or death of, any person or persons and all damages arising out of bodily injury to, or death of, any person or persons, as well as all property damage on property owned by the Federal Government and utilized by the successful bidder on this project; the said property is more particularly and commonly described as parcel 9000802.

**IMPACT ATTENUATORS (PARTIALLY REDIRECTIVE), TEST LEVEL 3**

The impact attenuator used in the median at Station 1542+33 shall be of the type that attaches directly to the concrete barrier and shall have a unit size 2'7" X 31'3".

**CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED**

The existing chain link fence LT. Station 1535+25 to Station 1536+45 NB FAI 57 shall be removed in order to perform ditch grading operations. The Contractor shall use care in remoing the fence. Any portion of the fence damaged by the Contractor shall be replaced at his/her expense. The Contractor shall re-erect the fence at the same location once the grading and seeding operations are completed.

This work shall include all hardware, material, equipment and labor to remove and re-erect the fence.

This work shall be paid for at the contract unit price per foot for CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED.

**PERMANENT PROTECTIVE SHIELD SYSTEM**

Description: This work shall consist of furnishing all labor, equipment, and materials for the installation of a permanent protective shield system as required to protect pedestrian, vehicular, railroad, and/or waterway traffic from falling material from portions of the existing structure. This system shall be used for structures 100-0008 and 100-0009.

General: The permanent protective shield system shall protect the area shown on the plans and/or as directed by the Engineer. The system shall be fixed. The existing vertical clearances above roadways, railroad tracks, and waterways shall be maintained.

The Contractor shall coordinate the installation with municipalities and/or utilities to insure protection of their facilities. Lane closures and other traffic control required during installation shall be according to the contract traffic control plan.

Material: The plywood shall be Exposure 1 plywood made with exterior grade glue and shall be of the thickness as shown in the plans. The plywood shall be nailed with at least two 6d common galvanized nails per timber. The timber shall be of the dimensions and spacing as shown on the plans. All wood shall be new or in "like-new condition subject to approval by the Engineer.

Method of Measurement: Permanent Protective Shield System will be measured for payment and the area computed in square yards. The length will be measured along the centerline of the structure. The width will be as shown on the plans or as directed by the Engineer.

Basis of Payment: The Permanent Protective Shield System will be paid for at the contract unit price per square yard for PROTECTIVE SHIELD (PERMANENT).

**DECK PATCHING**

The Contractor shall have the Protective Shield in place before any deck patching is completed. In order to complete the full depth patches on the bridge decks the Contractor will have to remove portions of the Protective Shield, complete the patching, and reinstall the Protective Shield. This work shall not be paid for separately, but shall be incuded in the contract unit price for DECK SLAB REPAIR (FULL-DEPTH, TYPE I) and DECK SLAB REPAIR (FULL-DEPTH, TYPE II).

**POROUS GRANULAR EMBANKMENT (SPECIAL)**

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 shall be CA 5 or CA 7 according to Section 1004.

Basis of Payment: This work will be paid for at the contract unit price per CUBIC YARD for POROUS GRANULAR EMBANKMENT (SPECIAL).

**SUB-BASE GRANULAR MATERIAL 10"**

This work shall be done in accordance with the applicable portions of Section 207 of the Standard Specifications. The material shall conform to Article 1004.05 of the Standard Specifications except as follows:

1. Crushed Stone, Crushed Blast Furnace Slag, and Crushed Concrete will be permitted. Steel slag and other expansive materials as determined through testing by the Department will not be permitted.

| Sieve Size | Percent Passing |
|---|---|
| 3 inches | 97±3 |
| 2 inches | 90±10 |
| 1 inches | 45±25 |
| #200 | 5±5 |

2. Crushed Gravel

| Sieve Size | Percent Passing |
|---|---|
| 3 inches | 97±3 |
| 2 inches | 90±10 |
| 1 inches | 55±25 |
| #4 | 30±20 |
| #200 | 5±5 |

3. Crushed Concrete with Bituminous Materials**

| Sieve Size | Percent Passing |
|---|---|
| 3 inches | 97±3 |
| 2 inches | 90±10 |
| 1 inches | 45±25 |
| #4 | 20±20 |
| #200 | 5±5 |

**The bituminous material shall be separated and mechanically blended with the crushed concrete so the bituminous material does not exceed 40% of the final product. The top size of the bituminous material in the final product shall be less than 3 inches and shall not contain steel slag or any material that is considered expansive by the Department.

The material shall be placed in two lifts. A vibratory roller meeting the requirements of Article 1101.01 of the Standard Specifications shall be used to roll the material to obtain the desired keying or interlock and necessary compaction. The Engineer will verify that adequate keying has been obtained.

Method of Measurement. Sub-base granular material 10” will be measured for payment in square yards.

Basis of Payment. This work will be paid for at the contract unit price per square yard for SUB-BASE GRANULAR MATERIAL 10”.

**CONCRETE BARRIER , DOUBLE FACE, 42 INCH HEIGHT**

This barrier shall be cast-in-place. Slip-forming or precast units will not be allowed.

**GRADING AND SHAPING FORESLOPES**

This work shall consist of cleaning existing ditches and corresponding slopes to drain.

The grading and shaping forslope limits as shown on the plans is approximate. Actual grading and shaping foreslope limits shall be determined by the Engineer.

Any trees 6" diameter or larger removed in order to drain the ditches shall be paid for as TREE REMOVAL (6 TO 15 UNITS DIAMETER) or TREE REMOVAL (OVER 15 UNITS DIAMETER).

Immediately after grading and shaping foreslopes is completed the erosion protection specified and scheduled in the plans will be put in place. Failure to place specified erosion control will result in additional reshaping of the ditches and slopes by the Contractor at his/her expense.

Grading and shaping foreslopes will be measured for payment in place, and the area computed in square yards.

This work will be paid for at the contract unit price per square yard for GRADING AND SHAPING FORESLOPES.

**EMERGENCY PATCHING**

This work shall consist of patching the existing decks of structures 100-0004, 100-0005, 100-0006, and 100-0007 at any time during the contract when the condition of the decks requires patching as determined by the Engineer. Concrete barriers to close a lane will not be required. Traffic control shall be in accordance with Standard 701401. Exit ramps shall remain open, but entrance ramps shall be closed.

The patching mixture used shall be of the type that is rapid setting and the accelerator used shall meet the Departments approved list.

Patches will be measured in place and the area computed in square yards.

Partial depth and full depth patching shall be done in accordance with the special provision for Deck Slab Repair. The patching shall be paid for in accordance with the special provision for Deck Slab Repair.

Traffic control shall be paid for per lump sum for TRAFFIC CONTROL AND PROTECTION, STANDARD 701401.

**RAISED REFLECTIVE PAVEMENT MARKERS**

Raised reflective pavement markers shall be used to delinate the centerline of the lane shifts from the beginning of the shift throughout the limits of the work to the end of the ending lane shift. Markers shall be placed at 40' centers. Markers shall be used for stages 1A, 2, 3, 4, 7,7A,

and 7B. Markers shall be removed from one stage to another if the lane shift is different than the previous stage. In stage 8 the markers shall be removed and the final raised reflective markers shall be placed.

The markers shall be crystal. Markers shall be installed in accordance with Section 781 of the Standard Specifications.

This work shall be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER. Removal of markers shall be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER REMOVAL.

**TEMPORARY RUMBLE STRIPS**

This work shall consist of placing temporary rumble strips to alert motorists to lane shifts. These shall be placed for long term staging work. Rumble strips will not be required on prestage work or on Old Ill. 13.

The strips shall start 100 feet from the beginning of the taper. The second and third set of strips shall be placed at 500' intervals. The typical installation shown on sheet 3 of highway standard 702001 shall be used. The strips shall be 4 inches wide by 0.5 inches thick. The Contractor shall be responsible for the maintenance of the adhesive through the duration of the project. One set shall be 12 feet wide and 25 feet long.

Material properties: The rumble strip shall be tape. The tensile strength shall be 250 psi minimum. The hardness shall be Shore A 75 minimum. The adhesive shall be high tack, user friendly, polymeric adhesive, which will provide a temporary bond to the road surface and is removable when the rumble strip is no longer needed.

Placement of rubble strips: The air and surface temperature must be 50 degrees Fahrenheit and rising. The existing pavement surface must be clean and dry. The surface must be free of any contaminants, which may include but not be limited to oils, grease, sand, dirt, dust, loose aggregate, curing compound, mud, soilo, and salt. Do not apply tape directly over deteriorating markings or substrates. Rumble strips applied directly over seams and joints must be cut through 1 inch on both sides of the joints or seams to prevent de-bonding of large sections of tape. Butt splices must always be used. Firmly tamp longitudinal tape in the same direction as tape was applied on the intial pass. A minimum of three passes total are required. Use a tamper device with a minimum 200 pound load and a tamping surface a minimum of 2 inches wider than the width of the tape being applied. Never twist the tamping device during tamping. Repeat tamping as necessary to insure tape has completely conformed to the road surface.

A removable primer as specified by the manufacturer is to be used under the following marginal conditions:

1. When air or surface temperatures are expected to fall below 50 degrees Fahrenheit 24 hours after installation.
2. Rain is expected within 24 hours after installation.
3. When road surfaces are marginal.

Removal of rumble strips: Pull tape at a 90 degree angle to the pavement. The marked roadway can be open to traffic immediately.

Temporary rumble strips will be measured as each, where each is defined as a 25 feet length and 12 feet wide installation.

This work will be paid for at the contract unit price per each for TEMPORARY RUMBLE STRIPS.

**SALVAGE OF EXISTING BRIDGE BEAMS**

This work shall consist of removing the existing steel bridge beams on structures 100-0004, 100-0005, 100-0006, and 100-0007 and placing them on the existing right of way. The beams shall become the property of the State. A suggested place of storage is the infield regions of the ramps at the interchange of Old Ill. 13. State Day Labor forces shall load and transport the beams. The Engineer shall notify the Bureau of Operations once the beams are removed from stage 1 bridge removal and again after the beams are removed from stage 2 bridge removal.

The beams shall be cut near the splice points. Lengths of the beams should be 30 feet or greater. Diaphragms shall be cut near the web of the beams leaving a short stub. Diaphragms shall become the property of the Contractor.

No additional compensation will be provided to the Contractor for this requirement.

**RETROREFLECTIVE SHEETING AND TRANSLUCENT OVERLAY FILM FOR HIGHWAY SIGNS**

General. This special provision covers retroreflective sheeting and translucent overlay films intended for application on new or refurbished aluminum. The sheeting serves as the reflectorized background for sign messages and as cutout legends and symbols applied directly to the reflectorized background. Messages may be applied in opaque black or transparent colors. This special provision governs the physical characteristics, inspection, testing, packaging, and service requirements for the sheeting, films and inks. All material furnished under this specification shall have been manufactured within 18 months of the delivery date. All material must be supplied by the same manufacturer for warranty purposes.

Properties. Retroreflective sheeting shall consist of a flexible, colored, prismatic, or glass lens elements adhered to a synthetic resin, encapsulated by a flexible, transparent plastic having a smooth outer surface and shall meet the following requirements.

(a) Adhesive. The sheeting shall have a pre-coated pressure sensitive adhesive, ASTM D 4956 Class 1. The adhesive shall have a protective liner which can be readily removed when tested in accordance with ASTM D 4956. The adhesive must be capable of being applied to new or refurbished aluminum without additional adhesive.

(b) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. It shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration and to the daytime and nighttime color requirements of ASTM D 4956. Sheeting used for side by side overlay applications will require a Hunter Lab Delta E of less than 3.

(c) Coefficient of Retroreflection. When tested in accordance with ASTM E 810, without averaging, the sheeting shall have the minimum values shown in the following tables. The brightness of the sheeting when totally wet shall not be less than 90 percent of the values shown in Tables I, II, III and IV when tested in accordance with the standard rainfall test specified in Section 7.10.1 of AASHTO M 268-84.

**Table I Type A**

Minimum Coefficient of Retroreflection

Candelas per Lux per Square Meter (Candelas per Foot Candle per Square Foot) of Material

Type A

| Observation Angle (Degree) | Entrance Angle (Degree) | White | Yellow | Orange | Red | Green | Blue | Brown |
|---|---|---|---|---|---|---|---|---|
| 0.2 | -4 | 250 | 170 | 100 | 45 | 45 | 20 | 12 |
| 0.2 | +30 | 150 | 100 | 60 | 25 | 25 | 12 | 8.5 |
| 0.5 | -4 | 95 | 65 | 30 | 15 | 15 | 8 | 5 |
| 0.5 | +30 | 75 | 50 | 25 | 10 | 10 | 5 | 3.5 |

**Table II Type AA**

Minimum Coefficient of Retroreflection

Candelas per Lux per Square Meter of Material (Candelas per Foot Candle per Square Foot)

Type AA (0 and 90 degree rotation)

| Observation Angle (Degree) | Entrance Angle (Degree) | White | Yellow | Red | Green | Blue | FO |
|---|---|---|---|---|---|---|---|
| 0.2 | -4 | 800 | 660 | 215 | 80 | 43 | 200 |
| 0.2 | +30 | 400 | 340 | 100 | 35 | 20 | 120 |
| 0.5 | -4 | 200 | 160 | 45 | 20 | 9.8 | 80 |
| 0.5 | +30 | 100 | 85 | 26 | 10 | 5.0 | 50 |

Type AA (45 degree rotation)

| Observation Angle (Degree) | Entrance Angle (Degree) | Yellow | FO |
|---|---|---|---|
| 0.2 | -4 | 550 | 165 |
| 0.2 | +30 | 130 | 45 |
| 0.5 | -4 | 145 | 70 |
| 0.5 | +30 | 70 | 40 |

**Table III Type AZ**
Minimum Coefficient of Retroreflection
Candelas per Lux per Square Meter of Material (Candelas per Foot Candle per Square Foot)

Type AZ (0 degree rotation)

| Observation Angle (Degree) | Entrance Angle (Degree) | White | Yellow | Red | Green | Blue | FYG | FY |
|---|---|---|---|---|---|---|---|---|
| 0.2 | -4 | 430 | 350 | 110 | 45 | 20 | 325 | 240 |
| 0.2 | +30 | 235 | 140 | 60 | 24 | 11 | 200 | 150 |
| 0.5 | -4 | 250 | 200 | 60 | 25 | 10 | 235 | 165 |
| 0.5 | +30 | 170 | 135 | 40 | 19 | 7 | 105 | 75 |
| 1.0 | -4 | 70 | 45 | 10 | 10 | 4 | 70 | 30 |
| 1.0 | +30 | 30 | 20 | 7 | 5 | 2.5 | 45 | 15 |

Type AZ (90 degree rotation)

| Observation Angle (Degree) | Entrance Angle (Degree) | White | Yellow | Red | Green | Blue | FYG | FY |
|---|---|---|---|---|---|---|---|---|
| 0.2 | -4 | 320 | 250 | 100 | 45 | 20 | 300 | 220 |
| 0.2 | +30 | 235 | 140 | 40 | 24 | 11 | 200 | 150 |
| 0.5 | -4 | 240 | 200 | 60 | 25 | 10 | 235 | 165 |
| 0.5 | +30 | 100 | 85 | 20 | 10 | 7 | 80 | 75 |
| 1.0 | -4 | 30 | 30 | 7 | 5 | 4 | 65 | 20 |
| 1.0 | +30 | 15 | 15 | 5 | 2 | 2 | 30 | 10 |

**Table IV Type AP**
Minimum Coefficient of Retroreflection
Candelas per Lux per Square Meter of Material (Candelas per Foot Candle per Square Foot)

Type AP

| Observation Angle (Degree) | Entrance Angle (Degree) | White | Yellow | Red | Green | Blue | Brown | FO |
|---|---|---|---|---|---|---|---|---|
| 0.2 | -4 | 550 | 425 | 100 | 75 | 50 | 30 | 275 |
| 0.2 | +30 | 200 | 150 | 40 | 35 | 25 | 15 | 90 |
| 0.5 | -4 | 300 | 250 | 60 | 35 | 25 | 20 | 150 |
| 0.5 | +30 | 100 | 70 | 20 | 20 | 10 | 5 | 50 |

(d) Gloss. The sheeting surface shall exhibit an 85 degree gloss-meter rating of not less than 50 when tested in accordance with ASTM D 523.

(e) Durability. The sheeting shall be weather resistant when processed and applied. Accelerated weathering will be performed for 1000 hours (300 hours for orange/FO) in accordance with ASTM G 151. The cycle used will consist of 8 hours of light at 60 °C (140 °F), followed by 4 hours of condensation at 40 °C (104 °F).

Outdoor weathering will entail an annual evaluation of material placed in an outdoor rack with a 45 degree angle and a southern sun exposure. The sheeting will be evaluated for a total of five years.

Following weathering, the test specimens will be cleaned by immersing them in a 5 percent hydrochloric acid solution for 45 seconds, then rinsed with water and blotted dry with a soft clean cloth. Following cleaning, the applied sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change. The sheeting shall exhibit not less than 80 percent of the minimum coefficient of retroreflection listed in Tables I, II, III and IV when exposed to weathering. The sheeting shall not exhibit a Hunter Lab Delta E of greater than 5 when compared to the original.

(f) Shrinkage. When tested according to ASTM D 4956, the sheeting shall not shrink in any dimension more than 0.8 mm (1/32 in.) in 10 minutes and not more than 3 mm (1/8 in.) in 24 hours.

(g) Workability. The sheeting shall show no cracking, scaling, pitting, blistering, edge lifting, inter-film splitting, curling, or discoloration when processed and applied using mutually acceptable processing and application procedures.

(h) Splices. A single roll shall not contain more than 4 splices per 45-m (50-yd) length. The sheeting shall be overlapped not less than 5 mm (3/16 in.) at a splice.

(i) Adhesive Bond. The sheeting shall form a durable bond to smooth, corrosion and weather-resistant surfaces and adhere securely when tested and evaluated according to ASTM D 4956.

(j) Positionability. Sheeting, with ASTM D 4956 Class 3 adhesive, used for manufacturing cut-out legends and borders, shall provide sufficient positionability during the fabrication process to permit removal and reapplication without damage to either the legend or sign background and shall have a plastic liner suitable for use on bed cutting machines. Thereafter, all other adhesive and bond requirements contained in the specification shall apply.

Positionablility shall be verified by cutting four inch letters E, I, K, M, S, W, and Y out of the positionable material. The letters shall then be applied to a sheeted aluminum blank using a single pass of a 2 pound roller. Allow the letters to sit for 5 minutes. After that time use a putty knife to lift a corner. Take thumb and fore finger and slowly pull the lifted corner to lift letters away from the sheeted aluminum. The letters shall not tear or distort when removed.

(k) Thickness. The thickness of the sheeting without the protective liner shall be less than or equal to 0.4 mm (0.015 in.), or 0.6 mm (0.025 in.) for prismatic material.

(l) Processing. The sheeting shall permit cutting and color processing in accordance with the sheeting manufacturer's recommendations at temperatures of 15 to 38 °C (60 to 100 °F) and within a relative humidity range of 20 to 80 percent. The sheeting shall be heat resistant and permit forced curing without staining the applied or unapplied sheeting at temperatures recommended by the manufacturer. The

sheeting shall be solvent resistant and capable of being cleaned with VM&P naptha, mineral spirits, and turpentine.

Transparent color and opaque black inks shall be single component and low odor. The inks shall dry within 8 hours and not require clear coating. After color processing on white sheeting, the sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The ink on the weathered, prepared panel shall not exhibit a Hunter Lab Delta E of greater than 5 when compared to the original.

Transparent color electronic cutting films shall be acrylic. After application to white sheeting, the films shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The films on the weathered, prepared panel shall not exhibit a Hunter Lab Delta E of greater than 5 when compared to the original.

Screened transparent colors or transparent acrylic electronic cutting films, on white sheeting, shall have initial coefficient of retroreflection values not less than 50 percent for yellow and red, and not less than 70 percent for green, blue, and brown of the 0.2 degree observation angle/-4.0 degree entrance angle values shown in Tables I through IV for the color being applied. After durability testing, the colors shall retain not less than 80 percent of the initial coefficient of retroreflection.

(m) Storage. Stored under normal conditions and temperatures, the sheeting as supplied shall be suitable for use for a period of at least two years. The sheeting shall continue to be pliable and workable.

(n) Identification. The sheeting shall have a distinctive overall pattern in the sheeting unique to the individual manufacturer. If material orientation is required for optimum retroreflectivity, permanent marks indicating direction of orientation shall be incorporated into the face of the sheeting throughout the roll length. The orientation marks must be obvious to the sign fabricator and the optimal direction clearly communicated. Neither the overall pattern nor the orientation marks shall interfere with the reflectivity of the sheeting.

Inspection and Testing. Only suppliers whose products have been tested and approved in the Department's periodic Sheeting Study will be eligible to supply material. All individual batches and or lots of material shall be tested and approved by the Department. The Department reserves the right to sample and test delivered materials in accordance with Federal Specification LS-300.

Packaging. Rolled goods shall be supplied on a 75 mm (3 in.) I.D. fiber core the same width as the sheeting. The rolls shall be packed snugly in individual corrugated fiberboard boxes in such a manner that no damage or defacement will occur to the reflective sheeting during shipment or storage. Rolls of 305 mm (12.25 in.) or more in width may be packaged in multiples. Both ends of each box shall be clearly labeled as to type, color, adhesive, manufacturer's lot number, date of manufacture, and vendor's name. The material shall not be stacked over five cartons high.

Service. Suppliers shall furnish Material Safety Data Sheets and technical bulletins for all materials.

**SPECIAL PROVISION FOR TYPE ZZ RETROREFLECTIVE SHEETING AND TRANSLUCENT OVERLAY FILM FOR HIGHWAY SIGNS:**

General. This special provision covers Type ZZ retroreflective sheeting and translucent overlay films intended for application on new or refurbished aluminum. The sheeting serves as the reflectorized background for sign messages and as cutout legends and symbols applied directly to the reflectorized background. Messages may be applied in opaque black or transparent colors. This special provision governs the physical characteristics, inspection, testing, packaging, and service requirements for the sheeting, films and inks. All material furnished under this specification shall have been manufactured within 18 months of the delivery date. All material must be supplied by the same manufacturer for warranty purposes.

Properties. Type ZZ sheeting shall consist of a flexible, colored, cubed corner prismatic, retroreflective material encapsulated by a flexible, transparent plastic having a smooth outer surface and shall meet the following requirements.

(a) Adhesive. The sheeting shall have a pre-coated pressure sensitive adhesive, ASTM D 4956 Class 1. The adhesive shall have a protective liner which can be readily removed when tested in accordance with ASTM D 4956. The adhesive must be capable of being applied to new or refurbished aluminum without additional adhesive.

(c) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. It shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration and to the daytime and nighttime color requirements of ASTM D 4956. Sheeting used for side by side overlay applications will require a Hunter Lab Delta E of less than 3.

(d) Coefficient of Retroreflection. When tested in accordance with ASTM E 810, the sheeting shall have the minimum values shown in the following tables. The brightness of the sheeting when totally wet shall not be less than 90 percent of the values shown when tested in accordance with the standard rainfall test specified in Section 7.10.1 of AASHTO M 268-84.

**Table I Type ZZ**

Minimum Coefficient of Retroreflection

Candelas per Lux per Square Meter of Material (Candelas per Foot Candle per Square Foot)

Type ZZ (0 degree rotation)

| Observation Angle (Degree) | Entrance Angle (Degree) | White | Yellow | Red | Green | Blue | FYG | FY | FO |
|---|---|---|---|---|---|---|---|---|---|
| 0.2 | -4 | 725 | 545 | 145 | 75 | 35 | 580 | 435 | 255 |
| 0.2 | +30 | 300 | 225 | 60 | 30 | 15 | 240 | 180 | 105 |
| 0.5 | -4 | 450 | 340 | 90 | 45 | 20 | 360 | 270 | 160 |
| 0.5 | +30 | 180 | 135 | 40 | 20 | 10 | 145 | 110 | 65 |
| 1.0 | -4 | 130 | 100 | 30 | 15 | 6 | 105 | 80 | 50 |
| 1.0 | +30 | 70 | 55 | 15 | 10 | 3 | 60 | 45 | 25 |

Type ZZ (90 degree rotation)

| Observation Angle (Degree) | Entrance Angle (Degree) | White | Yellow | Red | Green | Blue | FYG | FY | FO |
|---|---|---|---|---|---|---|---|---|---|
| 0.2 | -4 | 415 | 305 | 85 | 42 | 17 | 340 | 145 | 85 |
| 0.2 | +30 | 80 | 60 | 18 | 14 | 4.4 | 64 | 48 | 23 |
| 0.5 | -4 | 350 | 260 | 70 | 35 | 16 | 280 | 210 | 80 |
| 0.5 | +30 | 75 | 56 | 15 | 12 | 3.6 | 60 | 45 | 25 |
| 1.0 | -4 | 110 | 80 | 18 | 11 | 4.8 | 87 | 64 | 22 |
| 1.0 | +30 | 20 | 13 | 3 | 2 | 1 | 12 | 9 | 3 |

(d) Gloss. The sheeting surface shall exhibit an 85 degree gloss-meter rating of not less than 50 when tested in accordance with ASTM D 523.

(e) Durability. The sheeting shall be weather resistant when processed and applied. Accelerated weathering will be performed for 1000 hours (300 hours for orange/FO) in accordance with ASTM G 151. The cycle used will consist of 8 hours of light at 60 °C (140 °F), followed by 4 hours of condensation at 40 °C (104 °F).

Outdoor weathering will entail an annual evaluation of material placed in an outdoor rack with a 45 degree angle and a southern sun exposure. The sheeting will be evaluated for a total of five years.

Following weathering, the test specimens will be cleaned by immersing them in a 5 percent hydrochloric acid solution for 45 seconds, then rinsed with water and blotted dry with a soft clean cloth. Following cleaning, the applied sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change. The sheeting shall exhibit not less than 80 percent of the minimum coefficient of retroreflection listed in Tables I, II, III and IV when exposed to weathering. The sheeting shall not exhibit a Hunter Lab Delta E of greater than 5 when compared to the original.

(f) Shrinkage. When tested according to ASTM D 4956, the sheeting shall not shrink in any dimension more than 0.8 mm (1/32 in.) in 10 minutes and not more than 3 mm (1/8 in.) in 24 hours.

(g) Workability. The sheeting shall show no cracking, scaling, pitting, blistering, edge lifting, inter-film splitting, curling, or discoloration when processed and applied using mutually acceptable processing and application procedures.

(h) Splices. A single roll shall not contain more than 4 splices per 45-m (50-yd) length. The sheeting shall be overlapped not less than 5 mm (3/16 in.) at a splice.

(i) Adhesive Bond: The sheeting shall form a durable bond to smooth, corrosion and weather-resistant surfaces and adhere securely when tested and evaluated according to ASTM D 4956.

(j) Positionability. Sheeting, with ASTM D 4956 Class 3 adhesive, used for manufacturing cut-out legends and borders, shall provide sufficient positionability during the fabrication process to permit removal and reapplication without damage to either the legend or sign background and shall have a plastic liner suitable for use on bed cutting machines. Thereafter, all other adhesive and bond requirements contained in the specification shall apply.

Positionablility shall be verified by cutting four inch letters E, I, K, M, S, W, and Y out of the positionable material. The letters shall then be applied to a sheeted aluminum blank using a single pass of a 2 pound roller. Allow the letters to sit for 5 minutes. After that time use a putty knife to lift a corner. Take thumb and fore finger and slowly pull the lifted corner to lift letters away from the sheeted aluminum. The letters shall not tear or distort when removed.

(k) Thickness. The thickness of the sheeting without the protective liner shall be less than or equal to 0.6 mm (0.025 in.).

(l) Processing. The sheeting shall permit cutting and color processing in accordance with the sheeting manufacturer's recommendations at temperatures of 15 to 38 °C (60 to 100 °F) and within a relative humidity range of 20 to 80 percent. The sheeting shall be heat resistant and permit forced curing without staining the applied or unapplied sheeting at temperatures recommended by the manufacturer. The sheeting shall be solvent resistant and capable of being cleaned with VM&P naptha, mineral spirits, and turpentine.

Transparent color and opaque black inks shall be single component and low odor. The inks shall dry within 8 hours and not require clear coating. After color processing on white sheeting, the sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The ink on the weathered, prepared panel shall not exhibit a Hunter Lab Delta E of greater than 5 when compared to the original.

Transparent color electronic cutting films shall be acrylic. After application to white sheeting, the films shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (e). The films on the weathered, prepared panel shall not exhibit a Hunter Lab Delta E of greater than 5 when compared to the original.

Screened transparent colors or transparent acrylic electronic cutting films, on white sheeting, shall have initial coefficient of retroreflection values not less than 50 percent for yellow and red, and not less than 70 percent for green, blue, and brown of the 0.2 degree observation angle/-4.0 degree entrance angle values shown in Tables I for the color being applied. After durability testing, the colors shall retain not less than 80 percent of the initial coefficient of retroreflection.

(m) Storage. Stored under normal conditions and temperatures, the sheeting as supplied shall be suitable for use for a period of at least two years. The sheeting shall continue to be pliable and workable.

(n) Identification. The sheeting shall have a distinctive overall pattern in the sheeting unique to the individual manufacturer. If material orientation is required for optimum retroreflectivity, permanent marks indicating direction of orientation shall be incorporated into the face of the sheeting throughout the roll length. The orientation marks must be obvious to the sign fabricator and the optimal direction clearly communicated. Neither the overall pattern nor the orientation marks shall interfere with the reflectivity of the sheeting.

Inspection and Testing. Only suppliers whose products have been tested and approved in the Department's periodic Sheeting Study will be eligible to supply material. All individual batches and or lots of material shall be tested and approved by the Department. The Department reserves the right to sample and test delivered materials in accordance with Federal Specification LS-300.

Packaging. Rolled goods shall be supplied on a 75 mm (3 in.) I.D. fiber core the same width as the sheeting. The rolls shall be packed snugly in individual corrugated fiberboard boxes in such a manner that no damage or defacement will occur to the reflective sheeting during shipment or storage. Rolls of 305 mm (12.25 in.) or more in width may be packaged in multiples. Both ends of each box shall be clearly labeled as to type, color, adhesive, manufacturer's lot number, date of manufacture, and vendor's name. The material shall not be stacked over five boxes high.

Service. Suppliers shall furnish Material Safety Data Sheets and technical bulletins for all materials.

**REFLECTIVE SHEETING FOR INTERSTATE GUIDE SIGNS**
Revised: November 28, 2006

This work shall consist of furnishing and installing freeway signing and supplemental panels, according to Section 1091 of the Standard Specifications, as shown in the plans, and/or as directed by the Engineer except as herein modified.

All Type III reflectorized guide signs, supplemental signs, including route shields and supplemental panels shall be fabricated using faces and legend of Type ZZ retroreflective sheeting. This shall include mainline, ramp, crossroad interchange approach directional signing, and route markers. All remaining signing shall be fabricated using a background material of Type AP retroreflective sheeting. All signs shall be fabricated such that the copy or text and background material is applied in the preferred orientation for the maximum retroreflectivity per the manufacturer's recommendation. Background sheeting and legend shall be provided by the same manufacturer.

This specification shall apply to all colors of sheeting used in this contract except for blue and brown. Signs fabricated with blue and brown sheeting shall use Type AP for the background reflective sheeting with the legend of Type ZZ reflective sheeting.

**CLEANING AND PAINTING NEW METAL STRUCTURES**
Effective Date: September 13, 1994 Revised Date: January 1, 2007

Description. The material and construction requirements that apply to cleaning and painting new structural steel shall be according to the applicable portion of Sections 506 of the Standard Specifications except as modified herein. The three coat paint system shall be the system as specified on the plans and as defined herein.

Materials. All materials to be used on an individual structure shall be produced by the same manufacturer. The Bureau of Materials and Physical Research has established a list of all products that have met preliminary requirements. Each batch of material must be tested and approved by that bureau before use.

The paint materials shall meet the requirements of the following articles of the Standard Specification:

Item Article
(a) Inorganic Zinc-Rich Primer 1008.02
(b) Waterborne Acrylic 1008.04
(c) Aluminum Epoxy Mastic 1008.03
(d) Organic Zinc-Rich Primer (Note 1)
(e) Epoxy Intermediate (Note 1)
(f) Aliphatic Urethane (Note 1)

Note 1: These material requirements shall be according to the Special Provision for the Organic Zinc-Rich Paint System.

Submittals. At least 30 days prior to beginning field painting, the Contractor shall submit for the Engineer's review and acceptance, the following applicable plans, certifications and information for completing the field work. Field painting can not proceed until the submittals are accepted by the Engineer. Qualifications, certifications and QC plans for shop cleaning and painting shall be available for review by the QA Inspector.

a) Contractor/Personnel Qualifications. Except for miscellaneous steel items such as bearings, side retainers, expansion joint devices, and other items allowed by the Engineer, or unless stated otherwise in the contract, the shop painting Contractors shall be certified to perform the work as follows: the shop painting Contractor shall possess AISC Sophisticated Paint Endorsement or SSPC-QP3 certification. Evidence of current qualifications shall be provided.

Personnel managing the shop and field Quality Control program(s) for this work shall possess a minimum classification as a National Association of Corrosion Engineers (NACE) Coating Inspector Technician, or shall provide evidence of successful inspection of 3 projects of similar or greater complexity and scope that have been completed in the last 2 years. Copies of the certification and/or experience shall be provided.

The personnel performing the QC tests for this work shall be trained in coatings inspection and the use of the testing instruments. Documentation of training shall be provided.

b) Quality Control (QC) Program. The shop and field QC Programs shall identify the following; the instrumentation that will be used, a schedule of required measurements and observations, procedures for correcting unacceptable work, and procedures for improving surface preparation and painting quality as a result of quality control findings. The field program shall incorporate the IDOT Quality Control Daily Report form, as supplied by the Engineer.

c) Field Cleaning and Painting Inspection Access Plan. The inspection access plan for use by Contractor QC personnel for ongoing inspections and by the Engineer during Quality Assurance (QA) observations.

d) Surface Preparation/Painting Plan. The surface preparation/painting plan shall include the methods of surface preparation and type of equipment to be utilized for solvent cleaning, abrasive blast cleaning, washing, and power tool cleaning. The plan shall include the manufacturer's names of the materials that will be used, including Product Data Sheets and Material Safety Data Sheets (MSDS).

A letter or written instructions from the coating manufacturer shall be included, indicating the required drying time for each coat at the minimum, normal, and maximum application temperatures before the coating can be exposed to temperatures or moisture conditions that are outside of the published application parameters.

Field Quality Control (QC) Inspections. The Contractor shall perform first line, in process QC inspections of each phase of the work. The Contractor shall implement the submitted and accepted QC Program to insure that the work accomplished complies with these specifications. The Contractor shall use the IDOT Quality Control Daily Report form supplied by the Engineer to record the results of quality control tests. The completed reports shall be turned into the Engineer before work resumes the following day.

The Contractor shall have available at the shop or on the field site, all of the necessary inspection and testing equipment. The equipment shall be available for the Engineer's use when requested.

Field Quality Assurance (QA) Observations. The Engineer will conduct QA observations of any or all phases of the work. The Engineer's observations in no way relieve the Contractor of the responsibility to provide all necessary daily QC inspections of his/her own and to comply with all requirements of this Specification.

The Engineer has the right to reject any work that was performed without adequate provision for QA observations.

The Engineer will issue a Non-Conformance Report when cleaning and painting work is found to be in violation of the specification requirements, and is not corrected to bring it into compliance before proceeding with the next phase of work.

Inspection Access and Lighting. The Contractor shall facilitate the Engineer's observations as required, including allowing ample time to view the work. The Contractor shall furnish, erect and move scaffolding or other mechanical equipment to permit close observation of all surfaces to be cleaned and painted. This equipment shall be provided during all phases of the work. Examples of acceptable access structures include:

Mechanical lifting equipment, such as, scissor trucks, hydraulic booms, etc.

Platforms suspended from the structure comprised of trusses or other stiff supporting members and including rails and kick boards.

Simple catenary supports are permitted only if independent life lines for attaching a fall arrest system according to Occupational Safety and Health Administration (OSHA) regulations are provided.

When the surface to be inspected is more than 6 ft. (1.8 m) above the ground or water surface, the Contractor shall provide the Engineer with a safety harness and a lifeline according to OSHA regulations. The lifeline and attachment shall not direct the fall into oncoming traffic. The Contractor shall provide a method of attaching the lifeline to the structure independent of the inspection facility or any support of the platform. When the inspection facility is more than 2 1/2 ft. (800 mm) above the ground, the Contractor shall provide an approved means of access onto the platform.

The Contractor shall provide artificial lighting in areas where natural light is inadequate, as determined by the Engineer, to allow proper cleaning, inspection, and painting. Illumination for inspection shall be at least 30 foot candles (325 LUX). Illumination for cleaning and painting, including the working platforms, access, and entryways shall be at least 20 foot candles (215 LUX).

**Construction Requirements.** The Contractor shall be responsible for any damage caused to persons, vehicles, or property, except as indemnified by the Response Action Contractor Indemnification Act. Whenever the intended purposes of the protective devices are not being accomplished, as determined by the Engineer, work shall be immediately suspended until corrections are made. Painted surfaces damaged by any Contractor's operation shall be removed and repainted, as directed by the Engineer, at the Contractor's expense.

The Contractor shall comply with the provisions of the Illinois Environmental Protection Act. Paint drips, spills, and overspray are not permitted to escape into the air or onto any other surfaces or surrounding property not intended to be painted. Containment shall be used to control paint drips, spills, and overspray, and shall be dropped and all equipment secured when sustained wind speeds of 40 mph (64 kph) or greater occur, unless the containment design necessitates action at lower wind speeds. The contractor shall evaluate project-specific conditions to determine the specific type and extent of containment needed to control the paint emissions and shall submit a plan for containing or controlling paint debris (droplets, spills, overspray, etc.) to the Engineer for approval prior to starting the work. Approval shall not relieve the Contractor of their ultimate responsibility for controlling paint debris from escaping the work zone.

Surface and Weather Conditions. Surfaces to be painted after cleaning shall remain free of moisture and other contaminants. The Contractor shall control his/her operations to insure that dust, dirt, or moisture does not come in contact with surfaces cleaned or painted that day.

The surface temperature shall be at least 5°F (3°C) above the dew point during final surface preparation operations. The paint manufacturers' published literature shall be followed for specific temperature, dew point, and humidity restrictions during the application of each coat.

The Contractor shall monitor temperature, dew point, and humidity every 4 hours during surface preparation and coating application in the specific areas where the work is being performed. The frequency of monitoring shall increase if weather conditions are changing. The Engineer has the right to reject any work that was performed under unfavorable weather conditions. Rejected work shall be removed, recleaned, and repainted at the Contractor's expense.

Seasonal Restrictions on Field Cleaning and Painting. Field cleaning and painting work shall be accomplished between April 15 and October 31 unless authorized otherwise by the Engineer in writing.

**Inorganic Zinc-rich/ Waterborne Acrylic Paint system.** This system shall be for shop and field application of the coating system, shop application of the intermediate and top coats will not be allowed.

In the shop, all structural steel designated to be painted shall be given one coat of inorganic zinc rich primer. In the field, before the application of the intermediate coat, the prime coat and any newly installed fasteners shall be spot solvent cleaned per SSPC-SP 1 and all surfaces pressure washed to remove dirt, oil, lubricants, oxidation products, and foreign substances. Washing shall involve the use of potable water at a pressure between 1000 psi (7 MPa) and 5000 psi (34 MPa) and according to "Low Pressure Water Cleaning" of SSPC-SP12. Paint spray equipment shall not be used to perform the water cleaning. All damaged shop primed areas shall then be spot cleaned per SSPC-SP3 and spot primed with aluminum epoxy mastic. The structural steel shall then receive one full intermediate coat and one full topcoat of waterborne acrylic paint.

a) Paint drips, spills, and overspray must be controlled. If containment is used to control paint drips, spills, and overspray, the containment shall be dropped and all equipment secured when sustained wind speeds of 40 mph (64 kph) or greater occur. When the protective coverings need to be attached to the structure, they shall be attached by bolting, clamping, or similar means. Welding or drilling into the structure is prohibited unless approved by the Engineer in writing.

b) Coating Dry Film Thickness (dft), measured according to SSPC-PA2:
   Zinc Primer: 3 mils (75 microns) min., 6 mils (150 microns) max.
   Epoxy Mastic: 5 mils (125 microns) min., 7 mils (180 microns) max.
   Intermediate Coat: 2 mils (50 microns) min., 4 mils (100 microns) max.
   Topcoat: 2 mils (50 microns) min., 4 mils (100 microns) max.

The total dry film thickness, excluding the spot areas touched up with epoxy mastic, shall be between 7 and 14 mils (180 and 355 microns).

c) The pressure washing requirement above may be waived if the QC and QA Inspectors verify the primed surfaces have not been contaminated.

d) Damage to the paint system shall be spot cleaned using SSPC-SP3. The cleaned areas shall be spot painted with a penetrating sealer as recommended by the manufacturer, which shall overlap onto the existing topcoat. Then the aluminum epoxy mastic shall be spot applied not to go beyond the area painted with the sealer. The acrylic intermediate and topcoat shall be spot applied to the mastic with at least a 6 inch (150 mm) overlap onto the existing topcoat.

**Organic Zinc-Rich/ Epoxy/ Urethane Paint System.** This system shall be for full shop application of the coating system, all contact surfaces shall be masked off prior to application of the intermediate and top coats.

Additional Surface Preparation. In addition to the requirements of Section 3.2.9 of the AASHTO/AWS D1.5/D1.5:2002 Bridge Welding Code (breaking thermal cut corners of stress carrying members), rolled and thermal cut corners to be painted with organic zinc primer shall be broken if they are sharper than a 1/16 in. (1.5 mm) radius. Corners shall be broken by a single pass of a grinder or other suitable device at a 45 degree angle to each adjoining surface prior to final blast cleaning, so the resulting corner approximates a 1/16 in. (1.5 mm) or larger radius after blasting. Surface anomalies (burrs, fins, deformations) shall also be treated to meet this criteria before priming.

In the shop, all structural steel designated to be painted shall be given one coat of organic zinc rich primer. Before the application of the intermediate coat, the prime coat and any newly installed fasteners shall be spot solvent cleaned per SSPC-SP 1 and all surfaces pressure washed to remove dirt, oil, lubricants, oxidation products, and foreign substances. Washing shall involve the use of potable water at a pressure between 1000 psi (7 MPa) and 5000 psi (34 MPa) and according to “Low Pressure Water Cleaning” of SSPC-SP12. Paint spray equipment shall not be used to perform the water cleaning. All damaged shop primed areas shall then be spot cleaned per SSPC-SP3, and the structural steel shall then receive one full intermediate coat of epoxy and one full topcoat of aliphatic urethane.

(a) Paint drips, spills, and overspray must be controlled. If containment is used to control paint drips, spills, and overspray, the containment shall be dropped and all equipment secured when sustained wind speeds of 40 mph (64 kph) or greater occur. When the protective coverings need to be attached to the structure, they shall be attached by bolting, clamping, or similar means. Welding or drilling into the structure is prohibited unless approved by the Engineer in writing.

(b) Coating Dry Film Thickness (dft), measured according to SSPC-PA2:
Organic Zinc-Rich Primer: 3 mils (75 microns) min., 5 mils (125 microns) max.
Aluminum Epoxy Mastic: 5 mils (125 microns) min., 7 mils (180 microns) max.
Epoxy Intermediate Coat: 3 mils (75 microns) min., 6 mils (150 microns) max. Aliphatic Urethane Top Coat: 2.5 mils (65 microns) min., 4 mils (100 microns) max.

(c) The total dry film thickness, excluding the spot areas touched up with epoxy mastic, shall be between 8.5 and 15 mils (215 and 375 microns).

(d) When specified on the plans or as requested by the Contractor, and approved by the Engineer, the epoxy intermediate and aliphatic urethane top coats shall be applied in the shop. All faying surfaces of field connections shall be masked off after priming and shall not receive the intermediate or top coats in the shop. The intermediate and top coats for field connections shall be applied, in the field, after erection of the structural steel is completed. The pressure washing requirement above may be waived if the QC and QA Inspectors verify the primed surfaces have not been contaminated.

(e) Erection and handling damage to the shop applied system shall be spot cleaned using SSPC-SP3. The surrounding coating at each repair location shall be feathered for a minimum distance of 1 1/2 in. (40 mm) to achieve a smooth transition between the prepared areas and the existing coating. The existing coating in the feathered area shall be roughened to insure proper adhesion of the repair coats. The areas cleaned to bare metal shall be spot painted with aluminum epoxy mastic. The intermediate and finish coat shall be spot applied to with at least a 6 inch (150 mm) overlap onto the existing finish coat.

**Aluminum Epoxy Mastic/ Waterborne Acrylic Paint system.** This system shall be for shop or field application of the entire coating system.

Before priming with aluminum epoxy mastic the steel the surfaces to be primed shall be prepared according to SSPC SP6 for Commercial Blast Cleaning. In the field, before the application of the intermediate coat, the prime coat and any newly installed fasteners shall be spot solvent cleaned per SSPC-SP 1 and all surfaces pressure washed to remove dirt, oil, lubricants, oxidation products, and foreign substances. Washing shall involve the use of potable water at a pressure between 1000 psi (7 MPa) and 5000 psi (34 MPa) and according to “Low Pressure Water Cleaning” of SSPC-SP12. Paint spray equipment shall not be used to perform the water cleaning. All damaged shop primed areas shall then be spot cleaned per SSPC-SP3 and spot primed with aluminum epoxy mastic. The structural steel shall then receive one full intermediate coat of aluminum epoxy mastic and one full topcoat of waterborne acrylic paint.

d) Paint drips, spills, and overspray must be controlled. If containment is used to control paint drips, spills, and overspray, the containment shall be dropped and all equipment secured when sustained wind speeds of 40 mph (64 kph) or greater occur. When the protective coverings need to be attached to the structure, they shall be attached by bolting, clamping, or similar means. Welding or drilling into the structure is prohibited unless approved by the Engineer in writing.

e) Coating Dry Film Thickness (dft), measured according to SSPC-PA2:
Epoxy Mastic Primer: 5 mils (125 microns) min., 7 mils (180 microns) max.
Epoxy Mastic Intermediate Coat: 5 mils (125 microns) min., 7 mils (180 microns) max.

Acrylic Topcoat: 2 mils (50 microns) min., 4 mils (100 microns) max.

The total dry film thickness, excluding the spot areas touched up with epoxy mastic, shall be between 12 and 18 mils (300 and 460 microns).

f) The pressure washing requirement above may be waived if the QC and QA Inspectors verify the primed surfaces have not been contaminated.

d) Damage to the paint system shall be spot cleaned using SSPC-SP3. The cleaned areas shall be spot painted with a penetrating sealer as recommended by the manufacturer, which shall overlap onto the existing topcoat. Then the aluminum epoxy mastic shall be spot applied not to go beyond the area painted with the sealer. The acrylic topcoat shall be spot applied to the mastic with at least a 6 inch (150 mm) overlap onto the existing topcoat.

The paint manufacturer's product data sheets shall be available for QA review in the shop and submitted to the Engineer prior to start of field work and the requirements as outlined in the data sheets shall be followed.

Special Instructions.

Painting Date/System Code. At the completion of the work, the Contractor shall stencil in contrasting color paint the date of painting the bridge, the painting Contractors name, and the paint type code from the Structure Information and Procedure Manual for the system used. The letters shall be capitals, not less than 2 in. (50 mm) and not more than 3 in. (75 mm) in height.

The stencil shall contain the following wording "PAINTED BY (insert the name of the painting Contractor)" and shall show the month and year in which the painting was completed, followed by “CODE S” for the Inorganic Zinc/ Acrylic System, “CODE X” for the Organic Zinc/ Epoxy/ Urethane System, “CODE AB” for the Organic Zinc/ Epoxy/ Urethane System (shop applied), and “CODE U” for the Aluminum Epoxy Mastic/ Acrylic System all stenciled on successive lines. This information shall be stenciled on the cover plate of a truss end post near the top of the railing, or on the outside face of an outside stringer near both ends of the bridge facing traffic, or at some equally visible surface designated by the Engineer.

Method of Measurement. Shop cleaning and painting new structures will not be measured for payment. Field cleaning and painting will not be measured for payment except when performed under a contract that contains a separate pay item for this work.

Basis of Payment. This work will be paid for according to Article 506.07.

**DECK SLAB REPAIR**
Effective: May 15, 1995 Revised: January 1, 2007

This work shall consist of hot-mix asphalt surface removal, when required, the removal and disposal of all loose and deteriorated concrete from bridge deck and the replacement with new concrete to the original top of deck. The work shall be done according to the applicable requirements of Sections 501, 503 and 1020 of the Standard Specifications and this Special Provision.

Deck slab repairs will be classified as follows:

(a) Partial-Depth. Partial-depth repairs shall consist of removing the loose and unsound deck concrete, disposing of the concrete removed and replacing with new concrete. The removal may be performed by chipping with power driven hand tools or by hydro-scarification equipment. The depth shall be measured from the top of the concrete deck surface, at least 3/4 in. (20 mm) but not more than 1/2 the concrete deck thickness.

(b) Full-Depth. Full-depth repairs shall consist of removing concrete full-depth of the deck, disposing of the concrete removed, and replacing with new concrete to the original concrete deck surface. The removal may be performed with power driven hand tools or by hydro-scarification equipment. Full-depth repairs shall be classified for payment as Full-Depth, Type I and Full-Depth, Type II according to the following:

Type I Full-depth patches less than or equal to 5 sq. ft. (0.5 sq m) in area. The minimum dimensions for a patch shall be 1 ft. x 1 ft. (300 mm x 300 mm).

Type II Full-depth patches greater than 5 sq. ft. (0.5 sq. m) in area.

Materials.

Materials shall be according to Article 1020.02.

Portland cement concrete for partial and full-depth repairs shall be according to Section 1020. Class PP-1, PP-2, PP-3, PP-4, or BS concrete shall be used at the Contractor's option. For Class BS concrete, a CA 13, 14, or 16 shall be used. If the Class PP or BS concrete mixture is used only for full depth repairs, A CA-11 may be used.

Grout. The grout for bonding new concrete to old concrete shall be proportioned by weight (mass) and mixed at the job site, or it may be ready-mixed if agitated while at the job site. The bonding grout shall consist of one part portland cement and one part sand, mixed with sufficient water to form a slurry. The bonding grout shall have a consistency allowing it to be scrubbed onto the prepared surface with a stiff brush or broom leaving a thin, uniform coating that will not run or puddle in low spots. Grout that can not be easily and evenly applied or has lost its consistency may be rejected by the Engineer. Grout that is more than two hours old shall not be used.

Equipment:

The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

(a) Surface Preparation Equipment. Surface preparation and concrete removal equipment shall be according to the applicable portions of Section 1100 and the following:

(1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

(2) Blast Cleaning Equipment. The blast cleaning may be performed by wet sandblasting, high-pressure waterblasting, shotblasting or abrasive blasting. Blast cleaning equipment shall be capable of removing rust and old concrete from exposed reinforcement bars, and shall have oil traps.

(3) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 45 lb. (20 kg) class. Chipping hammers heavier than a nominal 15 lb. (6.8 kg) class shall not be used for removing concrete from below any reinforcing bar for partial depth repairs or final removal at the boundary of full-depth repairs. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.

(4) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a remote-controlled robotic device. The equipment may use river, stream or lake water. Operation of the equipment shall be performed and supervised by qualified personnel certified by the equipment manufacturer. Evidence of certification shall be presented to the Engineer. The equipment shall be capable of removing concrete to the specified depth and removing rust and concrete particles from exposed reinforcing bars. Hydro-scarification equipment shall be calibrated before being used and shall operate at a minimum of 18,000 psi (124 MPa).

(b) Concrete Equipment: Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.

(c) Finishing Equipment: Finishing equipment shall be according to Article 1103.17. Adequate hand tools will be permitted for placing and consolidating concrete in the patch areas and for finishing small patches.

Construction Requirements: Sidewalks, curbs, drains, reinforcement and/or existing transverse and longitudinal joints which are to remain in place shall be protected from damage during removal and cleaning operations. All damage caused by the Contractor shall be corrected, at the Contractor's expense, to the satisfaction of the Engineer.

The Contractor shall control the runoff water generated by the various construction activities in such a manner as to minimize, to the maximum extent practicable, the discharge of construction debris into adjacent waters, and shall properly dispose of the solids generated according to Article 202.03. Runoff water will not be allowed to constitute a hazard on adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

(a) Hot-Mix Asphalt Surface Removal.

The hot-mix asphalt surface course and all waterproofing membrane shall be removed and disposed of according to applicable portions of Articles 440.04 and 440.06, except milling equipment will not be allowed if the deck is to receive a waterproofing membrane system. If the overlay or waterproofing membrane contains asbestos fibers, removal shall be in accordance with the Special Provision for "Asbestos Waterproofing Membrane or Asbestos Hot-mix Asphalt Surface Removal". Removal of the hot-mix asphalt surface by the use of radiant or direct heat will not be permitted.

(b) Surface Preparation:

All loose, disintegrated and unsound concrete shall be removed from portions of the deck slab shown on the plans or as designated by the Engineer. The Engineer will determine the limits of removal as the work progresses.

The Contractor shall take care not to damage reinforcement bars or expansion joints which are to remain in place. Any damage to reinforcement bars or expansion joints shall be corrected at the Contractor's expense. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

(1) Partial-Depth. Areas to be repaired will be determined and marked by the Engineer. A concrete saw shall be used to provide vertical edges approximately 3/4 in. (20 mm) deep around the perimeter of the area to be patched when an overlay is not specified. Where high steel is present, the depth may be reduced as directed by the Engineer. A saw cut will not be required on those boundaries along the face of the curb, parapet or joint or when sharp vertical edges are provided by hydro-scarification.

The loose and unsound concrete shall be removed by chipping, with power driven hand tools or by hydro-scarification equipment. All exposed reinforcing bars and newly exposed concrete shall be thoroughly blast cleaned. Where, in the judgment of the Engineer, the bond between existing concrete and reinforcement steel within the patch area has been destroyed, the concrete adjacent to the bar shall be removed to a depth that will permit new concrete to bond to the entire periphery of the exposed bar. A minimum of 1 in. (25 mm) clearance will be required. The Engineer may require enlarging a designated removal area should inspection indicate deterioration beyond the limits previously designated. In this event, a new saw cut shall be made around the extended area before additional removal is begun. The removal area shall not be enlarged solely to correct debonded reinforcement or deficient lap lengths.

(2) Full-Depth. Concrete shall be removed as determined by the Engineer within all areas designated for full-depth repair and in all designated areas of partial depth repair in which unsound concrete is found to extend below half the concrete deck thickness. Full depth removal shall be performed according to Article 501.05. Saw cuts shall be made on the top of the deck, except those boundaries along the face of curbs, parapets and joints or where hydro-scarification provided sharp vertical edges. The top saw cut may be omitted if the deck is to receive an overlay.

Forms for full-depth repair may be supported by hangers with adjustable bolts or by blocking from the beams below. When approved by the Engineer, forms for Type 1 patches may be supported by No. 9 wires or other devices attached to the reinforcement bars.

All form work shall be removed after the curing sequence is complete and prior to opening to traffic.

(3) Reinforcement Treatment. Care shall be exercised during concrete removal to protect the reinforcement bars and structural steel from damage. Any damage to the reinforcement bars or structural steel to remain in place shall be repaired or replaced to the satisfaction of the Engineer at the Contractor's expense. All existing reinforcement bars shall remain in place except as herein provided for corroded bars. Tying of loose bars will be required. Reinforcing bars which have been cut or have lost 25 percent or more of their original cross sectional area

shall be supplemented by new in kind reinforcement bars. New bars shall be lapped a minimum of 32 bar diameters to existing bars. An approved mechanical bar splice capable of developing in tension at least 125 percent of the yield strength of the existing bar shall be used when it is not feasible to provide the minimum bar lap. No welding of bars will be permitted.

(4) Cleaning. Immediately after completion of the concrete removal and reinforcement repairs, the repair areas shall be cleaned of dust and debris. Once the initial cleaning is completed, the repair areas shall be thoroughly blast cleaned to a roughened appearance free from all foreign matter. Particular attention shall be given to removal of concrete fines. Any method of cleaning which does not consistently produce satisfactory results shall be discontinued and replaced by an acceptable method. All debris, including water, resulting from the blast cleaning shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final cleaning, the area shall be carefully protected with well-anchored polyethylene sheeting.

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, or other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer.

(c) Placement & Finishing of Concrete Repair:

(1) Grout Placement. After the repair areas have been cleaned and immediately prior to concrete placement, the grout shall be applied to a dampened surface. A thin layer of grout shall be thoroughly scrubbed into the deck surface. All vertical as well as horizontal surfaces shall receive a thorough, even coating. The rate of grout placement shall be limited so the brushed grout does not dry out before it is covered with concrete. Grout that has become dry and chalky shall be blast cleaned and replaced at the Contractor's expense. No concrete shall be placed over dry grout.

(2) Concrete Placement.

The concrete shall be placed and consolidated according to Article 503.07 and as herein specified. Article 1020.14 shall apply.

When an overlay system is not specified, the patches shall be finished according to Article 503.16 (a), followed by a light brooming.

(d) Curing and Protection.

Concrete patches shall be cured by the Wetted Burlap or Wetted Cotton Mat Method according to Article 1020.13 (a)(3) or Article 1020.13 (a)(5). The curing period shall be 3 days for Class PP-1, PP-2, PP-3, and PP-4 concrete. The curing period shall be 7 days for Class BS concrete. In addition to Article 1020.13, when the air temperature is less than 55º F (13º C), the Contractor shall cover the patch according to Article 1020.13 (d)(1) with minimum R12 insulation. Insulation is optional when the air temperature is 55º F. - 90º F (13º C - 32º C). Insulation shall not be placed when the air temperature is greater than 90° F (32° C). A 72-hour minimum drying period shall be required before placing waterproofing or hot-mix asphalt surfacing.

(e) Opening to Traffic.

No traffic will be permitted on a patch until after the specified cure period, and the concrete has obtained a minimum compressive strength of 4000 psi (27.6 MPa) or flexural strength of 675 psi (4.65 MPa).

Construction equipment will be permitted on a patch during the cure period if the concrete has obtained the minimum required strength. In this instance, the strength specimens shall be cured with the patch.

Method of Measurement.

When specified, hot-mix asphalt surface removal and full or partial depth repairs will be measured for payment and computed in square yards (square meters).

Basis of Payment.

The hot-mix asphalt surface removal will be paid for at the contract unit price per square yard (square meter) for HOT-MIX ASPHALT REMOVAL (DECK). Areas removed and replaced up to and including a depth of half the concrete deck thickness will be paid for at the contract unit price per square yard (square meter) for DECK SLAB REPAIR (PARTIAL). Areas requiring removal greater than a depth of half the concrete deck thickness shall be removed and replaced full depth and will be paid for at the contract unit price per square yard (square meter) for DECK SLAB REPAIR (FULL DEPTH, TYPE I) and/or DECK SLAB REPAIR (FULL DEPTH, TYPE II).

When corroded reinforcement bars are encountered in the performance of this work and replacement is required, the Contractor will be paid according to Article 109.04.

No payment will be allowed for removal and replacement of reinforcement bars damaged by the Contractor in the performance of his/her work or for any increases in dimensions needed to provide splices for these replacement bars.

Removal and disposal of asbestos waterproofing and/or asbestos bituminous concrete will be paid for as specified in the Special Provision for “Asbestos Waterproofing Membrane or Asbestos Hot-Mix Asphalt Surface Removal”.

**BRIDGE DECK MICROSILICA CONCRETE OVERLAY**
Effective: May 15, 1995 Revised: January 1, 2007

Description. This work shall consist of the preparation of the existing concrete bridge deck and the construction of a microsilica concrete overlay to the specified thickness. The minimum thickness of the overlay shall be 2 1/4 in. (60 mm).

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

| Item | Article/Section |
|---|---|
| (a) Microsilica | 1010 |
| (b) Portland Cement Concrete (Notes 1-6) | 1020 |
| (c) Grout (Note 7) | |
| (d) Packaged Rapid Hardening Mortar or Concrete | 1018 |
| (e) Concrete Curing Materials | 1022.02 |

Note 1: Cement shall be Type I portland cement. Fine aggregate shall be natural sand and the coarse aggregate shall be crushed stone or crushed gravel. The gradation of the coarse aggregate shall be CA 11, CA 13, CA 14 or CA 16.

Note 2: Mix Design Criteria.

Article 1020.04 shall not apply. The microsilica concrete mix design shall meet the following requirements:

Cement Factor 565 lb./cu. yd. (335 kg/cu. m)
Microsilica Solids 33 lb./cu. yd. (20 kg/cu. m)
Water/Cement Ratio 0.37 to 0.41
(including water in the slurry)
Mortar Factor 0.88 to 0.92
Slump 3 to 6 in. (75 to 150 mm)
Air Content 5.0 to 8.0 percent
Compressive Strength (14 days) 4000 psi (27,500 kPa) minimum
Flexural Strength (14 days) 675 psi (4,650 kPa) minimum

Note 3: Admixtures.

Article 1020.05(b) shall apply except as follows:
High-range water reducing admixtures (superplasticizers) shall be added as determined by the Engineer.

Note 4: Fly Ash.

Article 1020.05(c)(1) shall apply except as follows:

Only Class C fly ash may be used to partially replace portland cement. The amount of cement replaced and replacement ratio shall be the same as for bridge decks. Note 5: Ground Granulated Blast-Furnace Slag.

Ground granulated blast-furnace slag may be used according to Article 1020.05(c)(2). Note 6: Mixing.

The mixing requirements shall be according to Article 1020.11, except as follows:
(a) Water-based microsilica slurry:
(1) Truck Mixer:
Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.

Add remaining water.
Mix 30-40 revolutions at 12-15 RPM.
Add high range water-reducing admixture.
Mix 60-70 revolutions at 12-15 RPM.
(2) Stationary Mixer:
The microsilica slurry shall be diluted into the water stream or weigh box prior to adding into mixer. Combine simultaneously air entraining admixture, water-reducing admixture and/or retarding admixture, microsilica slurry and 80 percent of the water with cement, fly ash (if used) and aggregates.
Add remaining water.
After mixing cycle is completed deposit into truck mixer.
Add high range water-reducing admixture.
Mix 60-70 revolutions at 12-15 RPM.
(b) Densified microsilica (bulk):
(1) Truck Mixer:
- Same as (a)1 above except the densified microsilica shall be added with the cement.

(2) Stationary Mixer:
- Same as (a)2 above except the densified microsilica shall be added with the cement.

(c) Densified microsilica (bag): Bagged microsilica shall be kept dry. No bag or material containing moisture shall be introduced into the concrete mixer.
(1) Truck Mixer:
Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80 percent of the water.
Add cement, fly ash (if used), and aggregates.
Add remaining water.
Mix 30-40 revolutions at 12-15 RPM.
Add microsilica.
Mix 70-80 revolutions at 12-15 RPM.
Add high range water-reducing admixture.
Mix 60-70 revolutions at 12-15 RPM.
(2) Stationary Mixer:
Combine air entraining admixture, water-reducing admixture and/or retarding admixture and 80% of the water.
Add cement, fly ash (if used), and aggregates.
Add remaining water.
After mixing cycle is completed deposit into truck mixer.
Add microsilica to truck.
Mix 70-80 revolutions at 12-15 RPM.
Add high range water-reducing admixture.
Mix 60-70 revolutions at 12-15 RPM.

Note 7: Grout. The grout for bonding new concrete to old concrete shall be proportioned by weight (mass) and mixed at the job site, or it may be ready-mixed if agitated while at the job site. The bonding grout shall consist of one part portland cement and two parts sand, mixed with sufficient water to form a slurry. The bonding grout shall have a

consistency allowing it to be scrubbed onto the prepared surface with a stiff brush or broom leaving a thin, uniform coating that will not run or puddle in low spots. Grout that can not be easily and evenly applied or has lost its consistency may be rejected by the Engineer. Grout that is more than one hour old shall not be used.

At the option of the Contractor the grout may be applied by mechanical applicators. If this option is chosen, the sand shall be eliminated from the grout mix.

Equipment: The equipment used shall be subject to the approval of the Engineer and shall meet the following requirements:

(a) Surface Preparation Equipment. Surface preparation equipment shall be according to the applicable portions of Section 1100 and the following:

(1) Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

(2) Mechanical Blast Cleaning Equipment. Mechanical blast cleaning may be performed by high-pressure waterblasting or shotblasting. Mechanical blast cleaning equipment shall be capable of removing weak concrete at the surface, including the microfractured concrete surface layer remaining as a result of mechanical scarification, and shall have oil traps.

Mechanical high-pressure waterblasting equipment shall be mounted on a wheeled carriage and shall include multiple nozzles mounted on a rotating assembly. The distance between the nozzles and the deck surface shall be kept constant and the wheels shall maintain contact with the deck surface during operation.

(3) Hand-Held Blast Cleaning Equipment. Blast cleaning using hand-held equipment may be performed by high-pressure waterblasting or abrasive blasting. Hand-held blast cleaning equipment shall have oil traps.

Hand-held high-pressure waterblasting equipment that is used in areas inaccessible to mechanical blast cleaning equipment shall have a minimum pressure of 7,000 psi (48 MPa).

(4) Mechanical Scarifying Equipment. Scarifying equipment shall be a power-operated, mechanical scarifier capable of uniformly scarifying or removing the old concrete surface and new patches to the depths required in a satisfactory manner. Other types of removal devices may be used if their operation is suitable and they can be demonstrated to the satisfaction of the Engineer.

(5) Hydro-Scarification Equipment. The hydro-scarification equipment shall consist of filtering and pumping units operating with a computerized, self-propelled robotic machine with gauges and settings that can be easily verified. The equipment shall use potable water according to Section 1002. Operation of the equipment shall be performed and supervised by qualified personnel certified by the equipment manufacturer. Evidence of certification shall be presented to the Engineer. The equipment shall be capable of removing concrete to the specified depth and be capable of removing rust and old concrete particles from exposed reinforcement bars. The hydro-scarification equipment shall be calibrated before being used and shall operate at a uniform pressure sufficient to remove the specified depth of concrete in a timely manner.

(6) Vacuum Cleanup Equipment. The equipment shall be equipped with fugitive dust control devices capable of removing wet debris and water all in the same pass. Vacuum equipment shall also be capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.

(7) Power-Driven Hand Tools. Power-driven hand tools will be permitted including jackhammers lighter than the nominal 45 lb. (20 kg) class. Jackhammers or chipping hammers shall not be operated at an angle in excess of 45 degrees measured from the surface of the slab.

(b) Pull-off Test Equipment. Equipment used to perform pull-off testing shall be either approved by the Engineer, or obtained from one of the following approved sources:

James Equipment Germann Instruments, Inc.
007 Bond Tester BOND-TEST Pull-off System
800-426-6500 847-329-9999

SDS Company
DYNA Pull-off Tester
805-238-3229

Pull-off test equipment shall include all miscellaneous equipment and materials to perform the test and clean the equipment, as indicated in the Illinois Test Procedures 304 and 305 “Pull-off Test (Surface or Overlay Method)”. Prior to the start of testing, the Contractor shall submit to the Engineer a technical data sheet and material safety data sheet for the epoxy used to perform the testing. For solvents used to clean the equipment, a material safety data sheet shall be submitted.

(c) Concrete Equipment. Equipment for proportioning and mixing the concrete shall be according to Article 1020.03.

(d) Finishing Equipment. Finishing equipment shall be according to Article 503.03.

(e) Mechanical Fogging Equipment. Mechanical fogging equipment shall be according to 1103.17 (k)

Construction Requirements: Sidewalks, curbs, drains, reinforcement and/or existing transverse and longitudinal joints which are to remain in place shall be protected from damage during scarification and cleaning operations. All damage caused by the Contractor shall be corrected, at the Contractor’s expense, to the satisfaction of the Engineer.

The Contractor shall control the runoff water generated by the various construction activities in such a manner as to minimize, to the maximum extent practicable, the discharge of construction debris into adjacent waters, and shall properly dispose of the solids generated according to Article 202.03. Runoff water will not be allowed to constitute a hazard on adjacent or underlying roadways, waterways, drainage areas or railroads nor be allowed to erode existing slopes.

(a) Deck Preparation:

(1) Bridge Deck Scarification. The scarification work shall consist of removing the designated concrete deck surface using mechanical or hydro-scarifying equipment as specified. The areas designated shall be scarified uniformly to the depth as specified on the plans. In areas of the deck not accessible to the scarifying equipment, power-driven hand tools will be permitted. Power driven hand tools shall be used for removal around areas to remain in place.

A trial section on the existing deck surface will be designated by the Engineer to demonstrate that the equipment, personnel and methods of operation are capable of producing results satisfactory to the Engineer. The trial section will consist of approximately 30 sq. ft. (3 sq. m).

Once the settings for the equipment are established, they shall not be changed without the permission of the Engineer. The removal shall be verified, as necessary, at least every 16 ft. (5 m) along the cutting path. If sound concrete is being removed below the desired depth, the equipment shall be reset or recalibrated.

If the use of hydro-scarification equipment is specified, the Contractor may use mechanical scarification equipment to remove an initial depth of concrete provided that the last 1/4 in. (6 mm) of removal is accomplished with hydro-scarification equipment. If the Contractor's use of mechanical scarifying equipment results in exposing, snagging, or dislodging the top mat of reinforcing steel, the scarifying shall be stopped immediately and the remaining removal shall be accomplished using the hydro-scarification equipment. All damage to the existing reinforcement resulting from the Contractor's operation shall be repaired or replaced at the Contractor's expense as directed by the Engineer. Replacement shall include the removal of any additional concrete required to position or splice the new reinforcing steel. Undercutting of exposed reinforcement bars shall only be as required to replace or repair damaged or corroded reinforcement. Repairs to existing reinforcement shall be according to the Special Provision for "Deck Slab Repair".

After hydro-scarification the deck shall be vacuum cleaned in a timely manner before the water and debris are allowed to dry and re-solidify to the deck. The uses of alternative cleaning and debris removal methods to minimize driving heavy vacuum equipment over exposed deck reinforcement may be used subject to the approval of the Engineer.

(2) Deck Patching. After bridge deck scarification, all designated patching, except as note below, shall be completed according to the Special Provision for "Deck Slab Repair". All full depth patching shall be completed prior to final surface preparation.

When mechanical scarification is specified, partial depth patches may be fill with overlay material at the time of overlay placement.

All patches placed prior to overlay placement shall be struck off and then roughened with a suitable stiff bristled broom or wire brush to provide a rough texture designed to promote bonding of the overlay. Hand finishing of the patch surface shall be kept to a minimum to prevent overworking of the surface.

After scarification, the deck shall be thoroughly cleaned of broken concrete and other debris. The Engineer will sound the scarified deck and all remaining unsound areas will be marked for additional removal and/or repairs as applicable. If the bottom mat of reinforcement is exposed, that area shall be defined as a full depth repair.

In areas where hydro-scarification is specified, No separate payment for partial depth patching will be made regardless of whether it was detailed in the plans or not. Just prior to performing hydro-scarification, the deck shall be sounded, with unsound areas marked on the deck to assist the hydro-scarification process in performing the partial depth removal simultaneously with the hydro-scarification operation. If in the opinion of the Engineer additional removal is required after the hydro-scarification process, which could not have been anticipated or accounted for by normal modifications to the scarification process, such removal shall be paid for according to Article 109.04. Any removal required or made below the specified depth for scarification of the bridge deck, which does not result in full depth patching, shall be filled with the overlay material at the time of the overlay placement.

(3) Final Surface Preparation. Final surface preparation shall consist of the operation of mechanical blast cleaning equipment to remove any weak concrete at the surface, including the microfractured concrete surface layer remaining as a result of mechanical scarification. Any areas determined by the Engineer to be inaccessible to mechanical equipment shall be thoroughly blast cleaned with hand-held equipment. When hydro-scarification equipment is used for concrete removal, the deck surface need not be blast cleaned with mechanical equipment unless the spoils from the scarification operation are allowed to dry and re-solidify on the deck surface.

Final surface preparation shall also include the cleaning of all dust, debris, and concrete fines from the deck surface including vertical faces of curbs, previously placed adjacent overlays, barrier walls up to a height of 1 in. (25 mm) above the overlay, depressions, and beneath reinforcement bars. Hand-held high-pressure waterblasting equipment shall be used for this operation.

If mechanical scarification is used to produce the final deck surface texture, surface pull-off testing will be required. After the final surface preparation has been completed and before placement of the overlay, the prepared deck surface will be tested by the Engineer according to the Illinois Test Procedure 304 “Pull-off Test (Surface Method)”. The Contractor shall provide the test equipment.

a. Start-up Testing. Prior to the first overlay placement, the Engineer will evaluate the blast cleaning method. The start-up area shall be a minimum of 600 sq. ft. (56 sq. m). After the area has been prepared, six random test locations will be determined by the Engineer, and tested according to the Illinois Test Procedure 304 “Pull-off Test (Surface Method)”.

The average of the six tests shall be a minimum of 175 psi (1,207 kPa) and each individual test shall have a minimum strength of 160 psi (1,103 kPa). If the criteria are not met, the Contractor shall adjust the blast cleaning method. Startup testing will be repeated until satisfactory results are attained.

Once an acceptable surface preparation method is established, it shall be continued for the balance of the work. The Contractor may, with the permission of the Engineer, change the surface preparation method, in which case, additional start-up testing will be required.

b. Lot Testing. After start-up testing has been completed, the following testing frequency will be used. For each structure, each stage will be divided into lots of not more than 4500 sq. ft. (420 sq. m). Three random test locations will be determined by the Engineer for each lot, and tested according to the Illinois Test procedure 304 “Pull-off Test (Surface Method)”.

   The average of the three tests shall be a minimum of 175 psi (1,207 kPa) and each individual test shall have a minimum strength of 160 psi (1,103 kPa). In the case of a failing individual test or a failing average of three tests, the Engineer will determine the area that requires additional surface preparation by the Contractor. Additional test locations will be determined by the Engineer.

In addition to start-up and lot testing, the Department may require surface pull-off testing of areas inaccessible to mechanical blast cleaning equipment and blast cleaned with hand-held equipment. The Engineer shall determine each test location, and each individual test shall have a minimum strength of 175 psi (1,207 kPa).

Exposed reinforcement bars shall be free of dirt, detrimental scale, paint, oil, and other foreign substances which may reduce bond with the concrete. A tight non-scaling coating of rust is not considered objectionable. Loose, scaling rust shall be removed by rubbing with burlap, wire brushing, blast cleaning or other methods approved by the Engineer. All loose reinforcement bars, as determined by the Engineer, shall be retied at the Contractor's expense.

All dust, concrete fines, debris, including water, resulting from the surface preparation shall be confined and shall be immediately and thoroughly removed from all areas of accumulation. If concrete placement does not follow immediately after the final surface preparation, the area shall be carefully protected with well-anchored white polyethylene sheeting.

(b) Pre-placement Procedure. Prior to placing the overlay, the Engineer will inspect the deck surface. All contaminated areas shall be blast cleaned again at the Contractor's expense.

Before placing the overlay, the finishing machine shall be operated over the full length of bridge segment to be overlaid to check support rails for deflection and confirm the minimum overlay thickness. All necessary adjustments shall be made and another check performed, unless otherwise directed by the Engineer.

(c) Placement Procedure:

(1) Bonding Methods. The Contractor shall prepare the deck prior to overlay placement by one of the following methods unless restricted as specified on the plans:

   a. Grout Method. The deck shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition for at least 12 hours before placement of the grout is started. Any excess water shall be removed by compressed air or by vacuuming prior to grout placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the grout. Immediately before placing the overlay mixture, the exposed area shall be thoroughly covered with a thin layer of grout. The grout shall be thoroughly scrubbed into the surface. All vertical as well as horizontal surfaces shall receive a thorough, even coating. The rate of grout placement shall be limited so the brushed grout does not dry out before it is covered with the concrete.

Grout that is allowed to become dry and chalky shall be blast cleaned and replaced at the Contractor's expense. No concrete shall be placed over dry grout.

b. Direct Bond Method. The deck shall be cleaned to the satisfaction of the Engineer and shall be thoroughly wetted and maintained in a dampened condition for at least 12 hours before placement of the overlay. Any excess water shall be removed by compressed air or by vacuuming prior to beginning overlay placement. Water shall not be applied to the deck surface within one hour before or at any time during placement of the overlay.

(2) Overlay Placement. Placement of the concrete shall be a continuous operation throughout the pour. The overlay shall be placed as close to its final position as possible and then mechanically consolidated and screeded to final grade. All fogging, finishing, and texturing shall be according to Article 503.16.

Internal vibration shall be performed along edges, adjacent to bulkheads, and where the overlay thickness exceeds 3 in. (75 mm). Internal vibration along the longitudinal edges of a pour shall be performed with a minimum of 2 hand-held vibrators, one on each edge of the pour. Hand finishing shall be performed along the edges of the pour and shall be done from sidewalks, curbs or work bridges.

A construction dam or bulkhead shall be installed in case of a delay of 30 minutes or more in the concrete placement operation.

All construction joints shall be formed. When required by the Engineer the previously placed overlay shall be sawed full-depth to a straight and vertical edge before fresh concrete is placed. The Engineer will determine the extent of the removal. When longitudinal joints are not shown on the plans, the locations shall be subject to approval by the Engineer and shall not be located in the wheel paths.

The Contractor shall stencil the date of construction (month and year) and the appropriate letters MS, or MSFA when fly ash is used in the mix design, into the overlay before it takes its final set. The stencil shall be located in a conspicuous location, as determined by the Engineer, for each stage of construction. This location shall be outside of the grooving where possible and within 3 ft. (1 m) of an abutment joint. The characters shall be 3 to 4 in. (75 mm to 100 mm) in height, 1/4 in. (5 mm) in depth and face the centerline of the roadway.

(3) Limitations of Operations:

a. Weather limitations. Concrete shall not be placed unless the deck temperature is above 50°F (10°C) and the air temperature is predicted to be above 50°F (10°C) for at least 12 hours after placement. The concrete shall be maintained at a minimum of 50°F (10°C) during the curing period according to Article 1020.13(d). The temperature of the concrete mixture as placed shall not be less than 50°F (10°C) nor more than 90°F (32°C). If night placement is required, illumination and placement procedures will be subject to approval of the Engineer. No additional compensation will be allowed if night work is required.

b. Other Limitations. Concrete delivery trucks shall be limited to a maximum load of 6 cu. yd. (4.6 cu. m).

Truck mixers, concrete pumps, or other heavy equipment will not be permitted on any portion of the deck where the top reinforcing mat has been exposed. Conveyors, buggy ramps and pump piping shall be installed in a way that will not displace undercut reinforcement bars. Air compressors may be operated on the deck only if located directly over a pier and supported off undercut reinforcement bars. Compressors will not be allowed to travel over undercut reinforcement bars.

Concrete removal may proceed during final cleaning and concrete placement on adjacent portions of the deck, provided the removal does not interfere in any way with the cleaning or placement operations.

If water or contaminants from the hydro-scarification flow into the area of final cleaning or concrete placement, hydro-scarification shall be suspended until the concrete has been placed and has cured a minimum of 24 hours. No concrete shall be removed within 6 ft. (1.8 m) of a newly-placed overlay until the concrete has obtained a minimum compressive strength of 3000 psi (20,700 kPa) or flexural strength of 600 psi (4,150 kPa).

(4) Curing Procedure. The surface shall be continuously wet cured for at least 7 days according to Article 1020.13(a)(5) Wetted Cotton Mat Method.

(5) Opening to Traffic. No traffic or construction equipment will be permitted on the overlay until after the specified cure period and the concrete has obtained a minimum compressive strength of 4000 psi (27,500 kPa) or flexural strength of 675 psi (4,650 kPa) unless permitted by the Engineer.

(6) Overlay Testing. The Engineer reserves the right to conduct pull-off tests on the overlay to determine if any areas are not bonded to the underlying concrete, and at a time determined by the Engineer. The overlay will be tested according to the Illinois Test Procedure 305 “Pull-off Test (Overlay Method)”, and the Contractor shall provide the test equipment. Each individual test shall have a minimum strength of 150 psi (1,034 kPa). Unacceptable test results will require removal and replacement of the overlay at the Contractor’s expense, and the locations will be determined by the Engineer. When removing portions of an overlay, the saw cut shall be a minimum depth of 1 in. (25 mm).

If the overlay is to remain in place, all core holes due to testing 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 material.

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.

Method of Measurement. The areas of mechanical and/or hydro scarification on the bridge deck will be measured for payment in square yards (square meters). No additional payment will be made for multiple passes of the equipment required to achieve the specified scarification depth.

The concrete overlay will be measured for payment in square yards (square meters).

When Bridge Deck Hydro-Scarification is specified, the additional concrete placed with the overlay, required to fill all depressions below the specified thickness will be measured for payment in cubic yards (cubic meters). The volume will be determined by subtracting the theoretical volume of the overlay from the ticketed volume of overlay delivered minus the volume estimated by the Engineer left in the last truck at the end of the overlay placement. The theoretical cubic yard (cubic meter) quantity for the overlay will be determined by multiplying the plan surface area of the overlay times the specified thickness of the overlay.

Basis of Payment. Concrete scarification of the bridge deck using mechanical scarification equipment will be paid for at the contract unit price per square yard (square meter) for CONCRETE BRIDGE DECK SCARIFICATION of the depth specified. Concrete scarification of the bridge deck using hydro-scarification equipment will be paid for at the contract unit price per square yard (square meter) for BRIDGE DECK HYDRO-SCARIFICATION of the depth specified.

Microsilica concrete overlay will be paid for at the contract unit price per square yard (square meter) for BRIDGE DECK MICROSILICA CONCRETE OVERLAY, of the thickness specified. When hydro-scarification equipment is used, the additional volume of overlay required to fill all depressions below the specified thickness will be paid for at the Contractor's actual material cost for the microsilica concrete per cubic yard (cubic meter) plus 15 percent.

When mechanical scarification equipment is used, additional partial depth patches poured monolithically with the overlay will be paid for at the contract unit price bid per square yard (square meter) for DECK SLAB REPAIR (PARTIAL).

When the Engineer conducts pull-off tests on the overlay and they are acceptable, Contractor expenses incurred due to testing and for filling core holes will be paid according to Article 109.04. Unacceptable pull-off tests will be at the Contractor's expense.

When specified, the Contractor has the option of choosing the type of overlay. The options will be limited to those specified in the plans and will be paid for at the contract unit price per square yard (square meter) for BRIDGE DECK CONCRETE OVERLAY OPTION, of the thickness specified.

Overlay material placed off the deck in abutment backwalls, and/or other locations will not be measured for payment but will be included in the pay item involved.

**TEMPORARY SHEET PILING**
Effective: September 2, 1994 Revised: January 1, 2007

Description. This work shall consist of furnishing, driving, adjusting for stage construction when required and subsequent removal of the sheet piling according to the dimensions and details shown on the plans and according to the applicable portions of Section 512 of the Standard Specifications.

This work shall also include furnishing, installing and subsequent removal of all miscellaneous steel shapes, plates and connecting hardware when required to attach the sheeting to an existing substructure unit and/or to facilitate stage construction.

General. The Contractor may propose other means of supporting the sides of the excavation provided they are done so at no extra cost to the department. If the Contractor elects to vary from the design requirements shown on the plans, the revised design calculations and details shall be submitted to the Engineer for approval. The calculations shall be prepared and sealed by an Illinois Licensed Structural Engineer. This approval will not relieve the Contractor of responsibility for the safety of the excavation. Approval shall be contingent upon acceptance by all involved utilities and/or railroads.

Material. The sheet piling shall be made of steel and may be new or used material, at the option of the Contractor. The sheet piling shall have a minimum section modulus as shown on the plans or in the approved Contractor's alternate design. The sheeting shall have a minimum yield strength of 38.5 ksi (265 MPa) unless otherwise specified. The sheeting, used by the Contractor, shall be identifiable and in good condition free of bends and other structural defects. The Contractor shall furnish a copy of the published sheet pile section properties to the Engineer for verification purposes. The Engineer's approval will be required prior to driving any sheeting. All driven sheeting not approved by the Engineer shall be removed at the Contractor's expense.

Construction. The Contractor shall verify locations of all underground utilities before driving any sheet piling. Any disturbance or damage to existing structures, utilities or other property, caused by the Contractor's operation, shall be repaired by the Contractor in a manner satisfactory to the Engineer at no additional cost to the Department. The Contractor shall be responsible for determining the appropriate equipment necessary to drive the sheeting to the tip elevation(s) specified on the plans or according to the Contractor's approved design. The sheet piling shall be driven, as a minimum, to the tip elevation(s) specified, prior to commencing any related excavation. If unable to reach the minimum tip elevation, the adequacy of the sheet piling design will require re-evaluation by the Department prior to allowing excavation adjacent to the sheet piling in question. The Contractor shall not excavate below the maximum excavation line shown on the plans without the prior permission of the Engineer. The sheet piling shall remain in place until the Engineer determines it is no longer required.

The sheet piling shall be removed and disposed of by the Contractor when directed by the Engineer. When allowed, the Contractor may elect to cut off a portion of the sheet piling leaving the remainder in place. The remaining sheet piling shall be a minimum of 12 in. (300 mm) below the finished grade or as directed by the Engineer. Removed sheet piling shall become the property of the Contractor.

When an obstruction is encountered, the Contractor shall notify the Engineer and upon concurrence of the Engineer, the Contractor shall begin working to break up, push aside, or remove the obstruction. An obstruction shall be defined as any object (such as but not limited to, boulders, logs, old foundations etc.) where it's presence was not obvious or specifically noted on the plans prior to bidding, that cannot be driven through or around with normal driving procedures, but requires additional excavation or other procedures to remove or miss the obstruction.

Method of Measurement. The temporary sheet piling will be measured for payment in place in square feet (square meter). Any temporary sheet piling cut off, left in place, or driven to dimensions other than those shown on the contract plans without the written permission of the Engineer, shall not be measured for payment but shall be done at the contractor's expense.

If the Contractor is unable to drive the sheeting to the specified tip elevation(s) and can demonstrate that any further effort to drive it would only result in damaging the sheeting, then the Contractor shall be paid based on the plan quantity of temporary sheeting involved. However, no additional payment will be made for any walers, bracing, or other supplement to the temporary sheet piling, which may be required as a result of the re-evaluation in order to insure the original design intent was met.

Basis of Payment. This work will be paid for at the contract unit price per square foot (square meter) for TEMPORARY SHEET PILING.

Payment for any excavation performed in conjunction with this work will not be included in this item but shall be paid for as specified elsewhere in this contract.

Obstruction mitigation shall be paid for according to Article 109.04 of the Standard Specifications.

**REMOVAL OF EXISTING NON COMPOSITE BRIDGE DECKS**
Effective: June 21, 2004 Revised: January 1, 2007

Revise the last sentence of Article 501.05 (b) of the Standard Specifications to read:

"Saw cutting directly over the top of beam or girder flanges may be permitted only if shown on the plans. The maximum saw cut depth allowed directly over a flange shall be to the bottom of the top mat of reinforcing steel but shall not exceed half the deck thickness. The Contractor shall provide positive control for controlling the depth of cut into the slab. The Contractor shall provide sawing equipment adequate in size and horsepower to complete the sawing operation."

**PIPE UNDERDRAINS FOR STRUCTURES**
Effective: May 17, 2000 Revised: January 1, 2007

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 feet (meters), 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 foot (meter) for PIPE UNDERDRAINS FOR STRUCTURES of the diameter specified,. 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 Revised: January 1, 2007

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.

Construction. The porous granular embankment (special) shall be installed according to Section 207, except that it shall be uncompacted.

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

**BITUMINOUS COATED AGGREGATE SLOPEWALL**
Effective: March 21, 1997 Revised: January 1, 2007

This work shall consist of paving embankment slopes with crushed aggregate for control and prevention of erosion of slopes.

Material: The aggregate used for slope wall paving shall be crushed stone conforming to Article 1004.01 of the Standard Specifications for Class D quality except that one of the following options shall apply:

**COARSE AGGREGATE QUALITY**

| QUALITY TEST | Option 1 | Option 2 |
|---|---|---|
| $Na_2SO_4$ Soundness[2/] 5 Cycle, AASHTO T 104[1/2/] Max. % Loss | 35 | 25 |
| Los Angeles Abrasion AASHTO T 96 Max. % Loss | 45 | 65 |

The aggregate shall be uniformly graded to meet the following.

| Percent Passing | Sieve size |
|---|---|
| 100 % | 4 inch (100 mm) |
| 53 ± 23 % | 2 inch (50 mm) |
| 8 ± 8 % | No. 4 (4.75 mm) |

The bituminous material used for slopewall paving shall be RS-2 or RC70 meeting the requirements of Section 1032 of the Standard Specifications.

Construction Requirements: The surface upon which the slopewall is to be constructed shall conform to the elevation, lines, grades, and cross section indicated on the plans and as directed by the Engineer. The subgrade shall be shaped to ± 1 inch (25 mm) of plan grade.

Prior to placing aggregate, the slope shall be compacted to a uniform density as directed by the Engineer. Excess excavated material shall be disposed of by the Contractor as provided in Section 502 of the Standard Specifications.

The crushed aggregate shall be placed on the prepared slope, shaped and compacted to the satisfaction of the Engineer. Bituminous material shall not be placed until the aggregate has dried to the satisfaction of the Engineer.

Bituminous material shall be applied at a rate sufficient to assure penetration into and the binding together of particles in the upper 2 inches (50 mm) of the crushed aggregate slopewall. The adjacent structure shall be protected from bituminous material to prevent spattering or discoloration.

Basis of Payment: This work will be measured and paid for at the contract unit price per square yard (square meter) for BITUMINOUS COATED AGGREGATE SLOPEWALL, of the thickness specified, which price shall include payment for fine grading of the earth bed, backfilling, disposal of surplus material, and the furnishing and placing of all materials.

**TEMPORARY SUPPORT SYSTEM**
Effective: January 26, 2007

This work shall consist of the fabrication, furnishing, erecting and subsequent removal of temporary support system as shown on the plans.

After the support system herein specified is no longer required, it shall be completely removed. All materials shall become the property of the Contractor.

**Basis of Payment:** This work will be paid for at the contract lump sum price for TEMPORARY SUPPORT SYSTEM which price shall be payment in full to complete the work as required.

**SUSPENSION OF SLIPFORMED PARAPETS**
Effective: January 1, 2007

Slipforming of parapets is not allowed on this contract.

**ASBESTOS WATERPROOFING MEMBRANE AND ASBESTOS HOT-MIX ASPHALT SURFACE REMOVAL (BDE)**
Effective: June 1, 1989 Revised: January 2, 2007

Description. This work shall consist of the removal and disposal of the existing variable thickness hot-mix asphalt (HMA) surface and all of the asbestos waterproofing membrane system from the bridge deck area or the variable thickness HMA surface containing asbestos shown on the plans, according to the requirements of Section 440 of the Standard Specifications, and the following.

Construction Requirements

General. Complete surface removal is required for the entire deck including the waterproofing membrane system; the removal shall be done in such a manner that the concrete deck or the concrete beams are not damaged.

The Contractor is advised that the waterproofing membrane system or HMA wearing surface contains asbestos. Therefore, he/she shall take all necessary precautions in removing, handling, transporting, and subsequent disposal of all materials removed containing asbestos. All such work shall be in conformance with all governing laws, codes, ordinances, or other regulations.

The asbestos membrane, if present, shall be wet saw-cut and removed.

Grinding or roto-milling the existing wearing surface or the membrane system will not be allowed.

All removed material containing asbestos shall be stockpiled separately from other removed material.

All stockpiled material containing asbestos, shall be hauled to an approved landfill disposal site. This removed material shall be wetted down in the truck and shall be covered with an approved wetting material to prevent debris or dust from entering into the atmosphere.

The Engineer will keep records of removal, stockpiling, trucking, and the landfill disposal site used.

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for HOT-MIX ASPHALT SURFACE REMOVAL (ASBESTOS).

**CEMENT (BDE)**
Effective: January 1, 2007

Revise Section 1001 of the Standard Specifications to read:

"**SECTION 1001. CEMENT**

**1001.01 Cement Types.** Cement shall be according to the following.

(a) Portland Cement. Acceptance of portland cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland cement shall be according to ASTM C 150, and shall meet the standard physical and chemical requirements. Type I or Type II may be used for cast-in-place, precast, and precast prestressed concrete. Type III may be used according to Article 1020.04, or when approved by the Engineer. All other cements referenced in ASTM C 150 may be used when approved by the Engineer.

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement and the total of all inorganic processing additions shall be a maximum of 4.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids that improve the flowability of cement, reduce pack set, and improve grinding efficiency. Inorganic processing additions shall be limited to granulated blast-furnace slag according to the chemical requirements of AASHTO M 302 and Class C fly ash according to the chemical requirements of AASHTO M 295.

(b) Portland-Pozzolan Cement. Acceptance of portland-pozzolan cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland-pozzolan cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type IP or I(PM) may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. The pozzolan constituent for Type IP shall be a maximum of 21 percent of the weight (mass) of the portland-pozzolan cement. All other cements referenced in ASTM C 595 may be used when approved by the Engineer.

For cast-in-place construction, portland-pozzolan cements shall only be used from April 1 to October 15.

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall not be used.

(c) Portland Blast-Furnace Slag Cement. Acceptance of portland blast-furnace slag cement shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants".

Portland blast-furnace slag cement shall be according to ASTM C 595 and shall meet the standard physical and chemical requirements. Type I(SM) slag-modified portland cement may be used for cast-in-place, precast, and precast prestressed concrete, except when Class PP concrete is used. All other cements referenced in ASTM C 595 may be used when approved by the Engineer.

For cast-in-place construction, portland blast-furnace slag cements shall only be used from April 1 to October 15.

The total of all organic processing additions shall be a maximum of 1.0 percent by weight (mass) of the cement. Organic processing additions shall be limited to grinding aids as defined in (a) above. Inorganic processing additions shall not be used.

(d) Rapid Hardening Cement. Rapid hardening cement shall be used according to Article 1020.04 or when approved by the Engineer. The cement shall be on the Department's current "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs", and shall be according to the following.

(1) The cement shall have a maximum final set of 25 minutes, according to Illinois Modified ASTM C 191.

(2) The cement shall have a minimum compressive strength of 2000 psi (13,800 kPa) at 3.0 hours, and 4000 psi (27,600 kPa) at 24.0 hours, according to Illinois Modified ASTM C 109.

(3) The cement shall have a maximum drying shrinkage of 0.050 percent at seven days, according to Illinois Modified ASTM C 596.

(4) The cement shall have a maximum expansion of 0.020 percent at 14 days, according to Illinois Modified ASTM C 1038.

(5) The cement shall have a minimum 80 percent relative dynamic modulus of elasticity; and shall not have a weight (mass) gain in excess of 0.15 percent or a weight (mass) loss in excess of 1.0 percent, after 100 cycles, according to Illinois Modified AASHTO T 161, Procedure B. At 100 cycles, the specimens are measured and weighed at 73 ºF (23 ºC).

(e) Calcium Aluminate Cement. Calcium aluminate cement shall be used when specified by the Engineer. The cement shall meet the standard physical requirements for Type I cement according to ASTM C 150, except the time of setting shall not apply. The chemical requirements shall be determined according to ASTM C 114 and shall be as follows: minimum 38 percent aluminum oxide ($Al_2O_3$), maximum 42 percent calcium oxide (CaO), maximum 1 percent magnesium oxide (MgO), maximum 0.4 percent sulfur trioxide ($SO_3$), maximum 1 percent loss on ignition, and maximum 3.5 percent insoluble residue.

**1001.02 Uniformity of Color.** Cement contained in single loads or in shipments of several loads to the same project shall not have visible differences in color.

**1001.03 Mixing Brands and Types.** Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall not be mixed or used alternately in the same item of construction unless approved by the Engineer.

**1001.04 Storage.** Cement shall be stored and protected against damage, such as dampness which may cause partial set or hardened lumps. Different brands or different types of cement from the same manufacturing plant, or the same brand or type from different plants shall be kept separate."

**DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)**

Effective: September 1, 2000 Revised: January 1, 2007

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 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

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

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

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE 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 7.0% 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 working days after the date of letting. To meet the seven day requirement, the bidder may send the Plan by certified mail or delivery service within the seven working day period. If a question arises concerning the mailing date of a Plan, the mailing date will be established by the U.S. Postal Service postmark on the original certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service. It is the responsibility of the bidder to ensure that the postmark or receipt date is affixed within the seven working days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Plan is to be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). It is the responsibility of the bidder to obtain confirmation of telefax delivery. The Department will not accept a Utilization Plan if it does not meet the seven day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration or to extend the time for award.

(b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.

(c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. The signatures on these forms must be original signatures. All elements of information indicated on the said form shall be provided, including but not limited to the following:

(1) The name and address of each DBE to be used;

(2) A description, including pay item numbers, of the commercially useful work to be done by each DBE;

(3) The price to be paid to each DBE for the identified work specifically stating the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;

(4) A commitment statement signed by the bidder and each DBE evidencing availability and intent to perform commercially useful work on the project; and

(5) If the bidder is a joint venture comprised of DBE 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 working day period in order to cure the deficiency.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR part 26.55, the provisions of which govern over the summary contained herein.

(a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE firm does not count toward the DBE goals.

(b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.

(c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE firm does not count toward the DBE goal.

(d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contact. Credit will be given for the full value of all such DBE trucks operated using DBE employed drivers. Goal credit will be limited to the value of the reasonable fee or commission received by the DBE if trucks are leased from a non-DBE company.

(e) DBE as a material supplier:

(1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.

(2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.

(3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

GOOD FAITH EFFORT PROCEDURES. If the bidder cannot obtain sufficient DBE commitments to meet the contract goal, the bidder must document in the Utilization Plan the good faith efforts made in the attempt to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which could reasonably be expected to obtain sufficient DBE participation. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts are not good faith efforts; rather, the bidder is expected to have taken those efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

(1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.

(5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.

(7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.

(8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.

(b) If the Department determines that the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that a good faith effort has not been made, the Department will notify the bidder of that preliminary determination by contacting the responsible company official designated in the Utilization Plan. The preliminary determination shall include a statement of reasons why good faith efforts have not been found, and may include additional good faith efforts that the bidder could take. The notification will designate a five working day period during which the bidder shall take additional efforts. The bidder is not limited by a statement of additional efforts, but may take other action beyond any stated additional efforts in order to obtain additional DBE commitments. The bidder shall submit an amended Utilization Plan if additional DBE commitments to meet the contract goal are secured. If additional DBE commitments sufficient to meet the contract goal are not secured, the bidder shall report the final good faith efforts made in the time allotted. All additional efforts taken by the bidder will be considered as part of the bidder's good faith efforts. If the bidder is not able to meet the goal after taking additional efforts, the Department will make a pre-final determination of the good faith efforts of the bidder and will notify the designated responsible company official of the reasons for an adverse determination.

(c) The bidder may request administrative reconsideration of a pre-final determination adverse to the bidder within the five working days after the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The pre-final determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issue of whether an adequate good faith effort was made to meet the contract goal. In addition, the request shall be considered a consent by the bidder to extend the time for award. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Plan and award

of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal.

(a) No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.

(b) All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the Participation Statement. The Contractor shall not terminate for convenience a DBE listed in the Utilization Plan and then perform the work of the terminated DBE with its own forces, those of an affiliate or those of another subcontractor, whether DBE or not, without first obtaining the written consent of the Bureau of Small Business Enterprises to amend the Utilization Plan. If a DBE listed in the Utilization Plan is terminated for reasons other than convenience, or fails to complete its work on the contract for any reason, the Contractor shall make good faith efforts to find another DBE to substitute for the terminated DBE. The good faith efforts shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, but only to the extent needed to meet the contract goal or the amended contract goal. The Contractor shall notify the Bureau of Small Business Enterprises of any termination for reasons other than convenience, and shall obtain approval for inclusion of the substitute DBE in the Utilization Plan. If good faith efforts following a termination of a DBE for cause are not successful, the Contractor shall contact the Bureau 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 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.

**ELECTRICAL SERVICE INSTALLATION - TRAFFIC SIGNALS (BDE)**
Effective: January 1, 2007

Add the following to Article 805.02 of the Standard Specifications:

"(d) Wood Pole .....1069.04"

Add the following to Article 805.03 of the Standard Specifications:

"When a service pole is necessary, it shall be installed according to Article 830.03(c)."

**ERRATA FOR THE 2007 STANDARD SPECIFICATIONS (BDE)**
Effective: January 1, 2007

Page 60 Article 109.07(a). In the second line of the first paragraph change "amount" to "quantity".

Page 207 Article 406.14. In the second line of the second paragraph change "MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS, of the mixture composition specified;" to "MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS;".

Page 398 Article 540.07(b). Add the following two paragraphs after the third paragraph:

"Excavation in rock will be measured for payment according to Article 502.12.

Removal and disposal of unstable and/or unsuitable material below plan bedding grade will be measured for payment according to Article 202.07."

Page 398 Article 540.08. Add the following two paragraphs after the fifth paragraph:

"Excavation in rock will be paid for according to Article 502.13.

Removal and disposal of unstable and/or unsuitable material below plan bedding grade will be paid for according to Article 202.08."

Page 465 Article 551.06. In the second line of the first paragraph change "or" to "and/or".

Page 585 Article 701.19(a). Add "701400" to the second line of the first paragraph.

Page 586 Article 701.19(c). Delete "701400" from the second line of the first paragraph.

Page 586 Article 701.19. Add the following subparagraph to this Article:

"(f) Removal of existing pavement markings and raised reflective pavement markers will be measured for payment according to Article 783.05."

Page 587 Article 701.20(b). Delete "TRAFFIC CONTROL AND PROTECTION 701400;" from the first paragraph.

Page 588 Article 701.20. Add the following subparagraph to this Article.

"(j) Removal of existing pavement markings and raised reflective pavement markers will be paid for according to Article 783.06."

Page 762 Article 1020.04. In Table 1 Classes of Portland Cement Concrete and Mix Design Criteria, add to the minimum cement factor for Class PC Concrete "5.65 (TY III)", and add to the maximum cement factor for Class PC Concrete "7.05 (TY III)".

Page 765 Article 1020.04. In Table 1 Classes of Portland Cement Concrete and Mix Design Criteria (metric), add to the minimum cement factor for Class PC Concrete "335 (TY III)", and add to the maximum cement factor for Class PC Concrete "418 (TY III)".

Page 809 Article 1030.05. Revise the subparagraph "(a) Quality Assurance by the Engineer." to read "(e) Quality Assurance by the Engineer.".

Page 946 Article 1080.03(a)(1). In the third line of the first paragraph revise "(300 µm)" to "(600 µm)".

Page 963 Article 1083.02(b). In the second line of the first paragraph revise "ASTM D 4894" to "ASTM D 4895".

Page 1076 In the Index of Pay Items delete the pay item "BITUMINOUS SURFACE REMOVAL – BUTT JOINT".

Page 1081 In the Index of Pay Items add "Section 406, HOT-MIX ASPHALT SURFACE REMOVAL – BUTT JOINT, Page 207".

**HOT-MIX ASPHALT EQUIPMENT, SPREADING AND FINISHING MACHINE (BDE)**
Effective: January 1, 2005 Revised: January 1, 2007

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 placement of the surface course or at other times throughout the work."

**IMPACT ATTENUATORS (BDE)**
Effective: November 1, 2003 Revised: January 1, 2007

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 weight (mass) 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 (FULLY REDIRECTIVE, RESETTABLE); 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.

**IMPACT ATTENUATORS, TEMPORARY (BDE)**
Effective: November 1, 2003 Revised: January 1, 2007

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) Packaged Rapid Hardening Mortar | 1018.01 |

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.

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 (FULLY REDIRECTIVE, RESETTABLE); 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.

**MATERIAL TRANSFER DEVICE (BDE)**
Effective Date: June 15, 1999 Revised Date: January 1, 2007

Description. This work shall consist of placing Polymerized Hot-Mix Asphalt Surface Course, Mix "E", N105, 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 15 tons (13.5 metric 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 14 tons (12.7 metric 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 hot-mix asphalt (HMA). The longitudinal paddle mixers shall be located in the paver hopper insert.

CONSTRUCTION REQUIREMENTS

General. The material transfer device shall be used for the placement of Polymerized Hot-Mix Asphalt Surface Course, Mix "E", N105 on mainline FAI 57. The MTD will be required on the through lanes only. The MTD will not be required for the shoulders, gore regions or 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 HMA pavement if the thickness of binder in place is 10 in. (250 mm) 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 HMA 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 tons (metric tons) for Polymerized Hot-Mix Asphalt Surface Course, Mix "E", N105 materials placed with a material transfer device.

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

The various HMA 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.

**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.

**PLASTIC BLOCKOUTS FOR GUARDRAIL (BDE)**
Effective: November 1, 2004 Revised: January 1, 2007

Add the following to Article 630.02 of the Standard Specifications:

"(g) Plastic Blockouts (Note 1.)

Note 1. Plastic blockouts may be used in lieu of wood blockouts for steel plate beam guardrail. The plastic blockouts shall be the minimum dimensions shown on the plans and shall be on the Department's approved list."

**POLYUREA PAVEMENT MARKING (BDE)**
Effective: April 1, 2004 Revised: January 1, 2007

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 (mass) of component A shall be determined by low temperature ashing according to ASTM D 3723. The pigment content shall not vary more than ± 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 | 0.490 | 0.475 | 0.485 | 0.539 |
| Y | 0.470 | 0.438 | 0.425 | 0.456 |

(e) Weathering Resistance. The polyurea marking material, when mixed in the proper ratio and applied at 14 to 16 mils (0.35 to 0.41 mm) 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 122 °F (50 °C) and four hours of condensation at 104 °F (40 °C). 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 14 to 16 mils (0.35 to 0.41 mm) 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 4 x 4 x 2 in. (100 x 100 x 50 mm) 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 3500 psi (24,100 kPa). A 2 in. (50 mm) square film of the mixed polyurea shall be applied to the brushed surface and allowed to cure for 72 hours at room temperature. A 2 in. (50 mm) 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 2 in. (50 mm) 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 14 to 16 mils (0.35 to 0.41 mm) 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 14 to 16 mils (0.35 to 0.41 mm) 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:

| U.S. Standard Sieve Number | Sieve Size | % Passing By Weight (mass) |
|---|---|---|
| 12 | 1.70 mm | 95-100 |
| 14 | 1.40 mm | 75-95 |
| 16 | 1.18 mm | 10-47 |
| 18 | 1.00 mm | 0-7 |
| 20 | 850 µm | 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 (mass)) of sulfuric acid. Adding 0.2 oz (5.7 ml) of concentrated acid into the water shall make the one percent acid solution. This test shall be performed by taking a 1 x 2 in. (25 x 50 mm) 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 150 °F (66 °C) 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:

| U.S. Standard Sieve Number | Sieve Size | % Passing By Weight (mass) |
|---|---|---|
| 20 | 850 μm | 100 |
| 30 | 600 μm | 75-95 |
| 50 | 300 μm | 15-35 |
| 100 | 150 μm | 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 (mass) 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 77 °F (25 °C).

(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 1/2 in. (12.7 mm) 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 50 lb (22.7 kg) 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 2 in. (50 mm) 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 38 x 38 in. (1 x 1 m), contain 2000 lb (910 kg) 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 pt (1/2 L) 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 pt (1/2 L) 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 1.5 to 3 gal/min (5.7 to 11.4 L/min) to compensate for a typical range of application speeds of 6 to 8 mph (10 to 13 km/h). 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 110 gal (415 L) 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 ±5 ºF (±2.8 °C) 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 portland cement concrete 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 15 mils (0.4 mm) according to the manufacturer's installation instructions. On new hot-mix asphalt (HMA) surfaces the pavement markings shall be applied at a minimum uniform wet thickness of 20 mils (0.5 mm). 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 40 ºF (4 ºC) 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 2 in. (50 mm) from a longitudinal crack or joint. Edge lines shall be approximately 2 in. (50 mm) from the edge of pavement. The finished center and lane lines shall be straight, with the lateral deviation of any 10 ft (3 m) line not to exceed 1 in. (25 mm).

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 feet (meters). 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 foot (meter) 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.

**PRECAST CONCRETE HANDLING HOLES (BDE)**
Effective: January 1, 2007

Add the following to Article 540.02 of the Standard Specifications:

"(g) Handling Hole Plugs.....1042.16"

Add the following paragraph after the sixth paragraph of Article 540.06 of the Standard Specifications:

"Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar, or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar."

Add the following to Article 542.02 of the Standard Specifications:

"(ee) Handling Hole Plugs .....1042.16"

Revise the fifth paragraph of Article 542.04(d) of the Standard Specifications to read:

"Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation."

Add the following to Article 550.02 of the Standard Specifications:

"(o) Handling Hole Plugs.....1042.16"

Replace the fourth sentence of the fifth paragraph of Article 550.06 of the Standard Specifications with the following:

"Handling holes in concrete pipe shall be filled with a precast concrete plug and sealed with mastic or mortar; or filled with a polyethylene plug. The plug shall not project beyond the inside surface after installation."

Add the following to Article 602.02 of the Standard Specifications:

"(p) Handling Hole Plugs..... 1042.16(a)"

Replace the fifth sentence of the first paragraph of Article 602.07 of the Standard Specifications with the following:

"Handling holes shall be filled with a precast concrete plug and sealed with mastic or mortar. The plug shall not project beyond the inside surface after installation. When metal lifting inserts are used, their sockets shall be filled with mastic or mortar."

Add the following to Section 1042 of the Standard Specifications:

"**1042.16 Handling Hole Plugs.** Plugs for handling holes in precast concrete products shall be as follows.

(a) Precast Concrete Plug. The precast concrete plug shall have a tapered shape and shall have a minimum compressive strength of 3000 psi (20,700 kPa) at 28 days.

(b) Polyethylene Plug. The polyethylene plug shall have a "mushroom" shape with a flat round top and a stem with three different size ribs. The plug shall fit snuggly and cover the handling hole.

The plug shall be according to the following.

| Mechanical Properties | Test Method | Value (min.) |
|---|---|---|
| Flexural Modulus | ASTM D 790 | 3300 psi (22,750 kPa) |
| Tensile Strength (Break) | ASTM D 638 | 1600 psi (11,030 kPa) |
| Tensile Strength (Yield) | ASTM D 638 | 1200 psi (8270 kPa) |

| Thermal Properties | Test Method | Value (min.) |
|---|---|---|
| Brittle Temperature | ASTM D 746 | -49 ºF (-45 ºC) |
| Vicat Softening Point | ASTM D 1525 | 194 ºF (90 ºC)" |

**PUBLIC CONVENIENCE AND SAFETY (BDE)**
Effective: January 1, 2000

Add the following paragraph after the fourth paragraph of Article 107.09 of the Standard Specifications.

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

**RAILROAD PROTECTIVE LIABILITY INSURANCE (BDE)**
Effective: December 1, 1986 Revised: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications. A separate policy is required for each railroad unless otherwise noted.

| NAMED INSURED & ADDRESS | NUMBER & SPEED OF PASSENGER TRAINS | NUMBER & SPEED OF FREIGHT TRAINS |
|---|---|---|
| Crab Orchard and Egyptian Railroad<br>514 North Market Street<br>Marion, IL 62922 | 0 | 2 per day @ 5 mph |
| DOT/AAR No.: 294 178K<br>RR Division: St. Louis | RR Mile Post: 104.4<br>RR Sub-Division: Carbondale | |
| For all Information Contact: Mr. Hugh Crane | | Phone: (618) 993-8057<br>(618) 993-5769 |

Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

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

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

**RECLAIMED ASPHALT PAVEMENT (RAP) (BDE)**
Effective: January 1, 2007 Revised: January 2, 2007

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

Revise Section 1031 of the Standard Specifications to read:

"**SECTION 1031. RECLAIMED ASPHALT PAVEMENT**

**1031.01 Description.** Reclaimed asphalt pavement (RAP) is reclaimed asphalt pavement resulting from cold milling or crushing of an existing dense graded hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

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

Prior to milling, the Contractor shall request the District to provide verification of the quality of the RAP to clarify appropriate stockpile.

(a) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.

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

(c) Conglomerate 3/8. Conglomerate 3/8 RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least B quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate 3/8 RAP shall be processed prior to testing by crushing to where all RAP shall pass the 3/8 in. (9.5 mm) or smaller screen. Conglomerate 3/8 RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(d) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low ESAL), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

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

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

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

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

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

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

(a) Testing Conglomerate 3/8. In addition to the requirements above, conglomerate 3/8 RAP shall be tested for maximum theoretical specific gravity ($G_{mm}$) at a frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

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

| Parameter | Homogeneous / Conglomerate | Conglomerate "D" Quality |
|---|---|---|
| 1 in. (25 mm) | | ± 5 % |
| 1/2 in. (12.5 mm) | ± 8 % | ± 15 % |
| No. 4 (4.75 mm) | ± 6 % | ± 13 % |
| No. 8 (2.36 mm) | ± 5 % | |
| No. 16 (1.18 mm) | | ± 15 % |
| No. 30 (600 μm) | ± 5 % | |
| No. 200 (75 μm) | ± 2.0 % | ± 4.0 % |
| Asphalt Binder | ± 0.4 % 1/ | ± 0.5 % |
| $G_{mm}$ | ± 0.02 % 2/ | |

1/ The tolerance for conglomerate 3/8 shall be ± 0.3 %.

2/ Applies only to conglomerate 3/8. When variation of the $G_{mm}$ exceeds the ± 0.02 % tolerance, a new conglomerate 3/8 stockpile shall be created which will also require an additional mix design.

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

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

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

(a) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) surface mixtures are designated as containing Class B quality coarse aggregate.

(b) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder and IL-9.5L surface mixtures are designated as Class D quality coarse aggregate.

(c) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.

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

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

(a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.

(b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.

(c) Use in HMA Surface Mixtures (High and Low ESAL). RAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be either homogeneous or conglomerate 3/8, in which the coarse aggregate is Class B quality or better.

(d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be homogeneous, conglomerate 5/8, or conglomerate 3/8, in which the coarse aggregate is Class C quality or better.

(e) Use in Shoulders and Subbase. RAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be homogeneous, conglomerate 5/8, conglomerate 3/8, or conglomerate DQ.

(f) The use of RAP shall be a contractor's option when constructing HMA in all contracts. When the contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table for a given N Design.

Max RAP Percentage

| SUPERPAVE MIXTURES [1/, 3/] | MAXIMUM % RAP | | |
|---|---|---|---|
| Ndesign | Binder/Leveling Binder | Surface | Polymer Modified |
| 30 | 30 | 30 | 10 |
| 50 | 25 | 15 | 10 |
| 70 | 15 / 25 [2/] | 10 / 15 [2/] | 10 |
| 90 | 10 | 10 | 10 |
| 105 | 10 | 10 | 10 |

Note 1: For HMA Shoulder and Stabilized Sub-Base (HMA) N-30, the amount of RAP shall not exceed 50% of the mixture.

Note 2: Value of Max % RAP if 3/8 RAP is utilized.

Note 3: When RAP exceeds 20%, the high & low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25% RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

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

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

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

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

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

HMA plants utilizing RAP shall be capable of automatically recording and printing the mixture proportions and asphalt binder content. The asphalt binder content as a percentage of the total mix shall be printed as well as the individual percentages of virgin asphalt binder and residual asphalt binder from the RAP.

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

(a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Other". The testing requirements of Article 1031.03 shall not apply.

(b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

**REFLECTIVE CRACK CONTROL TREATMENT (BDE)**
Effective: April 1, 2006 Revised: January 1, 2007

Revise the third sentence of the first paragraph of Article 443.01 of the Standard Specifications to read:

"Strip reflective crack control treatment shall be either System A, B, C, or D at the option of the Contractor."

Add the following to Article 443.02 of the Standard Specifications:

"(c) Hot-Poured Joint Sealer .....1050.02"

Revise Article 443.09 of the Standard Specifications to Article 443.10.

Revise Article 443.10 of the Standard Specifications to Article 443.11.

Add the following Article to the Standard Specifications:

"**Article 443.09 Reflective Crack Control System D.** The stress relief membrane shall be applied when the surface temperature is a minimum of 50 ºF (10 ºC) and rising.

(a) Tack Coat Placement for Membrane. The tack coat shall be applied to the existing surface using one of the following methods.

(1) A hand held wand with a nozzle that produces a fan shaped spray to apply the tack coat evenly according to the rate specified by the manufacturer.

(2) A hand held wand without a spray nozzle. The tack coat shall be spread with a squeegee according to the rate specified by the manufacturer.

(3) A distributor bar attached to a distributor truck, for longitudinal applications only. The distributor bar nozzles shall be set at 20 degrees to the axis of the bar and the tack coat shall be applied according to the rate specified by the manufacturer. Application of the tack coat directly from a distributor bar attached to a distributor truck will not be permitted for transverse applications.

The maximum width of the tack coat application shall be such that the tack coat extends a maximum 1 1/2 in. (40 mm) on both sides of the stress relief membrane strip.

The use of emulsified asphalts and/or cutbacks is prohibited for use as a tack to bond the stress relief membrane to the existing pavement surface.

(b) Stress Relief Membrane Placement. The open grid woven polyester side of the material shall be placed up with the nonwoven side placed into the tack. The stress relief membrane shall be centered over the crack or joint on the existing surface and with a minimum of 6 in. (150 mm) of the membrane extending beyond the edges of the joint.

The material shall be laid smooth with no uplifted edges. The stress relief membrane shall be placed and rolled immediately with a riding static drum roller or a rubber tire roller. A maximum of three minutes shall pass between the first and second rolling efforts.

The stress relief membrane shall be butted where transverse and longitudinal joints meet or where two rolls must be joined. When required, the stress relief membrane shall be cut with a razor knife from the woven polyester side.

The stress relief membrane shall be placed at least two hours in advance of paving operations. If application must immediately precede the paving operation, hot-poured joint sealer may be required as a tack coat to bond the stress relief membrane to the existing surface.

(c) Traffic Exposure. Exposing the membrane to traffic shall be minimized. Small amounts of washed sand may be used to blot excess asphalt cement tack coat when necessary to facilitate movement of traffic or construction equipment over the membrane prior to placement of the overlay. Damaged membranes shall be removed and replaced.

(d) Paving Tack Coat/Paving. Paving operations shall only begin when the membrane is thoroughly bonded to the existing surface. The membrane may be exposed to moisture and rain prior to the application of the overlay, however, the stress relief membrane must be dry at the time the overlay is placed.

A slow-set emulsified asphalt paving tack coat (such as SS-1, SS-1h, CSS-1, or CSS-1h) shall be applied prior to paving over the membrane. Cutback asphalts shall not be used. Hot-mix asphalt or dry washed sand may be placed ahead of the paver if the membrane is sticking to the tires of the paving equipment. The minimum asphalt overlay thickness (total) shall be 2 in. (50 mm) compacted.

When using a vibratory roller for compaction, it shall be set to the lowest amplitude and highest frequency settings."

Add the following Article to the Standard Specifications:

"**1062.04 Reflective Crack Control System D.** The stress relief membrane shall be 36 in. (900 mm) wide and 0.15 in. (4 mm) thick and shall be a system of materials manufactured in a composite three layer fashion with the following properties.

| Stress Relief Membrane | | |
|---|---|---|
| Property | Value | Test Method |
| Cold Flex | No cracking or separation of fabric | ASTM D 146 (modified) |
| Tensile Strength (Peak) | 4,000 psi (700 N/mm) min. | ASTM D 412 (modified) |
| Elongation (at Peak Tensile) | 10% min. | ASTM D 412 (modified) |
| Weight | 0.76 lbs/sq ft (3.7 kg/sq m) | |
| Density (mastic) | 69 lbs/cu ft (1100 kg/cu m) min. | ASTM D 70 |
| Thickness | 0.15 in. (4 mm) | ASTM E 154-93 Subsection 10.0<br>ASTM D 1790 |
| Absorption (mastic) | 1 % max. | ASTM D 517 |
| Brittleness | Passes | ASTM D 517 |
| Softening Point (mastic) | 220 ºF (104 ºC) | ASTM D 36 |

The bottom layer of the composite shall be a low strength, nonwoven, geotextile and shall be according to AASHTO M 288-92. The bottom geotextile shall be designed to fully bond with

the existing pavement with the help of a tack coat. It shall be capable of accommodating sufficiently large stresses at the joint/crack without breaking its bond with the slab. The middle layer of the composite shall be a viscoelastic membrane designed to prevent water entry into the pavement through the cracks and/or joints in the pavement. It also acts as a stress absorbing member interlayer between the overlay and the underlying pavement. The top layer shall be a high strength woven geotextile with a tensile strength of 4,000 psi (700 N/mm) at five percent strain according to ASTM D 4595. The top geotextile shall be designed to fully bond with the overlay and provide high stiffness and reinforcement to the overlay.

The stress relief membrane shall be stored in an inside enclosure with temperatures not exceeding 120 ºF (49 ºC). Any material that becomes wet prior to installation shall be removed from the jobsite and discarded.

The grade of asphalt binder tack coat shall be PG 64-22, PG 58-28, or PG 52-28 and shall meet the requirements of Article 1032.05.

Emulsified asphalt for tack coat shall be SS-1, SS-1h, CSS-1, CSS-1h, CSS1hP, or SS-1hP and shall meet the requirements of Article 1032.06.

The manufacturer shall furnish a certification with each shipment of stress relief membrane, stating the amount of product furnished, and that the material complies with these requirements."

**REINFORCEMENT BARS (BDE)**
Effective: November 1, 2005 Revised: January 1, 2007

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

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

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

a. 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 706 (A 706M). The dimensions and clearances of this guided bend test shall be according to ASTM E 190.

d. Spiral Reinforcment. Spiral reinforcement shall be deformed or plain bars conforming to the above requirements or cold-drawn steel wire conforming to AASHTO M 32.

(2) Epoxy Coated Reinforcement Bars. Epoxy coated reinforcement bars shall be according to Article 1006.10(a)(1) and shall be epoxy coated according to AASHTO M 284 (M 284M) and the following.

a. Certification. The epoxy coating applicator shall be certified under the Concrete Reinforcing Steel Institute's (CRSI) Epoxy Plant Certification Program.

b. Coating Thickness. The thickness of the epoxy coating shall be 7 to 12 mils (0.18 to 0.30 mm). When spiral reinforcment is coated after fabrication, the thickness of the epoxy coating shall be 7 to 20 mils (0.18 to 0.50 mm).

c. Cutting Reinforcement. Reinforcement bars may be sheared or sawn to length after coating, providing the end damage to the coating does not extend more than 0.5 in. (13 mm) back and the cut is patched before any visible rusting appears. Flame cutting will not be permitted."

**SEEDING (BDE)**
Effective: July 1, 2004 Revised: January 1, 2007

Revise the following seeding mixtures shown in Table 1 of Article 250.07 of the Standard Specifications to read:

"Table 1 - SEEDING MIXTURES

| Class – Type | | Seeds | lb/acre (kg/hectare) |
|---|---|---|---|
| 2 | Roadside Mixture 7/ | Inferno Tall Fescue,<br>Tarheel II Tall Fescue, or<br>Quest Tall Fescue<br>Perennial Ryegrass<br>Creeping Red Fescue<br>Red Top | <br><br>100 (110)<br>50 (55)<br>40 (50)<br>10 (10) |
| 2A | Salt Tolerant<br>Roadside Mixture 7/ | Inferno Tall Fescue,<br>Tarheel II Tall Fescue, or<br>Quest Tall Fescue<br>Perennial Ryegrass<br>Audubon Red Fescue<br>Rescue 911 Hard Fescue<br>Fults Salt Grass 1/ | <br><br>60 (70)<br>20 (20)<br>30 (20)<br>30 (20)<br>60 (70)" |

Revise Table II of Article 1081.04(c)(6) of the Standard Specifications to read:

TABLE II

| Variety of Seeds | Hard Seed % Max. | Purity % Min. | Pure Live Seed % Min. | Weed % Max. | Secondary * Noxious Weeds No. per oz (kg) Max. Permitted | Notes |
|---|---|---|---|---|---|---|
| Alfalfa | 20 | 92 | 89 | 0.50 | 6 (211) | 1/ |
| Clover, Alsike | 15 | 92 | 87 | 0.30 | 6 (211) | 2/ |
| Audubon Red Fescue | 0 | 97 | 82 | 0.10 | 3 (105) | - |
| Fescue, Creeping Red | - | 97 | 82 | 1.00 | 6 (211) | - |
| Fescue, Inferno Tall | 0 | 98 | 83 | 0.10 | 2 (70) | - |
| Fescue, Tarheel II Tall | - | 97 | 82 | 1.00 | 6 (211) | - |
| Fescue, Quest Tall | 0 | 98 | 83 | 0.10 | 2 (70) | |
| Fults Salt Grass | 0 | 98 | 85 | 0.10 | 2 ( 70) | - |
| Kentucky Bluegrass | - | 97 | 80 | 0.30 | 7 (247) | 4/ |
| Oats | - | 92 | 88 | 0.50 | 2 ( 70) | 3/ |
| Redtop | - | 90 | 78 | 1.80 | 5 (175) | 3/ |
| Ryegrass, Perennial, Annual | - | 97 | 85 | 0.30 | 5 (175) | 3/ |
| Rye, Grain, Winter | - | 92 | 83 | 0.50 | 2 ( 70) | 3/ |
| Rescue 911 Hard Fescue | 0 | 97 | 82 | 0.10 | 3 (105) | - |
| Timothy | - | 92 | 84 | 0.50 | 5 (175) | 3/ |
| Wheat, hard Red Winter | - | 92 | 89 | 0.50 | 2 ( 70) | 3/" |

Revise the first sentence of the first paragraph of Article 1081.04(c)(7) of the Standard Specifications to read:

"The seed quantities indicated per acre (hectare) for Prairie Grass Seed in Classes 3, 3A, 4, 4A, 6, and 6A in Article 250.07 shall be the amounts of pure, live seed per acre (hectare) for each species listed."

**SELF-CONSOLIDATING CONCRETE FOR PRECAST PRODUCTS (BDE)**
Effective: July 1, 2004 Revised: January 1, 2007

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

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

Materials. Materials shall be according to Section 1021 of the Standard Specifications.

Mix Design Criteria. The mix design criteria shall be as follows:

(a) The minimum cement factor shall be according to Article 1020.04 of the Standard Specifications. If the maximum cement factor is not specified, it shall not exceed 7.05 cwt/cu yd (418 kg/cu m).

(b) The maximum allowable water/cement ratio shall be according to Article 1020.04 of the Standard Specifications or 0.44, whichever is lower.

(c) The slump requirements of Article 1020.04 of the Standard Specifications shall not apply.

(d) The coarse aggregate gradations shall be CA 13, CA 14, CA 16, or a blend of these gradations. CA 11 may be used when the Contractor provides satisfactory evidence to the Engineer that the mix will not segregate. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.

(e) The slump flow range shall be ± 2 in. (± 50 mm) of the Contractor target value, and within the overall Department range of 20 in. (510 mm) minimum to 28 in. (710 mm) maximum.

(f) The visual stability index shall be a maximum of 1.

(g) The J-ring value shall be a maximum of 4 in. (100 mm). The Contractor may specify a lower maximum in the mix design.

(h) The L-box blocking ratio shall be a minimum of 60 percent. The Contractor may specify a higher minimum in the mix design.

(i) The column segregation index shall be a maximum 15 percent.

(j) The hardened visual stability index shall be a maximum of 1.

Placing and Consolidating. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m), unless approved otherwise by the Engineer.

Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator shall be the pencil head type with a maximum diameter or width of 1 in. (25 mm). Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.

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

**STEEL PLATE BEAM GUARDRAIL (BDE)**
Effective: November 1, 2005 Revised: January 1, 2007

Revise the first paragraph of Article 1006.25 of the Standard Specifications to read:

"**1006.25 Steel Plate Beam Guardrail.** Steel plate beam guardrail, including bolts, nuts, and washers, shall be according to AASHTO M 180. Guardrails shall be Class A, with Type II coatings. The weight (mass) of the galvanized coating for each side of the guardrail shall be at least 2.00 oz/sq ft (610 g/sq m). The overall combined weight (mass) of the coating on both sides shall meet or exceed 4.00 oz/sq ft (1220 g/sq m). 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. The minimum average thickness for each side shall be 3.1 mils (79 µm)."

**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.

**SURFACE TESTING OF PAVEMENTS (BDE)**
Effective: April 1, 2002 Revised: January 1, 2007

**Hot-Mix Asphalt (HMA) Overlays**

Revise Article 406.03(h) of the Standard Specifications to read:

"(h) Pavement Surface Test Equipment .....1101.10"

Revise Article 406.11 of the Standard Specifications to read:

"**406.11 Surface Tests.** The finished surface of the pavement shall be tested for smoothness within three days of paving. Testing shall be performed in the presence of the Engineer.

Prior to testing, a copy of the approval letter and recorded settings from the Profile Equipment Verification (PEV) Program shall be submitted to the Engineer; and all objects and debris shall be removed from the pavement.

(a) Test Sections/Equipment.

(1) High-Speed Mainline Pavement. High-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed greater than 45 mph. These sections shall be tested using a profile testing device.

(2) Low-Speed Mainline Pavement. Low-speed mainline pavement shall consist of pavements, ramps, and loops with a posted speed of 45 mph or less. These sections shall be tested using a profile testing device.

(3) Miscellaneous Pavement. Miscellaneous pavement shall consist of:

a. pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1000 ft (300 m) and pavement within the superelevation transition of such curves;

b. pavement on vertical curves having a length of less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grades greater than or equal to three percent, as may occur on urban ramps or other constricted-space facilities;

c. the first or last 15 ft (4.5 m) of a pavement section where the Contractor is not responsible for the adjoining surface;

d. intersections;

e. variable width pavements;

f. side street returns;

g. crossovers;

h. connector pavement from mainline pavement expansion joint to the bridge approach pavement;

i. bridge approach pavement; and

j. other miscellaneous pavement surfaces (i.e. a turn lane) as determined by the Engineer.

Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge set to a 3/8 in. (10 mm) tolerance.

(b) Lots/Sublots. Mainline pavement test sections will be divided into lots and sublots.

(1) Lots. A lot will be defined as a continuous strip of pavement 1 mile (1600 m) long and one lane wide. When the length of a continuous strip of pavement is less than 1 mile (1600 m), that pavement will be included in an adjacent lot. Structures will be omitted when measuring pavement length.

(2) Sublots. Lots will be divided into 0.1 mile (160 m) sublots. A partial sublot greater than or equal to 250 ft (76 m) resulting from an interruption in the pavement will be subject to the same evaluation as a whole sublot. Partial sublots less than 250 ft (76 m) shall be included with the previous sublot for evaluation purposes.

(c) Testing Procedure. One wheel track shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to the edge of the lane away from traffic. A guide shall be used to maintain the proper distance.

The profile trace generated shall have stationing indicated every 500 ft (150 m) 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 data was collected, and the device operator name(s). The top portion of the Department supplied form, "Profile Report of Pavement Smoothness" shall be completed and secured around the trace roll.

Although surface testing of intermediate lifts will not be required, they may be performed at the Contractor's option. When this option is chosen, the testing shall be performed and the profile traces shall be generated as described above.

The Engineer may perform his/her own testing at any time for monitoring and comparison purposes.

(d) Trace Reduction and Bump Locating Procedure. All traces shall be reduced. Traces produced by a mechanical recorder shall be reduced using an electronic scanner and computer software. This software shall calculate the profile index of each sublot in in./mile (mm/km) and indicate any high points (bumps) in excess of 0.30 in. (8 mm) with a line intersecting the profile on the printout. Computerized recorders shall provide the same information.

The profile index of each track, average profile index of each sublot, average profile index of the lot and locations of bumps shall be recorded on the form.

All traces and reports shall be provided within two working days of completing the testing to the Engineer for the project file. Traces from either a computerized profile testing device or analysis software used with a manual profile testing device shall display the settings used for the data reduction. The Engineer will compare these settings with the approved settings from the PEV Program. If the settings do not match, the results will be rejected and the section shall be retested/reanalyzed with the appropriate settings.

The Engineer will use the results of the testing to evaluate paving methods and equipment. If the average profile index of a lot exceeds 40.0 in./mile (635 mm/km) for high-speed mainline pavement or 65.0 in./mile (1025 mm/km) for low-speed mainline pavement, the paving operation will be suspended until corrective action is taken by the Contractor.

(e) Corrective Work. All bumps in excess of 0.30 in. (8 mm) in a length of 25 ft (8 m) or less shall be corrected. If the bump is greater than 0.50 in. (13 mm), the pavement shall be removed and replaced. The minimum length of pavement to be removed shall be 3 ft (900 mm).

(1) High-Speed Mainline Pavement. Any sublot having a profile index within the range of, greater than 30.0 to 40.0 in./mile (475 to 635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace. Any sublot having a profile index greater than 40.0 in./mile (635 mm/km) including bumps, shall be corrected to reduce the profile index to 30.0 in./mile (475 mm/km) or less on each trace, or replaced at the Contractor's option.

(2) Low-Speed Mainline Pavement. Any sublot having a profile index within the range of, greater than 45.0 to 65.0 in./mile (710 to 1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace. Any sublot having a profile index greater than 65.0 in./mile (1025 mm/km) including bumps, shall be corrected to reduce the profile index to 45.0 in./mile (710 mm/km) or less on each trace, or replaced at the Contractor's option.

(3) Miscellaneous Pavement. Surface variations which exceed the 3/8 in. (10 mm) tolerance will be marked by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed using either an approved grinding device consisting of multiple saws or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area squared normal to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the sublot(s) shall be retested. The Contractor shall furnish the profile tracing(s) and the completed form(s) to the Engineer within two working days after corrections are made. If the profile index and/or bumps still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

(f) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each sublot of mainline pavement, per the Smoothness Assessment Schedule. Assessments will be based on the average profile index of each sublot prior to performing any corrective work unless the Contractor has chosen to remove and replace the sublot. For sublots that are replaced, assessments will be based on the profile index determined after replacement.

Assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.

| SMOOTHNESS ASSESSMENT SCHEDULE (HMA Overlays) | | |
|---|---|---|
| High-Speed Mainline Pavement Average Profile Index in./mile (mm/km) | Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km) | Assessment per sublot |
| 6.0 (95) or less | 15.0 (240) or less | +$150.00 |
| >6.0 (95) to 10.0 (160) | >15.0 (240) to 25.0 (400) | +$80.00 |
| >10.0 (160) to 30.0 (475) | >25.0 (400) to 45.0 (710) | +$0.00 |
| >30.0 (475) to 40.0 (635) | >45.0 (710) to 65.0 (1025) | +$0.00 |
| Greater than 40.0 (635) | Greater than 65.0 (1025) | -$300.00 |

Smoothness assessments will not be applied to miscellaneous pavement sections."

**Hot-Mix Asphalt (HMA) Pavement (Full-Depth)**

Revise Article 407.09 of the Standard Specifications to read:

"**407.09 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

| SMOOTHNESS ASSESSMENT SCHEDULE (Full-Depth HMA) | | |
|---|---|---|
| High-Speed Mainline Pavement Average Profile Index in./mile (mm/km) | Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km) | Assessment per sublot |
| 6.0 (95) or less | | +$800.00 |
| >6.0 (95) to 11.0 (175) | 15.0 (240) or less | +$550.00 |
| >11.0 (175) to 17.0 (270) | >15.0 (240) to 25.0 (400) | +$350.00 |
| >17.0 (270) to 30.0 (475) | >25.0 (400) to 45.0 (710) | +$0.00 |
| >30.0 (475) to 40.0 (635) | >45.0 (710) to 65.0 (1025) | +$0.00 |
| Greater than 40.0 (635) | Greater than 65.0 (1025) | -$500.00" |

Delete the third paragraph of Article 407.12 of the Standard Specifications.

**Portland Cement Concrete Pavement**

Revise Article 420.10 of the Standard Specifications to read:

"**420.10 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The finished surface of the pavement shall be tested for smoothness once the pavement has attained a flexural strength of 550 psi (3800 kPa) or a compressive strength of 3000 psi (20,700 kPa).

Two wheel tracks shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to each lane edge.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.18 at no additional cost to the Department.

For pavement that is corrected by removal and replacement, the minimum length to be removed shall meet the requirements of either Class A or Class B patching.

| SMOOTHNESS ASSESSMENT SCHEDULE (PCC) | | |
|---|---|---|
| High-Speed Mainline Pavement Average Profile Index in./mile (mm/km) | Low-Speed Mainline Pavement Average Profile Index in./mile (mm/km) | Assessment per sublot |
| 6.0 (95) or less | | +$1200.00 |
| >6.0 (95) to 11.0 (175) | 15.0 (240) or less | +$950.00 |
| >11.0 (175) to 17.0 (270) | >15.0 (240) to 25.0 (400) | +$600.00 |
| >17.0 (270) to 30.0 (475) | >25.0 (400) to 45.0 (710) | +$0.00 |
| >30.0 (475) to 40.0 (635) | >45.0 (710) to 65.0 (1025) | +$0.00 |
| Greater than 40.0 (635) | Greater than 65.0 (1025) | -$750.00" |

Delete the fourth paragraph of Article 420.20 of the Standard Specifications.

**Testing Equipment**

Revise Article 1101.10 of the Standard Specifications to read:

"**1101.10 Pavement Surface Test Equipment.** Required surface testing and analysis equipment and their jobsite transportation shall be provided by the Contractor.

(a) 16 ft (5 m) Straightedge. The 16 ft (5 m) straightedge shall consist of a metal I-beam mounted between two wheels spaced 16 ft (5 m) between the axles. Scratcher bolts which can be easily and accurately adjusted, shall be set at the 1/4, 1/2, and 3/4 points between the axles. A handle suitable for pushing and guiding shall be attached to the straightedge.

(b) Profile Testing Device. The profile testing device shall have a decal displayed to indicate it has been tested through the Profile Equipment Verification (PEV) Program administered by the Department.

(1) California Profilograph. The California Profilograph shall be either computerized or manual and have a frame 25 ft (8 m) in length supported upon multiple wheels at either end. The profile shall be recorded from the vertical movement of a wheel attached to the frame at mid point.

The California Profilograph shall be calibrated according to the manufacturer's recommendations and California Test 526. All calibration traces and calculations shall be submitted to the Engineer for the project file.

(2) Inertial Profiler. The inertial profiler shall be either an independent device or a system that can be attached to another vehicle using one or two non-contact sensors to measure the pavement profile. The inertial profiler shall be capable of performing a simulation of the California Profilograph to provide results in the Profile Index format.

The inertial profiler shall be calibrated according to the manufacturer's recommendations. All calibration traces and calculations shall be submitted to the Engineer for the project file.

(3) Trace Analysis. The Contractor shall reduce/evaluate these traces using a 0.00 in. (0.0 mm) blanking band and determine a Profile Index in in./mile (mm/km) for each section of finished pavement surface. Traces produced using a computerized profile testing device will be evaluated without further reduction. When using a manual profile testing device, the Contractor shall provide an electronic scanner, a computer, and software to reduce the trace. All analysis equipment (electronic scanner, computerized recorder, etc.) shall be able to accept 0.00 in. (0.0 mm) for the blanking band.

All traces from pavement sections tested with the profile testing device shall be recorded on paper with scales of 300:1 longitudinally and 1:1 vertically. Equipment and software settings of the profile testing device and analysis equipment shall be set to those values approved through the PEV Program.

The Engineer may retest the pavement at any time to verify the accuracy of the equipment."

**TEMPORARY EROSION CONTROL (BDE)**
Effective: November 1, 2002 Revised: January 1, 2007

Revise the second sentence of the first paragraph of Article 280.04(a) of the Standard Specifications to read:

"Temporary ditch checks shall be constructed with rolled excelsior, products from the Department's approved list, or with aggregate when specified."

Revise Article 1081.15(f) of the Standard Specifications to read:

"(f) Rolled Excelsior. Rolled excelsior shall consist of an excelsior fiber filling totally encased inside netting and sealed with metal clips or knotted at the ends. Each roll shall be a minimum of 20 in. (500 mm) in diameter and a minimum of 10 ft (3 m) in length. Each 10 ft (3 m) roll shall have a minimum weight (mass) of 30 lbs (13.6 kg). The excelsior fiber filling shall be weed free. At least 80 percent of the fibers shall be a minimum of 6 in. (150 mm) in length. The fiber density shall be a minimum of 1.38 lb/cu ft (22 kg/cu m). The netting shall be composed of a polyester or polypropylene material which retains 70 percent of its strength after 500 hours of exposure to sunlight. The maximum opening of the net shall be 1 x 1 in. (25 x 25 mm)."

**TRAFFIC SIGNAL GROUNDING (BDE)**
Effective: April 1, 2006 Revised: January 1, 2007

Revise Article 873.02 of the Standard Specifications to read:

"**873.02 Materials.** Materials shall be according to the following.

| Item | Article/Section |
|---|---|
| (a) Electric Cable – Signal, Lead-in, Communication, Service, and Equipment Grounding Conductor | 1076.04 |
| (b) Electrical Raceway Materials | 1088.01" |

Revise Article 873.04 of the Standard Specifications to read:

"**873.04 Grounding System.** All traffic signal circuits shall include an equipment grounding conductor according to Article 801.04. The equipment grounding conductor shall consist of a continuous, green, insulated conductor Type XLP, No. 6 AWG, stranded copper installed in raceways and bonded to each metal enclosure (handhole, post, mast arm pole, signal cabinet, etc.). All clamps shall be bronze or copper, UL approved.

A grounding cable with connectors shall be installed between each handhole cover and frame. The grounding cable shall be looped over cable hooks installed in the handholes and 5 ft (1.5 m) of extra cable shall be provided between the frame and cover.

All equipment grounding conductors shall terminate at the ground bus in the controller cabinet. The neutral conductor and the equipment grounding conductor shall be connected in the service installation. At no other point in the traffic signal system shall the neutral and equipment grounding conductors be connected."

Revise Article 873.05 of the Standard Specifications to read:

"**873.05 Method of Measurement.** Electric cable will be measured for payment in feet (meters) in place. The length of measurement shall be the distance horizontally and vertically measured between the changes in direction, including cables in mast arms, mast arm poles, signal posts, and extra cable length as specified in Article 873.03. The vertical cable length shall be measured according to the following schedule.

| Location | Cable Length |
|---|---|
| Foundation (signal post, mast arm pole, controller cabinet) | 3 ft (1 m) |
| Mast Arm Pole (mast arm mounted signal head) | 20 ft (6 m) |
| Mast Arm Pole<br>(bracket mounted signal head attached to mast arm pole) | 13 ft (4 m) |
| Signal Post (bracket or post mounted signal head) | 13 ft (4 m) |
| Pedestrian Push Button | 6 ft (2 m)" |

Add the following Article to Section 873 of the Standard Specifications:

"**873.06 Basis of Payment.** This work will be paid for at the contract unit price per foot (meter) for ELECTRIC CABLE, of the method of installation (IN TRENCH, IN CONDUIT, or AERIAL SUSPENDED), of the type, size, and number of conductors specified.

The type specified will indicate the method of installation and whether the electric cable is Service, Signal, Lead-in, Communication, or Equipment Grounding Conductor."

Revise the heading of Article 1076.04 of the Standard Specifications to read:

"**1076.04 Electric Cable – Signal, Lead-in, Communication, Service, and Equipment Grounding Conductor.**"

Add the following paragraph to the end of Article 1076.04 of the Standard Specifications:

"(e) Equipment Grounding Conductor. The cross linked polyethylene (XLP) insulated conductor shall be according to Articles 1066.02 and 1066.03. The stranded copper conductor shall be No. 6 AWG and the insulation color shall be green."

**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 4. In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided

however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather then

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.

**UNINTERRUPTABLE POWER SUPPLY (UPS) (BDE)**
Effective: April 1, 2006 Revised: January 1, 2007

Add the following paragraph to the end of Article 801.14 of the Standard Specifications:

"The warranty for an uninterruptable power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years."

Add the following Section to the Standard Specifications:

"**SECTION 862. UNINTERRUPTABLE POWER SUPPLY (UPS)**

**862.01 Description.** This work shall consist of furnishing and installing an uninterruptable power supply (UPS).

**862.02 Materials.** Materials shall be according to the following.

| Item | Article/Section |
|---|---|
| (a) Uninterruptable Power Supply | 1074.04 |

**CONSTRUCTION REQUIREMENTS**

**862.03 General.** The UPS shall provide power for full run-time operation for an "LED-only" intersection (all colors red, yellow, and green) or flashing mode operation for an intersection using red LED's. A UPS that provides a minimum of two hours of full run-time operation will be designated as "standard". A UPS that provides a minimum of six hours of full run-time operation will be designated as "extended".

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

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

**862.04 Installation.** When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four bolts. The UPS cabinet shall include a bottom constructed of the same material as the cabinet.

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

**862.05 Basis of Payment.** This work will be paid for at the contract unit price per each for UNINTERRUPTABLE POWER SUPPLY, STANDARD or UNINTERRUPTABLE POWER SUPPLY, EXTENDED."

Add the following article to Section 1074 of the Standard Specifications:

"**1074.04 Uninterruptable Power Supply (UPS).**

(a) Operation.

(1) The UPS shall be line interactive and provide voltage regulation and power conditioning when utilizing utility power.

The UPS shall be sized appropriately for the intersection load. The total system load shall not exceed the manufacturer's specifications.

A standard UPS shall provide a minimum of two hours full run-time operation for LED signal modules load at 77 ºF (25 ºC) (minimum 700 W/1000 VA active output capacity, with 80 percent minimum inverter efficiency). An extended UPS shall provide a minimum of six hours full run-time operation for the same conditions.

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

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

a. The first set of NO and NC contact closures shall be energized whenever the unit switches to battery power. Contact shall be labeled or marked "On Batt".

b. The second set of NO and NC contact closures shall be energized whenever the battery approaches approximately 40 percent of remaining useful capacity. Contact shall be labeled or marked "Low Batt".

c. The third set of NO and NC contact closures shall be energized two hours after the unit switches to battery power. Contact shall be labeled or marked "Timer".

d. The fourth set of NO and NC contact closures shall be energized in the event of inverter/charger failure. Contact shall be labeled or marked “UPS Fail”.

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

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

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

(7) Batteries shall not be recharged when battery temperature exceeds 122 $^{o}$F ± 5 $^{o}$F (50 $^{o}$C ± 3 $^{o}$C).

(8) The UPS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 100 VAC to 130 VAC (± 2 VAC).

(9) When utilizing battery power, the UPS output voltage shall be between 110 and 125 VAC, pure sine wave output, ≤ 3 percent THD, 60 Hz ± 3 Hz.

(10) The UPS shall be compatible with the Department’s traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

(11) When the utility line power has been restored at above 105 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

(12) When the utility line power has been restored at below 125 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.

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

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

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

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

(17) When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, and service receptacles.

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

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

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

(b) Mounting/Configuration.

(1) General.

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

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

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

d. To ensure interchangeability between all UPS manufacturers, the UPS power transfer relay and manual bypass switch shall be interconnected with Type IV or Type V NEMA cabinets as shown on the plans.

(2) Battery Cabinet.

a. The inverter/charger and power transfer relay shall be installed inside the external battery cabinet and the manually bypass switch shall be installed inside the traffic signal cabinet.

b. Batteries shall be housed in a separate NEMA Standard TS 2 rated Type II cabinet. This external battery cabinet shall be according to Article 1074.03 for the construction and finish of the cabinet.

c. No more than two batteries shall be mounted on individual shelves for a cabinet housing four batteries and no more than four batteries per shelf for a cabinet housing eight batteries.

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

e. The battery cabinets housing four batteries shall have nominal outside dimensions according to a NEMA Type II cabinet; or alternatively, a width of 14 in. (355 mm), a depth of 9 in. (230 mm), and a height of 45 to 55 in. (1.14 to 1.4 m). The battery cabinets housing eight batteries shall have nominal outside dimensions according to a NEMA Type III cabinet; or alternatively, a width of 28 in. (710 mm), a depth of 9 in. (230 mm), and a height of 45 to 55 in. (1.14 to 1.4 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).

f. The battery cabinet shall be ventilated through the use of louvered vents, filters, and one thermostatically controlled fan as per NEMA TS 2 specifications. The cabinet fan shall not be energized when the traffic signals are on UPS power.

g. The battery cabinet shall have a door opening to the entire cabinet. The door shall be attached to the cabinet through the use of a continuous stainless steel or aluminum piano hinge. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

h. The UPS with battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting.

i. A warning sticker shall be placed on the outside of the cabinet indicating that there is an uninterruptable power supply inside the cabinet.

(c) Maintenance, Displays, Controls, and Diagnostics.

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

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

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

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

(5) The UPS shall include a resettable front-panel event counter display to indicate the number of times the UPS was activated and a front-panel hour meter to display the total number of hours the unit has operated on battery power.

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

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

(d) Battery System.

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

(2) Batteries used for the UPS shall consist of four to eight batteries with a cumulative minimum rated capacity of 240 amp-hours.

(3) Batteries shall be premium gel cell, deep cycle, completely sealed, prismatic lead-calcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance.

(4) Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 $^{o}$F (-25 to + 71 $^{o}$C).

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

(6) Batteries shall indicate maximum recharge data and recharging cycles.

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

(8) Battery terminals shall be covered and insulated so as to prevent accidental shorting."

**VARIABLY SPACED TINING (BDE)**

Effective: August 1, 2005 Revised: January 1, 2007

Revise the first sentence of the third paragraph of Article 420.09(e)(1) of the Standard Specifications to read:

"The metal comb shall consist of a single line of tempered spring steel tines variably spaced as shown in the table below and securely mounted in a suitable head."

Revise the fifth sentence of the third paragraph of Article 420.09(e)(1) of the Standard Specifications to read:

"The tining device shall be operated so as to a produce a pattern of grooves, 1/8 to 3/16 in. (3 to 5 mm) deep and 1/10 to 1/8 in. (2.5 to 3.2 mm) wide across the pavement. The tining device shall be operated at a 1:6 skew across the pavement for facilities with a posted speed limit of 55 mph or greater. The tining pattern shall not overlap or leave gaps between successive passes."

Add the following table after the third paragraph of Article 420.09(e)(1) of the Standard Specifications:

| "Center to Center Spacings of Metal Comb Tines in. (mm) (read spacings left to right) | | | | |
|---|---|---|---|---|
| 1 5/16 (34) | 1 7/16 (36) | 1 7/8 (47) | 2 1/8 (54) | 1 7/8 (48) |
| 1 11/16 (43) | 1 1/4 (32) | 1 1/4 (31) | 1 1/16 (27) | 1 7/16 (36) |
| 1 1/8 (29) | 1 13/16 (46) | 13/16 (21) | 1 11/16 (43) | 7/8 (23) |
| 1 5/8 (42) | 2 1/16 (52) | 15/16 (24) | 11/16 (18) | 1 1/8 (28) |
| 1 9/16 (40) | 1 5/16 (34) | 1 1/16 (27) | 1 (26) | 1 (25) |
| 1 1/16 (27) | 13/16 (20) | 1 7/16 (37) | 1 1/2 (38) | 2 1/16 (52) |
| 2 (51) | 1 3/4 (45) | 1 7/16 (37) | 1 11/16 (43) | 2 1/16 (53) |
| 1 1/16 (27) | 1 7/16 (37) | 1 5/8 (42) | 1 5/8 (41) | 1 1/8 (29) |
| 1 11/16 (43) | 1 3/4 (45) | 1 3/4 (44) | 1 3/16 (30) | 1 7/16 (37) |
| 1 5/16 (33) | 1 9/16 (40) | 1 1/8 (28) | 1 1/4 (31) | 1 15/16 (50) |
| 1 5/16 (34) | 1 3/4 (45) | 13/16 (20) | 1 3/4 (45) | 1 15/16 (50) |
| 2 1/16 (53) | 2 (51) | 1 1/8 (29) | 1 (25) | 11/16 (18) |
| 2 1/16 (53) | 11/16 (18) | 1 1/2 (38) | 2 (51) | 1 9/16 (40) |
| 11/16 (17) | 1 15/16 (49) | 1 15/16 (50) | 1 9/16 (39) | 2 (51) |
| 1 7/16 (36) | 1 7/16 (36) | 1 1/2 (38) | 1 13/16 (46) | 1 1/8 (29) |
| 1 1/2 (38) | 1 15/16 (50) | 15/16 (24) | 1 5/16 (33)" | |

**THERMOPLASTIC PAVEMENT MARKINGS (BDE)**
Effective: January 1, 2007

Revise Article 1095.01(a)(2) of the Standard Specifications to read:

"(2) Pigment. The pigment used for the white thermoplastic compound shall be a high-grade pure (minimum 93 percent) titanium dioxide ($Ti0_2$). The white pigment content shall be a minimum of ten percent by weight and shall be uniformly distributed throughout the thermoplastic compound.

The pigments used for the yellow thermoplastic compound shall not contain any hazardous materials listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1. The combined total of RCRA listed heavy metals shall not exceed 100 ppm when tested by X-ray fluorescence spectroscopy. The pigments shall also be heat resistant, UV stable and color-fast yellows, golds, and oranges, which shall produce a compound which shall match Federal Standard 595 Color No. 33538. The pigment shall be uniformly distributed throughout the thermoplastic compound."

Revise Article 1095.01(b)(1)e. of the Standard Specifications to read:

"e. Daylight Reflectance and Color. The thermoplastic compound after heating for four hours ± five minutes at 425 ± 3 °F (218.3 ± 2 ºC) and cooled at 77 °F (25 °C) shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degree circumferential/zero degree geometry, illuminant C, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

White: Daylight Reflectance .....75 percent min.
*Yellow: Daylight Reflectance .....45 percent min.

*Shall meet the coordinates of the following color tolerance chart.

| | | | | |
|---|---|---|---|---|
| x | 0.490 | 0.475 | 0.485 | 0.530 |
| y | 0.470 | 0.438 | 0.425 | 0.456" |

Revise Article 1095.01(b)(1)k. of the Standard Specifications to read:

"k. Accelerated Weathering. After heating the thermoplastic for four hours ± five minutes at 425 ± 3 ºF (218.3 ± 2 ºC) the thermoplastic shall be applied to a steel wool abraded aluminum alloy panel (Federal Test Std. No. 141, Method 2013) at a film thickness of 30 mils (0.70 mm) and allowed to cool for 24 hours at room temperature. The coated panel shall be subjected to accelerated weathering using the light and water exposure apparatus (fluorescent UV - condensation type) for 75 hours according to ASTM G 53 (equipped with UVB-313 lamps).

The cycle shall consist of four hours UV exposure at 122 °F (50 °C) followed by four hours of condensation at 104 °F (40 °C). UVB 313 bulbs shall be used. At the end of the exposure period, the panel shall not exceed 10 Hunter Lab Delta E units from the original material."

**BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE) (RETURN FORM WITH BID)**
Effective: November 2, 2006 Revised: January 2, 2007

Description. For projects with at least 1200 tons (1100 metric tons) of work involving applicable bituminous materials, cost adjustments will be made to provide additional compensation to the

Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and pavement preservation type surface treatments. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, or joint filling/sealing.

The bidder shall indicate on the attached form whether or not this special provision will be part of the contract and submit the completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments.

Method of Adjustment. Bituminous materials cost adjustments will be computed as follows.

$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$

Where: CA = Cost Adjustment, $.
$BPI_P$ = Bituminous Price Index, as published by the Department for the month the work is performed, $/ton ($/metric ton).
$BPI_L$ = Bituminous Price Index, as published by the Department for the month prior to the letting, $/ton ($/metric ton).
$\%AC_V$ = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % $AC_V$ will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% $AC_V$ and undiluted emulsified asphalt will be considered to be 65% $AC_V$.
Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards: Q, tons = A x D x ($G_{mb}$ x 46.8) / 2000. For HMA mixtures measured in square meters: Q, metric tons = A x D x ($G_{mb}$ x 24.99) / 1000. When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different $G_{mb}$ and % $AC_V$.

For bituminous materials measured in gallons: Q, tons = V x 8.33 lb/gal x SG / 2000
For bituminous materials measured in liters: Q, metric tons = V x 1.0 kg/L x SG / 1000

Where: A = Area of the HMA mixture, sq yd (sq m).
D = Depth of the HMA mixture, in. (mm).
$G_{mb}$ = Average bulk specific gravity of the mixture, from the approved mix design.
V = Volume of the bituminous material, gal (L).
SG = Specific Gravity of bituminous material as shown on the bill of lading.

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

Percent Difference = $\{(BPI_L - BPI_P) \div BPI_L\} \times 100$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

Return With Bid

## ILLINOIS DEPARTMENT OF TRANSPORTATION

**OPTION FOR**
**BITUMINOUS MATERIALS COST ADJUSTMENTS**

The bidder shall submit this completed form with his/her bid. Failure to submit the form, or failure to fill out the form completely, shall make this contract exempt of bituminous materials cost adjustments. After award, this form, when submitted, shall become part of the contract.

**Contract No.:** _____

**Company Name:**_____

**Contractor's Option:**

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

Yes ☐ No ☐

**Signature:** _____ **Date:** _____

**STEEL COST ADJUSTMENT (BDE) (RETURN FORM WITH BID)**
Effective: April 2, 2004 Revised: January 1, 2007

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 lb (kg), shipped from the mill to the fabricator.

(c) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

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

$SCA = Q \times D$

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

$D = CBP_M - CBP_L$

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

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

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

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

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

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

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

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

**Return With Bid**

## ILLINOIS DEPARTMENT OF TRANSPORTATION

**OPTION FOR**
**STEEL COST ADJUSTMENT**

The bidder shall submit this 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:** _____

## STORM WATER POLLUTION PREVENTION PLAN

Illinois Department of Transportation

**Storm Water Pollution Prevention Plan**

Route FAI 57 & FAU 9629 Marked I 57 & West Main Street
Section (X1-6-2)VB-2, (X1-6)HBK-2 Project No.
County Williamson

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.

Mary C Ramei
Signature

12/8/06
Date

Regional Engineer
Title

**1. Site Description**

a. The following is a description of the construction activity which is the subject of this plan (use additional pages, as necessary):
The project consists of the reconstruction of the FAI 57/Old Ill. 13 interchange. Work includes removal and construction of 4 structures, removal of all existing ramps, construction of new ramps on new alignments. Existing pavement will be rubblized and resurfaced. New pavement will be constructed to maintain 2 lanes of traffic. Embankment will be constructed, storm sewers, curb and gutter, concrete barrier, traffic signals, and highway lighting will be placed.

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 embankment, excavating for ditches, excavating for new pavement, removal of bridges, removal of ramp embankments and pavement, and construction of a storm sewer system.

c. The total area of the construction site is estimated to be 80 acres.

The total area of the site that it is estimated will be disturbed by excavation, grading or other activities is 32 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 area extent of wetland acreage at the site are in the design/project report or plan documents which are incorporated by reference as a part of this plan.

## 2. Controls

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

### a. Erosion and Sediment Controls

(i) Stabilization Practices. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided in 2.a.(i).(A) and 2.b., stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased on all disturbed portions of the site where construction activity will not occur for a period of 21 or more calendar days.

(A) where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

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

The temporary erosion control plan included in the plans contains the location and types of stabilization devices to use. These include temporary sediment basins, temporary ditch checks, perimeter erosion barrier, inlet and pipe protection, temporary seeding, mulch, erosion control blanket, and pipes for erosion control.

**(ii)** **Structural Practices.** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

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

The temporary erosion control plan included in the plans contains the location and types of stabilization devices to use. These include temporary sediment basins, temporary ditch checks, perimeter erosion barrier, inlet and pipe protection, and perimeter erosion barrier.

**b. Storm Water Management**

Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

(I) Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on site; and sequential systems (which combine several practices). **The practices selected for implementation were determined on the basis of the technical guidance in Section 10-300 (Design Considerations) in Chapter 10 (Erosion and Sedimentation Control) of the Illinois Department of Transportation Drainage Manual. If practices other than those discussed in Section 10-300 are selected for implementation or if practices are applied to situations different from those covered in Section 10-300, the technical basis for such decisions will be explained below.**

(ii) Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of Storm Water Management Controls (use additional pages, as necessary):

None are required.

**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:

**3. Maintenance**

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

All erosion control devices will be maintained in accordance with Article 280.05 of the Standard Specifications for Road and Bridge Construction.

**4. Inspections**

Qualified personnel shall inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 above and pollution prevention measures identified in section 2 above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section 4.b. shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The report of noncompliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

**5. Non-Storm Water Discharges**

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge. (Use additional pages as necessary to describe non-storm water discharges and applicable pollution control measures).

There are no known sources of non storm water that will be combined with storm water discharges.

Illinois Department of Transportation

## 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 & FAU 9629 Marked I 57 & West Main Street

Section (X1-6-2)VB-2, (X1-6)HBK-2 Project No. _____

County Williamson

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

# REQUIRED CONTRACT PROVISIONS
# FEDERAL-AID CONSTRUCTION CONTRACTS



## I. GENERAL

1. These contract provisions shall apply to all word performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4 and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

## II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above

agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to

the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

**III. NONSEGREGATED FACILITIES**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term “segregated facilities” means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

**IV. PAYMENT OF PREDETERMINED MINIMUM WAGE**

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter “the wage determination”) which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the

contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or



disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advised the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not

be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:
Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under 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 suncontractors.

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 that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U/S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for

inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

**VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR**

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on /Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

**VII. SUBLETTING OR ASSIGNING THE CONTRACT**

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in he 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 form 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 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.

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**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.

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**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 tie 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.

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**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.

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**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.