

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

PREQUALIFICATION

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

REQUESTS FOR AUTHORIZATION TO BID

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

WHO CAN BID ?

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

WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID? When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status" (BDE 124INT) he/she must indicate at that time which items are being requested For Bidding purposes. Only those items requested For Bidding will be analyzed. After the request has been analyzed, the bidder will be issued a **Proposal Denial and/or Authorization Form**, approved by the Central Bureau of Construction, that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Proposal Denial and/or Authorization Form** will indicate the reason for denial.

ABOUT AUTHORIZATION TO BID: Firms that have not received an authorization form within a reasonable time of complete and correct original document submittal should contact the department as to status. This is critical in the week before the letting. These documents must be received three days before the letting date. Firms unsure as to authorization status should call the Prequalification Section of the Bureau of Construction at the number listed at the end of these instructions.

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

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

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

IDOT is not responsible for any e-mail related failures.

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

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

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

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

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

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

WHO SHOULD BE CALLED IF ASSISTANCE IS NEEDED?

Questions Regarding	Call
Prequalification and/or Authorization to Bid	(217)782-3413
Preparation and submittal of bids	(217)782-7806
Mailing of plans and proposals	(217)782-7806
Electronic plans and proposals	(217)524-1642

ADDENDUMS AND REVISIONS TO THE PROPOSAL FORMS

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

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RETURN WITH BID

Proposal Submitted By
Name
Address
City

Letting June 17, 2005

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

NOTICE TO PROSPECTIVE BIDDERS
 This proposal can be used for bidding purposes by only those companies that request and receive written AUTHORIZATION TO BID from IDOT's Central Bureau of Construction.
 (SEE INSTRUCTIONS ON THE INSIDE OF COVER)

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



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. 72A00
SANGAMON County
Section D-6 ITS #1
Route FAI 55
Project ITS-417(102)
District 6 Construction Funds**

PLEASE MARK THE APPROPRIATE BOX BELOW:

A Bid Bond is included.

A Cashier's Check or a Certified Check is included

Prepared by _____
 Checked by _____ F

(Printed by authority of the State of Illinois)

INSTRUCTIONS

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

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

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

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

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

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Questions Regarding	Call
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Preparation and submittal of bids	217/782-7806
Mailing of CD-ROMS	217/782-7806

RETURN WITH BID



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of _____

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

**Contract No. 72A00
SANGAMON County
Section D-6 ITS #1
Project ITS-417(102)
Route FAI 55
District 6 Construction Funds**

ITS Dynamic Message Signs and traffic surveillance cameras along I-55 in the Springfield Metropolitan area.

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

RETURN WITH BID

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

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

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

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

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

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

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

Attach Cashier's Check or Certified Check Here

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

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

Item _____

Section No. _____

County _____

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

BD 354 (Rev. 11/2001)

RETURN WITH BID

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

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

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

Schedule of Combination Bids

Combination No.	Sections Included in Combination	Combination Bid	
		Dollars	Cents

7. **SCHEDULE OF PRICES.** The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices shall govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
8. **CERTIFICATE OF AUTHORITY.** The undersigned bidder, if a business organized under the laws of another State, assures the Department that it will furnish a copy of its certificate of authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish the certificate within the time provided for execution of an awarded contract may be cause for cancellation of the award and forfeiture of the proposal guaranty to the State.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT
 NUMBER - 72A00

State Job # - C-96-028-05
 PPS NBR -
 County Name - SANGAMON- -
 Code - 167 - -
 District - 6 - -
 Section Number - D-6 ITS #1

Project Number
 ITS041-7/102/000

Route
 FAI 55

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0323228	F & I TRUSS DAMPER	EACH	2.000				
X0324256	FIB OPTIC C SPLICE	EACH	3.000				
X0324963	CC CAMERA SYS COMPL	EACH	3.000				
X0324964	COM CENTER SUPP EQUIP	L SUM	1.000				
X0324965	INS TRUS M DYN MES SN	EACH	2.000				
X7015000	CHANGEABLE MESSAGE SN	CAL MO	2.000				
Z0002005	ATTENUATOR BASE	SQ YD	51.600				
Z0030150	IMPACT ATTEN NRD TL3	EACH	4.000				
67100100	MOBILIZATION	L SUM	1.000				
70100305	TRAF CONT-PROT 701400	L SUM	1.000				
70100420	TRAF CONT-PROT 701411	EACH	3.000				
70100800	TRAF CONT-PROT 701401	L SUM	1.000				
73300300	OVHD SIN STR-SPAN T3A	FOOT	220.000				
73305000	OVHD SIN STR WALKWAY	FOOT	21.500				
73400200	DRILL SHAFT CONC FDN	CU YD	47.300				

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 Code - 167 - -
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Route
 FAI 55

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
80500100	SERV INSTALL TY A	EACH	5.000				
80801400	W POLE 25 CL 4	EACH	5.000				
81012500	CON T 1 1/2 PVC	FOOT	11,358.000				
81012600	CON T 2 PVC	FOOT	3,477.000				
81021540	CON AUGERED 1 1/2 PVC	FOOT	738.000				
81021550	CON AUGERED 2 PVC	FOOT	1,179.000				
81100500	CON AT ST 1 1/2 GALVS	FOOT	270.000				
81100600	CON AT ST 2 GALVS	FOOT	45.000				
81102500	CON AT ST 1 1/2 PVC	FOOT	300.000				
81306100	JUNCTION BOX SPL	EACH	62.000				
81306200	DRILL EX JUNCTION BOX	EACH	2.000				
81500200	TR & BKFIL F ELECT WK	FOOT	14,835.000				
87100120	FO CAB C 62.5/125 8F	FOOT	34,412.000				
87301815	ELCBL C SERV 6 3C	FOOT	1,255.000				
87301865	ELCBL C SERV 8 3/C	FOOT	5,073.500				

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF PRICES
 CONTRACT NUMBER - 72A00

State Job # - C-96-028-05
 PPS NBR -
 County Name - SANGAMON- -
 Code - 167 - -
 District - 6 - -
 Section Number - D-6 ITS #1

Project Number
 ITS041-7/102/000

Route
 FAI 55

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
87900200	DRILL EX HANDHOLE	EACH	4.000				

CONTRACT NUMBER **72A00**

THIS IS THE TOTAL BID **\$ _____**

NOTES:

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

RETURN WITH BID

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

I. GENERAL

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

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

C. In addition to all other remedies provided by law, failure to comply with any assurance, failure to make any disclosure or the making of a false certification shall be grounds for termination of the contract and the suspension or debarment of the bidder.

II. ASSURANCES

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

B. Felons

1. The Illinois Procurement Code provides:

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

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

C. Conflicts of Interest

1. The Illinois Procurement Code provides in pertinent part:

Section 50-13. Conflicts of Interest.

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

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

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

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

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

The current salary of the Governor is \$150,700.00. Sixty percent of the salary is \$90,420.00.

RETURN WITH BID

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

D. Negotiations

1. The Illinois Procurement Code provides in pertinent part:

Section 50-15. Negotiations.

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

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

E. Inducements

1. The Illinois Procurement Code provides:

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

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

F. Revolving Door Prohibition

1. The Illinois Procurement Code provides:

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

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

G. Reporting Anticompetitive Practices

1. The Illinois Procurement Code provides:

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

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

H. Confidentiality

1. The Illinois Procurement Code provides:

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

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

RETURN WITH BID

I. Insider Information

1. The Illinois Procurement Act provides:

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

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

III. CERTIFICATIONS

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

B. Bribery

1. The Illinois Procurement Code provides:

Section 50-5. Bribery.

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

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

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

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

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

(2) the business demonstrates to the governmental entity with which it seeks to contract, and that entity finds that the commission of the offense was not authorized, requested, commanded, or performed by a director, officer, or high managerial agent on behalf of the business as provided in paragraph (2) of subsection (a) of Section 5-4 of the Criminal Code of 1961.

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

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

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

C. Educational Loan

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

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

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

D. Bid-Rigging/Bid Rotating

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

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

RETURN WITH BID

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

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

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

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

E. International Anti-Boycott

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

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

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

F. Drug Free Workplace

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

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

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

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

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

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

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

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

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

G. Debt Delinquency

1. The Illinois Procurement Code provides:

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

The contractor or bidder certifies that it, or any affiliate, is not barred from being awarded a contract under 30 ILCS 500. Section 50-11 prohibits a person from entering into a contract with a State agency if it knows or should know that it, or any affiliate, is delinquent in the payment of any debt to the State as defined by the Debt Collection Board. Section 50-12 prohibits a person from entering into a contract with a State agency if it, or any affiliate, has failed to collect and remit Illinois Use Tax on all sales of tangible personal property into the State of Illinois in accordance with the provisions of the Illinois Use Tax Act. The contractor further acknowledges that the contracting State agency may declare the contract void if this certification is false or if the contractor, or any affiliate, is determined to be delinquent in the payment of any debt to the State during the term of the contract.

H. Sarbanes-Oxley Act of 2002

1. The Illinois Procurement Code provides:

Section 50-60(c).

The contractor certifies in accordance with 30 ILCS 500/50-10.5 that no officer, director, partner or other managerial agent of the contracting business has been convicted of a felony under the Sarbanes-Oxley Act of 2002 or a Class 3 or Class 2 felony under the Illinois Securities Law of 1953 for a period of five years prior to the date of the bid or contract. The contractor acknowledges that the contracting agency shall declare the contract void if this certification is false.

I. ADDENDA

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

J. Section 42 of the Environmental Protection Act

The contractor certifies in accordance with 30 ILCS 500/50-12 that the bidder or contractor is not barred from being awarded a contract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency by a person or business found by a court or the Pollution Control Board to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act for a period of five years from the date of the order. The contractor acknowledges that the contracting agency may declare the contract void if this certification is false.

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

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

NA - FEDERAL

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

TO BE RETURNED WITH BID

IV. DISCLOSURES

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

B. Financial Interests and Conflicts of Interest

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

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

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

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

C. Disclosure Form Instructions

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

The Department has retained the Form A disclosures submitted by all bidders responding to these requirements for the April 24, 1998 or any subsequent letting conducted by the Department. The bidder has the option of submitting the information again or the bidder may sign the following certification statement indicating that the information previously submitted by the bidder is, as of the date of signature, current and accurate. The Certification must be signed and dated by a person who is authorized to execute contracts for the bidding company. Before signing this certification, the bidder should carefully review its prior submissions to ensure the Certification is correct. If the Bidder signs the Certification, the Bidder should proceed to Form B instructions.

CERTIFICATION STATEMENT

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

(Bidding Company)

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative

Date

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

If the bidder is a publicly traded entity subject to Federal 10K reporting, the 10K Report may be submitted to meet the requirements of Form A. If a bidder is a privately held entity that is exempt from Federal 10K reporting, but has more than 400 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any person or entity holding any ownership share that is in excess of 5%. If a bidder is not subject to Federal 10K reporting, the bidder must determine if any individuals are required by law to complete a financial disclosure form. To do this, the bidder should answer each of the following questions. A "YES" answer indicates Form A must be completed. If the answer to each of the following questions is "NO", then the NOT APPLICABLE STATEMENT on the second page of Form A must be signed and dated by a person that is authorized to execute contracts for the bidding company. Note: These questions are for assistance only and are not required to be completed.

1. Does anyone in your organization have a direct or beneficial ownership share of greater than 5% of the bidding entity or parent entity? YES ___ NO ___
2. Does anyone in your organization have a direct or beneficial ownership share of less than 5%, but which has a value greater than \$90,420.00? YES ___ NO ___
3. Does anyone in your organization receive more than \$90,420.00 of the bidding entity's or parent entity's distributive income? (Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.) YES ___ NO ___
4. Does anyone in your organization receive greater than 5% of the bidding entity's or parent entity's total distributive income, but which is less than \$90,420.00? YES ___ NO ___
(Note: Only one set of forms needs to be completed per person per bid even if a specific individual would require a yes answer to more than one question.)

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

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

Form B: Identifying Other Contracts & Procurement Related Information Disclosure Form B must be completed for each bid submitted by the bidding entity. It must be signed by an individual who is authorized to execute contracts for the bidding entity. *Note: Signing the NOT APPLICABLE STATEMENT on Form A does not allow the bidder to ignore Form B. Form B must be completed, signed and dated or the bidder may be considered nonresponsive and the bid will not be accepted.*

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

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

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

D. Bidders Submitting More Than One Bid

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

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

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Form A Financial Information & Potential Conflicts of Interest Disclosure

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

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

DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the BIDDER (or its parent) in terms of ownership or distributive income share in excess of 5%, or an interest which has a value of more than \$90,420.00 (60% of the Governor's salary as of 7/1/01). (Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)

FOR INDIVIDUAL (type or print information)

NAME: _____

ADDRESS _____

Type of ownership/distributable income share:

stock _____ sole proprietorship _____ Partnership _____ other: (explain on separate sheet): % or \$ value of ownership/distributable income share: _____

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

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

Yes ___ No ___

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

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

2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name the State agency for which you are employed and your annual salary. _____

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- 3. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___

- 4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or minor children entitled to receive (i) more than 15% in aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor? Yes ___ No ___

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

Yes ___ No ___

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

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

- 2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary. _____

3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the salary of the Governor as of 7/1/01) are you entitled to receive (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of the salary of the Governor? Yes ___ No ___

4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds \$90,420.00, (60% of the Governor's salary as of 7/1/01) are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of 2 times the salary of the Governor?

Yes ___ No ___

(c) Elective status; the holding of elective office of the State of Illinois, the government of the United States, any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois currently or in the previous 3 years.

Yes ___ No ___

(d) Relationship to anyone holding elective office currently or in the previous 2 years; spouse, father, mother, son, or daughter.

Yes ___ No ___

(e) Appointive office; the holding of any appointive government office of the State of Illinois, the United State of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years.

Yes ___ No ___

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

Yes ___ No ___

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

Yes ___ No ___

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

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

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

APPLICABLE STATEMENT

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

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

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

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

NOT APPLICABLE STATEMENT

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

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

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Signature of Authorized Representative Date _____

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**ILLINOIS DEPARTMENT
OF TRANSPORTATION**

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

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

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

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE SIGNED

Name of Authorized Representative (type or print)	

Title of Authorized Representative (type or print)	
_____	_____
Signature of Authorized Representative	Date

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SPECIAL NOTICE TO CONTRACTORS

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

CONSTRUCTION EMPLOYEE UTILIZATION PROJECTION

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

RETURN WITH BID

**Contract No. 72A00
SANGAMON County
Section D-6 ITS #1
Project ITS-417(102)
Route FAI 55
District 6 Construction Funds**

PART II. WORKFORCE PROJECTION - continued

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

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

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____ Telephone Number _____

Address _____

NOTICE REGARDING SIGNATURE

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

Signature: _____ Title: _____ Date: _____

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

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

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

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

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ADDITIONAL FEDERAL REQUIREMENTS

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

- A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.
- B. CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:
1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____
 2. If answer to #1 is yes, have you filed with the Joint Reporting Committee, the Director of OFCC, any Federal agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements of those organizations? YES _____ NO _____

RETURN WITH BID

**Contract No. 72A00
SANGAMON County
Section D-6 ITS #1
Project ITS-417(102)
Route FAI 55
District 6 Construction Funds**

PROPOSAL SIGNATURE SHEET

The undersigned bidder hereby makes and submits this bid on the subject Proposal, thereby assuring the Department that all requirements of the Invitation for Bids and rules of the Department have been met, that there is no misunderstanding of the requirements of paragraph 3 of this Proposal, and that the contract will be executed in accordance with the rules of the Department if an award is made on this bid.

(IF AN INDIVIDUAL) Firm Name _____
Signature of Owner _____
Business Address _____

(IF A CO-PARTNERSHIP) Firm Name _____
By _____
Business Address _____
Name and Address of All Members of the Firm: _____

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

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

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

Attest _____
Signature _____
Business Address _____

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

RETURN WITH BID



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

Item No.
Letting Date

KNOW ALL MEN BY THESE PRESENTS, That We

as PRINCIPAL, and

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

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

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

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

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

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

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
COUNTY OF

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

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

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

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

My commission expires Notary Public

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

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

PROPOSAL ENVELOPE



PROPOSALS

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

Item No.	Item No.	Item No.

Submitted By:

Name:
Address:
Phone No.

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

Engineer of Design and Environment - Room 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. 72A00
SANGAMON County
Section D-6 ITS #1
Project ITS-417(102)
Route FAI 55
District 6 Construction Funds**



Illinois Department of Transportation



NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Sealed proposals for the improvement described herein will be received by the Department of Transportation at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.m., June 17, 2005. All bids will be gathered, sorted, publicly opened and read in the auditorium at the Department of Transportation's Harry R. Hanley Building shortly after the 10:00 a.m. cut off time.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 72A00
SANGAMON County
Section D-6 ITS #1
Project ITS-417(102)
Route FAI 55
District 6 Construction Funds**

ITS Dynamic Message Signs and traffic surveillance cameras along I-55 in the Springfield Metropolitan area.

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

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

By Order of the
Illinois Department of Transportation

Timothy W. Martin, Secretary

BD 351 (Rev. 01/2003)

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted March 1, 2005

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.
ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-02) (Revised 3-1-05)

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STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2002, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAI 55 (I-55); Section D6 ITS #1; Sangamon County; Contract 72A00 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

DESCRIPTION OF PROJECT

This project on I-55 consists of, but is not limited to the installation of two Dynamic Message Signs (furnished by others) placed on Type III trusses across FAI 55 at approximate Station 202+54 (mile post 87) and Station 234+00 (mile post 107), furnishing and installing 3 PTZ traffic surveillance cameras on existing I-55 sign structures 6C084I055R099.7, 6C084I055L096.4, 6C084I072R097.5, furnish and install fiber optic cable, system support equipment and software at the District's communication center, and all necessary traffic control. Communications between the District 6 communications office and the Dynamic Message Signs shall be accomplished via a standard, voice grade, dial-up telephone line.

This telephone line communication method shall be backed-up by a cellular communication modem included in the DMS structure. Communications between the District 6 communications office and the Cameras shall be accomplished via either existing fiber optic cable, or fiber optic cable installed according to this contract. A Serial Transceiver and Ethernet switch shall be installed in an existing traffic signal control cabinet at 6th Street and Hazel Dell Road in Springfield, and connected to the existing Signal Controller within that cabinet. Communications between the District 6 communications office and these devices is accomplished via fiber optic cable installed according to this contract.

All equipment manufacturers must have a minimum of three years direct manufacturing experience in their respective fields. These respective fields include, but are not limited to, surveillance camera systems, dynamic message signs, video equipment, Ethernet equipment, fiber optic equipment, and computer equipment. Manufacturers will be required to establish a record of proven field service for the system hardware and software being provided for this contract. The contractor must have also installed at least one system of the type to be provided for this contract.

This system must have demonstrated at least one year of satisfactory operation prior to the letting of this contract. The system hardware and copyrighted software to be provided by this contract shall have been in full production, fully operational, and commercially utilized for a period of at least three months prior to the letting date of this contract. For each of the above-cited equipment and installation requirements, the contractor shall furnish the IDOT System Engineer with the location of the system(s) and contact information for the persons responsible for these systems.

TRAFFIC CONTROL PLAN

Effective: November 1, 1984

Revised: April 15, 1997

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

Special attention is called to Sections 107 and 701 through 705 of the Standard Specifications for Road and Bridge Construction, and as amended by the Supplemental Specifications, Recurring Special Provisions, the Special Provisions contained herein, and the following highway standards relating to traffic control:

701101 701106 701400 701401 701411 702001

Limitations of Construction: The Contractor shall coordinate the items of work in order to keep hazards and traffic inconveniences to a minimum, as specified below.

1. Notify the Bureau of Operations 1-week prior to lane closures on I-55 at 217-782-7743. No lane closures will be allowed on FAI-55 between the hours of 6:00 A.M. and 6:00 P.M.
2. The Contractor shall provide, erect, and maintain all the necessary barricades, cones, drums, and lights for the warning and protection of traffic, as required by Sections 107 and 701 through 703 of the Standard Specifications, and as modified.
3. The Contractor shall furnish and erect "Road Construction Ahead" signs (W20-1(0)-48) at both ends of the project and all side roads within the limits of this section when working in the vicinity of the side road intersection.
4. Revise the first paragraph of Article 702.05(a): "General: Sign posts must be 100 x 100 mm (4 x 4 inches) wood posts according to Article 1093.01(b). The use of metal posts will not be permitted."
5. All advance-warning signs shall be in new or like new condition at the start of the project. All warning signs shall be 48 inches by 48 inches and have a black legend on a fluorescent orange reflectorized background.
6. During the construction of this section at least one lane shall remain open to traffic in each direction at all times, except Interstate closures.
7. Two Portable Changeable Message Boards will be required for each Interstate closure.

CONSTRUCTION PROCEDURE FOR PUBLIC EVENTS

Effective: October 1, 1990

There shall be no lane closures within the limits of this project during Illinois State Fair-August 12-21, 2005, the Hot Rod Super Nationals-August 26-28, and the LPGA State Farm Rail Charity Classic-September 1-4.

No broken pavement, open holes, or trenches shall remain on, or adjacent to, the traveled way during these events. Barricades, cones, drums or other warning devices shall also be removed from the traveled way during these periods.

These periods shall begin at 3:00 p.m. of the day preceding the beginning day of each event, and end at 12:00 midnight on the final day of each event.

Any inconvenience caused the Contractor in complying with these Special Provision shall be considered as incidental to the contract and no additional compensation will be allowed.

STATUS OF UTILITIES TO BE ADJUSTED

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

<u>Name & Address of Utility</u>	<u>Type</u>	<u>Location</u>	<u>Estimated Date of Relocation Completed</u>
--------------------------------------	-------------	-----------------	---

NONE ANTICIPATED

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

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

PAYROLLS AND PROCEDURES

Effective: February 5, 1975

Revised: November 7, 1986, January 14, 1994, and June 2001

The prime Contractor and each Subcontractor shall submit a weekly certified original and one copy of their companies payroll directly to the District Engineer.

Payrolls must be received within seven (7) days of the payroll ending period.

Payroll data shall be submitted on Payroll Form RE 48 or an approved facsimile to include every person paid by a Contractor or Subcontractor in any manner for his or her labor in the construction, prosecution, completion, or repair of this public work is employed and receiving "wages," regardless of any contractual relationship alleged to exist between him/her and the real employer.

Payroll data shall include all persons employed on the job site.

The following employee codes are to be used to identify each individual on the payroll:

A. **Gender:** **M** – Male **F** – Female

B. **Ethnic Group:** **1** – White **2** – Black **3** – Hispanic
 4 – American Indian/Alaskan Native **5** – Asian/Pacific Islander

C. **Work Classification:**

OF – Officials	SU – Supervisors	FO – Foremen	CL – Clerical
CA – Carpenters	EO – Operators	ME – Mechanics	TD – Truck Drivers
IW – Ironworkers	PA – Painters	CM – Cement Masons	EL – Electricians
PP – Pipefitters	TE – Technical	LA – Laborers	OT – Other

D. **Employee Status:** **O** – Owner Operator **J** – Journeyman **C** – Company
 A – Apprentice **T** – Trainee

Payroll data shall be submitted by the prime Contractor and each Subcontractor for each consecutive week from the start to the completion of their work. When there has been no activity during a work week, a payroll is still required to be sent to the District Engineer with the appropriate box ("No Work," "Suspended," "Completed") checked at the bottom of the Payroll Form RE 48. DO NOT check any of these boxes when payroll data is being reported on the payroll.

The Department of Transportation is requesting disclosure of information necessary to accomplish the statutory purpose as outlined under 23CFR, part 230, and 41CFR, part 60.4, and the Illinois Human Rights Act. Disclosure of this information is REQUIRED. Failure to comply with this special provision may result in the withholding of payments to the Contractor and/or cancellation, termination, or suspension of the contract in whole or part.

Compliance with this Special Provision shall be considered incidental to the cost of the contract and no additional compensation will be allowed for any costs incurred.

SEEDING, MINOR AREAS

Effective July 1, 1990

Revised July 1, 1994

Seeding and fertilizing shall be done in accordance with Article 250 of the Standard Specifications except for the following revisions:

All areas disturbed by the work performed shall be seeded, fertilized and mulched as directed by the Engineer.

The seed mixture shall be applied at 110 kg/ha (100 pounds/acre). All seeds shall meet the mixture, purity and noxious weed requirements of Article 1081.04 of the Standard Specifications, and be approved by the Engineer.

The Contractor shall provide the Engineer with the test results from the seed container and the chemical analysis of the fertilizer nutrients.

The seed and fertilizer placed at all disturbed areas will not be measured for payment but will be considered incidental to this contract

COMPLETION DATE

All work necessary to complete this project shall be completed by and in operation by December 31, 2005. A successful turn-on inspection of all surveillance camera locations and a successful 72-hour testing period of all Dynamic Message Signs will be included in this time period. Contractor's liability for failure to meet this date shall be as specified in Section 108 of the Standard Specifications.

INSTALL TRUSS MOUNTED DYNAMIC MESSAGE SIGNS

Two walk-in Dynamic Message Sign (furnished by others) assemblies will be installed on Type III Trusses along I-55 and the changeable message sign control system will be installed under this contract. Communications between the District 6 communications office and the Dynamic Message Signs shall be accomplished via a standard, voice grade, dial-up telephone line. This telephone line communication method shall be backed-up by a cellular communication modem included in the DMS structure.

This item shall be paid for at the contract unit price each for **INSTALL TRUSS MOUNTED DYNAMIC MESSAGE SIGN**, and shall include the cost of all labor and necessary equipment to perform the work.

CONDUIT

This work shall consist of furnishing and installing a conduit of the type and size specified in accordance with Sections 810 and 1088.01(b) or 1088.01(c) of the Standard Specifications for Road and Bridge Construction except as described herein.

PVC Conduits: When it is necessary to connect PVC conduit to steel conduit a heavy wall set screw connector with a PVC female adapter shall be installed and sealed by duct seal and plastic tape.

When conduit is installed in the excavation in back of curb, the conduit shall be installed below driveway and entrances at a depth which will prevent the conduit from protruding into the entrance pavement material.

PVC Conduit, Augered: The term augered shall cover both the pushed and bored method of installing conduit. Because of differences in equipment and techniques, the contractor may use either method to install the conduit for the term AUGERED.

In the event that latent subsurface physical conditions are encountered which prevents the conduit of pilot hole from being augered or pushed through the entire conduit run in three (3) sincere attempts, as determined by the Engineer, compensation for the proposed conduit run will be as follows:

1. The Department will delete the contract specified method of payment for the subject conduit run.
2. The Department will pay for the installation of the conduit run and the three unsuccessful attempts to install the conduit run, under Article 109.04 of the Standard Specification on the force account basis.
3. The Engineer will determine the method to be utilized to install the conduit run.

Basis of Payment: This work will be paid for at the contract unit price per foot (meter) for **CONDUIT**, of the size and type specified, which price shall be payment in full for furnishing and installing the conduit and fittings complete.

JUNCTION BOX (SPECIAL)

Effective September 14, 1990

Revised April 30, 2004

This work shall consist of furnishing and installing a composite concrete junction box at a location(s) shown on the plan in accordance with Sections 813 and 1088.05 of the Standard Specifications for Road and Bridge Construction and the following additions or exceptions.

The box shall be made of polymer concrete and fiber reinforced polyester. The nominal dimensions shall be 13" x 24" x 18" D. The box and cover shall have a design load of 15,000-lbs. minimum with a test load of 22,500-lbs. minimum. The lid logo shall be "TRAFFIC" and shall be held down by two stainless steel hex head bolts and have a skid resistant surface. The walls shall be straight. The box shall be set on 12 inches of compacted CA 6 for drainage. When the box is placed in a driveway or sidewalk, expansion material shall be placed around the box.

Basis of Payment: This work will be paid for at the contract unit price each for **JUNCTION BOX (SPECIAL)**, which price shall be payment in full for furnishing and installing the junction box complete in place.

FIBER OPTIC CABLE

Revised: April 19, 2004

This work shall consist of furnishing, installing and terminating a fiber optic cable in accordance with the requirements of Sections 871 and 1076.02 of the Standard Specifications for Road and Bridge Construction and the following additions.

The fiber optic cable shall consist of eight (8) fibers with each fiber being singlemode. The Contractor may use fusion splices for the continuous fiber optic run along Sixth Street and along Stevenson Dr. to assist in the fiber optic cable installation. If the Contractor chooses to use fusion splices during installation, the cable and splices shall meet the testing requirements as specified herein.

All fibers within the cable shall be terminated with an ST connector at the existing Hazel Dell controller cabinet distribution enclosure. The connector type shall be either hot-melt, epoxy, or crimp-on. The connectors shall meet TIA/EIA 568B specifications and shall have an operating temperature range of -10°C (14°F) to 60°C (140°F). The connectors shall be free from defects in material and manufacture for 6 months.

Unused fibers shall be secured within the existing distribution enclosure and readily available for use.

Locator Wire: A #14 AWG minimum, THHN wire shall be installed along side of the fiber optic cable. The locator wire shall not be terminated to the control facility. The locator wire may be omitted in conduit runs that contain existing interconnect wire.

Basis of Payment: This work will be paid for at the contract unit price per meter (foot) for **FIBER OPTIC CABLE**, of the type, size, and number of fibers indicated on the plans, which price shall be payment in full for furnishing the material, making all fiber connections to the proposed equipment and installing the cable complete.

FIBER OPTIC SPLICE

Effective: May 1, 2005

This work shall consist of splicing the proposed singlemode fiber optic cable to the existing fiber optic cable backbone at the locations shown on the plans in accordance with the testing requirements as specified herein.

The Contractor shall contact Wiltel Communications to perform the splice work.

Wiltel Communications Contact: John Green
Project Manager IRU Services
(918) 547-1964

The Contractor will splice optical fibers from different cable sheaths and protect them with a splice closure at the locations shown on the Plans. Fiber splicing consists of in-line fusion splices for all fibers described in the cable plan at the particular location.

Two splices are identified. A mainline splice includes all fibers in the cable sheath. In a lateral splice, the buffer tubes in the mainline cable are dressed out and those fibers identified on the plans are accessed in and spliced to lateral cables.

Splice Closures

Splice Closures shall be designed for use under the most severe conditions such as moisture, vibration, impact, cable stress and flex temperature extremes as demonstrated by successfully passing the factory test procedures and minimum specifications listed below:

Physical Requirements:

The closures shall provide ingress for up to four cables in a butt configuration.

The closure shall prevent the intrusion of water without the use of encapsulates.

The closure shall be capable of accommodating splice organizer trays that accept mechanical, or fusion splices. The splice closure shall have provisions for storing fiber splices in an orderly manner, mountings for splice organizer assemblies, and space for excess or un-spliced fiber. Splice organizers shall be re-enterable. The splice case shall be UL rated.

Closure re-entry and subsequent reassembly shall not require specialized tools or equipment. Further, these operations shall not require the use of additional parts.

The splice closure shall have provisions for controlling the bend radius of individual fibers to a minimum of 1.5 in (38 mm).

Factory Testing:

Compression Test: The closure shall not deform more than 10% in its largest cross-sectional dimension when subjected to a uniformly distributed load of 1335 N at a temperature of 0° F and 100°F (-18°C and 38°C). The test shall be performed after stabilizing at the required temperature for a minimum of two hours. It shall consist of placing an assembled closure between two flat parallel surfaces, with the longest closure dimension parallel to the surfaces. The weight shall be placed on the upper surface for a minimum of 15 minutes. The measurement shall then be taken with weight in place.

Impact Test: The assembled closure shall be capable of withstanding an impact of 28 N-M at temperatures of 0° F and 100° F (-18° C and 38° C). The test shall be performed after stabilizing the closure at the required temperature for a minimum of 2 hours. The test fixture shall consist of 20 lb (9 kg) cylindrical steel impacting head with a 2 in (5 cm) spherical radius at the point where it contacts the closure. It shall be dropped from a height of 12 in (30 cm). The closure shall not exhibit any cracks or fractures to the housing that would preclude it from passing the water immersion test. There shall be no permanent deformation to the original diameter or characteristic vertical dimension by more than 5%.

Cable Gripping and Sealing Testing: The cable gripping and sealing hardware shall not cause an increase in fiber attenuation in excess of 0.05 dB/fiber @ 1550 nm when attached to the cables and the closure assembly. The test shall consist of measurements from six fibers, one from each buffer tube or channel, or randomly selected in the case of a single fiber bundle. The measurements shall be taken from the test fibers before and after assembly to determine the effects of the cable gripping and sealing hardware on the optical transmission of the fibers.

Vibration Test: The splice organizers shall securely hold the fiber splices and store the excess fiber. The fiber splice organizers and splice retaining hardware shall be tested per EIA Standard FOTP-II, Test Condition I. The individual fibers shall not show an increase in attenuation in excess of 0.1 dB/fiber.

Water Immersion Test: The closure shall be capable of preventing a 10 ft (3 m) water head from intruding into the splice compartment for a period of 7 days. Testing of the splice closure is to be accomplished by the placing of the closure into a pressure vessel and filling the vessel with tap water to cover the closure. Apply continuous pressure to the vessel to maintain a hydrostatic head equivalent to 10 ft (3 m) on the closure and cable. This process shall be continued for 30 days. Remove the closure and open to check for the presence of water. Any intrusion of water in the compartment containing the splices constitutes a failure.

Certification: It is the responsibility of the Contractor to insure that either the manufacturer, or an independent testing laboratory has performed all of the above tests, and the appropriate documentation has been submitted to the Department. Manufacturer certification is required for the model(s) of closure supplied. It is not necessary to subject each supplied closure to the actual tests described herein.

Construction Requirements:

The closure shall be installed according to the manufacturer's recommended guidelines. For mainline splices, the cables shall be fusion spliced. 45 days prior to start of the fiber optic cabling installation, the Contractor shall submit the proposed locations of the mainline splice points for review by the Department.

The Contractor shall prepare the cables and fibers in accordance with the closure and cable manufacturers' installation practices. A copy of these practices shall be provided to the Engineer 21 days prior to splicing operations.

Using a fusion splicer, the Contractor shall optimize the alignment of the fibers and fuse them together. The Contractor shall recoat the fused fibers and install mechanical protection over them.

Upon completing all splicing operations for a cable span, the Contractor shall measure the mean bi-directional loss at each splice using an Optical Time Domain Reflectometer. This loss shall not exceed 0.1 dB.

The Contractor shall measure the end-to-end attenuation of each fiber, from connector to connector, using an optical power meter and source. This loss shall be measured at from both directions and shall not exceed 0.5 dB per installed kilometer of single mode cable. Measurements shall be made at both 1300 and 1550 nm for single mode cable. For multimode cable, power meter measurements shall be made at 850 and 1300 nm. The end-to-end attenuation shall not exceed 3.8 dB/installed kilometers at 850nm or 1.8 dB per installed kilometer at 1300nm for multimode fibers.

As directed by the Engineer, the Contractor at no additional cost to the Department shall replace any cable splice not satisfying the required objectives.

The Contractor shall secure the Splice Closure to the side of the splice facility using cable support brackets. All cables shall be properly dressed and secured to rails or racks within the manhole. No cables or enclosures will be permitted to lie on the floor of the splice facility. Cables that are spliced inside a building will be secured to the equipment racks or walls as appropriate and indicated on the Plans.

FIBER OPTIC CABLE SPLICING, TESTING AND ACCEPTANCE STANDARDS, AND PROCEDURES

- A. During construction, an Optical Domain Reflectometer (OTDR) shall be used to test splices and shall use an OTDR and a 1-km launch reel to test pigtail connectors. Such construction tests shall be uni-directional and performed at both 1310 nm and 1550 nm.
- B. If the loss value of two connectors and the associated pigtail splice exceeds 1dB, the splice and re-splice until the loss value is 1.0 dB or less.
- C. If the loss value for a splice, when measured in one direction with an OTDR, exceeds 0.15 dB, break the splice and re-splice until the loss value is 0.15 dB or less, provided that, not able to achieve a loss value of 0.15 dB after three total splicing attempts, then the maximum loss value shall be 0.3 dB.
- D. After end-to-end connectivity has been established on the fibers during construction the following shall be completed:
 - a. bi-directional end-to-end tests
 - b. test continuity to confirm that no fibers have crossed at any splice points
 - c. record loss measurements using a light source and a power meter
 - d. take OTDR traces and record splice loss measurements
- E. Bi-directional end-to-end tests and OTDR traces shall be performed at both 1310 nm and 1550 nm. All losses for each splice point shall be measured, verified, and averaged in both directions.
- F. ODTR Equipment and Settings
The contractor shall use OTDR equipment and setting that are in the Engineer's opinion, suitable for performing accurate measurements of the fiber.
- G. Acceptance Test Deliverables
The contractor shall provide data sheets or computer media, in format that is readily accessible to the Department, containing the following information for the relevant fibers and cable segments:
 - a. Verification of end-to-end fiber continuity with power level readings for each fiber taken with a light source and power meter.
 - b. Verification that the loss at each splice point is below 0.3 dB.
 - c. The final bi-directional OTDR test data, with distances.
 - d. Cable manufacturer, cable type (buffer/ribbon), fiber type, cable reel number, number and distance of each section of cable between splice points.

The cost of performing the appropriate tests and providing the documentation shall be considered incidental to the over all cost of the contract.

Basis of Payment: This work will be paid for at the contract unit price each for **FIBER OPTIC SPLICE**, which price shall be payment in full for drilling the existing vaults, attaching proposed conduit, installing proposed fiber within existing vaults and making all fiber splices complete.

CLOSED CIRCUIT CAMERA SYSTEM COMPLETE

Effective May 1, 2005

This work shall consist of furnishing, installing, and placing into operation a closed circuit television camera system. All new equipment shall be properly-installed to be compatible, fully-operational, and fully-integrated into the district's ITS system. All work and equipment required both to achieve this level of performance, and to complete the 30 day end-of-project performance milestone, whether or not specifically stated in either the Plans or this contract, shall be considered incidental to this contract. In addition to equipment and labor at the three peripheral field locations, satisfactory completion of this item will involve work at the district's communication center. The contractor may be utilizing and/or incorporating existing, ongoing, or related work and equipment done or installed by others in order to satisfactorily complete this project. Any coordinating efforts, equipment, or labor associated with existing, ongoing, or related work by others shall be incidental to this contract unless otherwise specified herein.

This system shall consist of, but shall not be limited to, furnishing and installing the following equipment:

- **Color Camera**
- **Environmental Enclosure**
- **Pole Mounted Equipment Cabinet**
- **Digital Video Encoder**
- **Managed Ethernet Switch**
- **Surge Arrestor**
- **Camera Connecton J-Box**

The Camera System shall include a mounting bracket, Sensormatic RHOPM, pole mount or equal (1 ea.); a 4" diameter Schedule 80 Aluminum pipe (length as required, 1 ea.); a pole plate (1 ea.), a 12"x12"x1/2" aluminum plate (2 ea.); power, control, and video cables from the camera to the junction box; all incidental cables & connectors; mounting hardware required to securely fasten the camera to the sign truss; and to make the system perform to the satisfaction of the Engineer. The camera system shall also include installing a serial to Ethernet transceiver device and managed Ethernet switch at the existing traffic signal cabinet at 6th Street and Hazel Dell.

A camera mounting bracket unit shall include the features and meet the performance requirements listed below:

1. Support maximum 75 lbs.
2. Cast Aluminum
3. Gray polyester powder coat finish.
4. Cable hole on mounting plate

The appropriate transformers, circuit breakers, surge arrestors, terminal strips, & receptacles (GFCI) required for a closed circuit television camera system are also included in this pay item.

All coaxial cable furnished shall be in accordance with the applicable portions of section 873 of the Standard Specifications for Road and Bridge Construction and as specified herein.

Coax cable shall be a 75 ohm, 20AWG (solid) cable conforming to Belden Type 8281 or approved equal.

The cable shall be 100% sweep tested from 5 Mhz to 850 Mhz and suitable for outdoor use. The cable shall have the following nominal electrical characteristics:

- Inductance = 0.131 microH/ft.
- Capacitance = 21 pF/ft.
- Delay = 1.54 ns/ft.
- Conductor DC Resistance at 20 deg. C = 9.9 Ohms/1000 ft.
- Outer Shield DC Resistance at 20 deg. C = 1.1 Ohms/1000 ft.

The cable shall contain 1(one) 20AWG 0.031 in. bare copper conductor housed in polyethylene insulation with a 98% tinned copper double braided shield and polyethylene jacket. The insulation diameter shall be 0.198 in. The overall nominal diameter shall be 0.305 in.

Connectors shall be installed on each end of the coaxial cable after the cable has been installed. Connectors shall be Amphenol 31-71032 or approved equal. Connectors should be installed using a CTL-2 connector tool or approved equal.

COLOR CAMERA:

The color camera shall be the American Dynamics Sensormatic SpeedDome Ultra VII, RAS916WLS or equivalent.

The camera/dome assembly shall incorporate a high-speed programmable dome with high resolution DSP6 with Day (color) and Night (black and white) camera modes. Day and Night mode shall be controlled by the removal of an infrared filter. The camera shall utilize user-definable motion detection based upon image activity.

The dome assembly shall be comprised of a high-speed pan/tilt assembly, and a high-resolution day (color) or night (black and white) mode camera with 230X zoom. The 230X zoom shall be achieved with no less than a 23X optical zoom lens, and 10X digital magnification. The camera/lens assembly shall provide for continuous, full-time auto focus.

The pan mechanism shall incorporate a sealed precision slip ring to provide 360° of continuous pan rotation. The tilt mechanism shall provide for a minimum of 110° travel. Precise manual panning and tilting shall be achievable through a combination of variable-speed operator control (speed ranges), and automatic adjustment of these speed ranges shall be dependent upon zoom factor. Pan and Tilt speeds shall be adjustable from 0.25°/second or less, to 100°/second or more. Pan and tilt preset positions shall be obtained at a speed of no less than 220°/second. The pan and tilt acceleration, speed, and deceleration shall be directly-driven by encoder feedback monitored pulse-width-modulated high-speed DC servo motors. The pan and tilt operation shall be smooth, precise, fluid, and accurate.

The dome assembly shall contain a built-in multi-protocol receiver/driver for use with matrix switching systems using one of the following protocols:

1. AD Manchester control code and a single 18 AWG shielded twisted pair (STP) cabling
2. SensorNet control code and a single 22 AWG unshielded twisted pair (UTP) cabling
3. SEC RS-422 control code and two pairs of 22 AWG shielded twisted pair (STP) cabling
4. AD-UTC and RG59U video cable

The receiver/driver shall provide all voltages for camera controls, pan and tilt functions and all motorized lens functions.

In addition, the camera system shall support the District's selected third-party protocol, including but not limited to Cameleon version 4 specified herein, for integration into the District 6 ITS system as a whole.

The dome shall include standard support for unshielded twisted pair dome connections.

The dome shall support a minimum of 96 Presets 16 Patterns and 16 Preset Sequences. The dome shall also support a user-selectable 'return-to-home' parameter that, after a period of time from 1 or less minutes to 60 or more minutes, automatically returns the dome to a user-selectable preset, pattern, or preset sequence. A freeze-frame function that maintains a static image on-screen during dome movement and lens adjustment, and when presets and patterns are called, shall be available.

The dome shall include user-selectable motion detection presets where up to eight detection zones are available within a preset, and five motion sensitivity levels are available within a zone. Motion detection trigger actions shall include:

1. activating a preset command
2. activating a pattern
3. setting a dome output
4. return to home defeat

The dome shall support on-screen programming of dome parameters, including proportional flip, direction indicators and azimuth, maximum zoom stop, line-lock or internal crystal synchronization, automatic gain control, white balance, dynamic range, motion detection selection, alarm actions and default states, infrared filter removal threshold, home position, camera name, area names, a minimum of 96 preset names, a minimum of 16 pattern names, and 4 alarm names. All of this on-screen programming and displays shall be available in the English language.

Password protection shall be provided to prevent unauthorized access.

Dome direction indicators and azimuth reading; Dome, Area, Preset, Pattern, Preset Sequence and alarm names; and zoom, focus, and iris status shall be displayable on the monitor. All on-screen text character attributes shall be user-selectable solid or translucent white, with or without black outline.

On-screen display of dome usage statistics shall be available, and shall provide a record of the number of pan, tilt, and zoom commands issued by the dome; operating time, time from last reset in seconds, and total reset count.

The complete dome assembly shall be capable of operating to full specification with an applied voltage of 18 to 30 VAC at a frequency of 50 or 60 Hertz and meet Class 2 standards. The power consumption shall not exceed 16 watts with all functions operating. The dome assembly shall have surge protection for video, communications, power, and alarm connections. The camera shall be a ¼-inch CCD interline transfer device. Day (color) mode shall provide a minimum horizontal resolution of 470 lines given a usable video signal with a scene illumination of better than 0.5 Lux (20 IRE with automatic gain control on), and 0.03 Lux with an open shutter selection of no more than 1/4 second. Night (black and white) mode shall provide a minimum horizontal resolution of 470 lines with a usable video signal with a scene illumination of 0.01 Lux (20 IRE with AGC on) and 0.009 Lux with an open shutter selection of no more than 1/4 sec.

The video output synchronization shall be 2:1 interlace and shall observe the NTSC or PAL (day/color mode) or EIA RS-170 or CCIR (Night/black & white mode) standards. Line-lock with an adjustable vertical phase shall also be provided.

The camera shall include a color corrected, 3.6-82.8 mm, F1.6 lens, and shall have continuous auto focus with manual override. The lens shall have an automatic iris with manual iris override. The automatic focus and automatic iris settings shall be configurable via the on-screen menu settings.

The dome shall incorporate a base that enables the housing/eyeball assembly to be connected and disconnected to the base without the use of tools, and without disturbing wiring or cabling. The base shall include diagnostic LED's to indicate power and proper communications to and from the district's communication center.

One (1) installation tool that enables service personnel to connect and disconnect the housing/eyeball assembly without the use of a ladder or lift shall be included as a part of this contract. The dome and bases shall be available for purchase or replacement IDOT. An outdoor housing shall be available, and shall provide for the above-described installation and service.

Upon initial power-up and after any resets, diagnostic tests shall be automatically run, including communication loopback, camera loopback, and motor circuit tests. The results of these tests shall be displayable on the monitor. After initialization, the dome shall automatically pan, tilt and zoom to its previous position.

ENVIRONMENTAL ENCLOSURE:

The environmental enclosure shall be a Sensormatic ADODH-CLR or equivalent and shall house and protect CCTV camera, lens, and pan and tilt unit from outdoor environment in which the assembly must be designed to function. The enclosure shall be a domed housing. The top of the enclosure shall be aluminum. The inside shall be flat black. The bottom of the enclosure shall be clear acrylic. The enclosure shall be fully watertight and weatherproof. The CCTV camera and zoom lens shall be mounted to insure that the enclosure will not obstruct the field of view of the CCTV camera. Sufficient clearance between the zoom lens extended to its furthest point of travel and the enclosure shall be provided to insure that mirroring will not occur. The enclosure shall be constructed so as to minimize the effort required to remove the CCTV camera assembly for maintenance.

1. Heater: The enclosure shall be equipped with a heater controlled by a thermostat. The heater shall operate at 24 VAC. The power requirement shall be no more than 100 watts. This heater shall be powered at all times, and shall operate independently of the camera.
2. Cable Entry and Mounting: Entry into the enclosure by power, composite video output, and remote CCTV camera control and monitor functions shall be via weatherproof UL listed connectors intended for outdoor use.

Each enclosure shall contain the pan and tilt unit within the dome. The enclosure shall provide a means of securely attaching the camera and lens. A pan and tilt drive unit shall be supplied as part of the CCTV camera assembly and meet or exceed the following requirements:

1. Configuration: The pan and tilt unit shall be designed for outdoor applications and shall be constructed to allow maintenance of the unit without removal from the CCTV camera field location. All parts shall be corrosion protected.
2. Mechanical: The pan and tilt unit shall have the ability to handle the proposed CCTV camera and lens load within the dome. The unit shall be capable of at least 64 settable and selectable preset position points and have the ability to attach alphanumeric character identification to each position point. The unit shall operate as follows:
 - a. Pan (Horizontal): 360 degrees (+ 1 degree), at a proportionally variable rate to obtain new position
 - b. Tilt (Vertical): 2 degrees to -90 degrees (+1 degree) at a proportionally variable rate to obtain new position

The pan and tilt unit shall be equipped with a cable guard to prevent cable entanglement during combined pan and tilt operations.

The mounting base shall be designed for the CCTV camera and lens specified herein.

The unit shall have an input voltage of 115 VAC. Five-amp (10 million cycle rating) limit switches for pan and tilt shall be provided to guard against motor burn-out. The pan and tilt motor shall be two phase induction type, continuous duty with instantaneous reversal operation.

A 3.5 inch length of 1.5-inch NPT threaded pipe fitting for attaching the camera to a mount shall be included with each camera.

POLE MOUNTED EQUIPMENT CABINET:

This work consists of furnishing and installing a pole mounted equipment cabinet and peripheral equipment at locations indicated on the plans. The cabinet shall be used to house critical electrical, optical, and communications equipment for the proposed video surveillance cameras.

Equipment cabinets shall be mounted and anchored on the poles and structures at locations indicated on the plans. These cabinets shall have a housing that shall include but not limited to, miscellaneous items such as video transmitters, receiver/drivers, etc. as defined by other pay items. In addition, all mounting hardware and brackets required to install the equipment cabinet on the pole shall be stainless steel and provided. The mounting height shall be as specified on the CCTV system mounting and wiring details sheet.

The cabinet shall be a stainless steel NEMA 4X Single Door Enclosure, with nominal outside dimensions of approximately 30 in (762 mm) high X 24 in (610 mm) wide X 12 in (305mm) deep. It shall also be furnished with two adjustable height shelves. The cabinet shall also have a Corbin #2 dead bolt lock or equal. The key shall be removable in the lock position only. Four keys shall be supplied for each lock, and all equipment cabinet locks shall be keyed the same.

Cabinet details and wiring diagrams shall be as shown on the CCTV system mounting and wiring details sheet. Circuit #1 shall terminate in a GFI duplex receptacle, protected by a 15 Amp circuit breaker. Circuit #2 shall terminate in a GFI duplex receptacle, protected by a 15 Amp circuit breaker. Circuit #3 shall terminate in a GFI duplex receptacle with a 15 Amp circuit breaker and shall be connected to the internal cabinet lighting, thermostat, heater and ventilation fan. All cables shall be labeled utilizing marking tags.

The Contractor shall prepare and submit shop drawings that detail all of the components to be supplied, along with associated mounting hardware for the pole mounted equipment cabinets. The shop drawings must be approved by the Engineer prior to any testing or installation of the completed cabinet in the field.

The Engineer reserves the right to inspect and/or factory test any completed cabinet assemblies prior to shipment of the material to the project site. Any deviations from these specifications that are identified during such testing shall be corrected prior to delivery of the assembly to the project site.

The AC power service to be run to the equipment cabinet shall be terminated on the terminal bus of the covered power supply. The cost of providing the AC power service connection shall be included in the SERVICE INSTALLATION, TYPE A bid item as designated in the Plans. In addition, the cabinet shall be connected to an adequate ground following Section 807 of the Standard Specifications. Power service shall be activated and the Contractor shall perform tests to verify that proper line service is being obtained.

The Contractor shall terminate any inbound and outbound fiber optic leads in the equipment cabinet as shown in the Plans. Lugs shall be installed at the end of each conductor suitable for connection to the barrier terminal blocks.

DIGITAL VIDEO ENCODER:

The Video Encoder shall be the Coretec VC2400E, or equivalent. The Video Encoder shall be NEMA (National Electrical Manufacturers Association) Standard TS-2-2003, Section 2 compliant. Two serial data sub-channels shall transmit and receive RS232 or RS422 level signals that are placed on or retrieved from a TCP/IP or UDP connection. Simple twisted pair wiring shall be supported.

The Video Encoder shall receive a standard 30 frames/second video color signal that complies with NTSC and EIA requirements, including the *EIA-170* standard, with composite video amplitude of 1 volt peak-to-peak (Vp-p). The equipment shall have an electrical input resistance of 75 ohms (Ω) per 60 hertz (Hz). The Encoding function shall support Full D1 (720x480), Half D1 (352x480), and SIF/CIF (352x240) resolutions and be selectable under software control. The resulting data stream shall be MPEG-2 ISO/13818-2 compliant encapsulated in a multicast UDP packet. The encoded MPEG-2 stream shall consist of any valid combination of I, B, and P Frames. Encoded data rate shall be programmable from at least 800Kbps to 6 Mbps

A discovery protocol shall be supported that allows identification of Video Encoding devices by workstation and Video Decoder equipment.

Status shall be displayed locally for video, network and power interface conditions.

Encoder reconfiguration shall be accomplished via network connection. Configuration information shall be non-volatile and restored on power up.

The Video Encoder shall support two (2) bi-directional serial communication channels (Sub-Channels) over Ethernet 10/100 Base-T via the following methods:

1. Encoder serial port to Decoder serial port data stream
2. IP socket to Encoder/ Decoder serial port

Each serial communication channel shall support IP addressing and socket number selection. The Serial Communications Channels shall support reconfiguration of stop bits, data bits and Baud rate to 115 Kbps. The serial interface shall be transparent to the device (i.e. no additional or special protocols).

The Video Encoder/Decoder shall support a standard Ethernet Interface with a data rate of 10/100 MBits/Second, Base-T protocol, Full or Half-Duplex, Auto Sensing (per 802.3) with an RJ-45 style female connector.

The Encoder/Decoder shall be specifically designed for network operation, adhere to both ISO/IEC 13818-1 Systems and ISO/13818-2 Video standards and the corresponding Transport Streams shall be encapsulated into an UDP packet.

Transmissions over Category-5/5e unshielded twisted pair (UTP)/shielded twisted pair (STP) network cables compliant with the *EIA/TIA 568-A* standard shall be supported. The generated stream shall also be compatible with an attached fiber optic media converter (i.e., an Ethernet switch); or an IP wireless device.

IP Addressing shall be static (class A, B, and C) or via Dynamic Host Configuration Protocol (DHCP).

UDP Unicast and IP Multicast (Internet Group Multicast Protocol / IGMP V2) features for digital video transmission shall be supported.

Session Announcement Protocol (SAP) and Session Description Protocol (SDP) shall be supported.

The Video Encoder/Decoder shall be manageable through a management system interface using SNMP (v2), TFTP or FTP, or Telnet/CLI.

The management system interface shall provide the capability to remotely configure and diagnose the Encoders/Decoders.

The management system interface shall have the capability to reset/reboot the Encoder/Decoder remotely. The capability to change any of the device configuration settings including bit rates, image resolution and compression settings and serial interface type shall be supported.

Pre-defined optimized MPEG settings for various bit rates shall be defined and settable using the management system interface.

The management system interface shall have the capability to update firmware in one or multiple Encoders/Decoders from the central site. Ability to access the serial number, firmware revision, IP address and equipment configuration shall be provided.

The Video Encoder/Decoder shall have the following ports:

1. Network: 10/100 Mbps RJ-45
2. Video: Composite binary network connector (BNC)
3. Serial Data Interface: Two (2) RJ-45 ports.

The video input performance measures shall comply with NTSC and EIA requirements, including the *EIA-170* standard, with a composite video of 1 volt peak-to-peak (Vp-p). The equipment shall have an electrical resistance of 75 ohms (Ω) per 60 hertz (Hz).

The Video Encoders shall exceed NEMA Standard TS-2-2003, Section 2 and operate with ambient temperature range of -34°C to +74°C (-29°F to +165°F), and relative humidity between 5% and 90% non-condensing.

The Video Decoders shall operate with ambient temperature range of 0°C to +50°C (+32°F to +122°F), and relative humidity between 5% and 90% non-condensing.

Encoders/Decoders shall provide a local status display capability for video, data, network interfaces and power. Status indicators shall be LED.

Cable connections (signal / power) shall require no tools for installation or removal and be designed with positive locking devices such that they will not vibrate loose.

All connectors, indicators, and replaceable components shall be permanently marked. The external markings shall include the product function name, model number, serial number, and manufacturer's name.

The input power supply range shall be 95 to 230 VAC @ 50/60 Hz. The unit shall contain all power conversion and regulation necessary to support electronics operation.

The power consumption for the Video Encoder/Decoder shall not exceed 10W.

The Video Encoder shall provide for automatic recovery from an over or under voltage condition when prime power has returned to the tolerance values specified herein. No reprogramming or manual adjustments shall be required upon power recovery.

The Video Encoder shall meet or exceed the following feature-set and performance specifications:

Inputs and Outputs

Video

NTSC format (EIA 170)

1 Volt peak-to-peak, 75 Ohm, 60 Hz

Data

4 RS-232/422/485 (selectable)

Video Parameters

Compression

MPEG-2

Resolution

720h x 480v

Frame Rate

30fps

Connectors

BNC

Data Parameters

Format

RS-232/422/485

Handshaking

Software Selectable

Data Rate

to 38.4 kbps

Connectors

RJ-45

Programming Port

Format

RS-232

Connector

RJ-11

Indicators

2-line scrolling display

Network Parameters

1.0 to 8.0 Mbps

Ethernet

Connector

RJ-45

Interface

10/100 Base T

IEEE 802.3

Protocols

UDP, IP (v4)

IGMP (v2), Multicast

Environmental

Temperature

-20 to +70 degrees C

Humidity

0 – 95%, non-condensing

Power

95-130 VAC, 200-240 VAC,

58mA@120V, 400mA@12VDC (-R)

IEC-type detachable power cord

Mechanical

Dimensions

19" W x 1.75" H x 12" (or less) D

Weight

Less than 5lbs., 2 oz.

User interface software shall be included with the digital video encoder.

SERIAL TO ETHERNET TRANSCEIVER (6TH ST. / HAZEL DELL CABINET):

The Serial to Ethernet Tranceiver shall be the Digi PortServer TS H MEI Hardened Series, or equivalent. The Video Encoder shall meet or exceed the following feature-set and performance specifications:

- 10/100Base-T Ethernet support
- RJ-45 serial port
- RS-232/422/485 switch selectable on Port 1; RS-232 only on Ports 2-4
- Baud rates up to 230 Kbps
- Full modem and hardware flow control
- Low latency
- TCP/UDP Socket Services
- UDP Multicast
- Telnet and Reverse Telnet
- Patented RealPort technology for COM and TTY ports
- PPP
- SSH v2 server
- SSL/TLS
- Port buffering
- Modbus to Modbus/TCP conversion
- HTTP
- SNMP (read/write)
- Remote management diagnostics and auto-discovery tool
- DHCP/RARP/ARP-Ping for IP address assignment
- 9-30VDC input
- LED status for link and power
- RJ-45/DB-9F crossover cable included for configuration
- Bare-wire "pigtail" power Connector
- Windows XP compatible
- 5.42" x 3.33" x 0.952" (or less)
- Weight: 2.25 oz (or less)
- 9-30VDC @ 0.5 Amps max
- Operating temperature: -35° C to +70° C
- Relative Humidity: 5% to 90% (non-condensing)
- Ethernet isolation: 1500VAC min per IEEE 802.3/ANSI +3.263
- Serial port protection (ESD): +15 kV air GAP and +8 kV contact discharge per IEC 100-4-2

MANAGED ETHERNET SWITCH:

The managed Ethernet switch shall be the International Fiber Systems EtherNav D7600-SS-X environmentally hardened eight port 10/100 Mbps managed Ethernet switch, or equivalent. All units shall be obtained from one manufacturer.

The Ethernet switch shall provide up to 8 10/100TX ports or, 6 10/100TX ports and 2 100FX optical multimode, single-mode or, combination ports. The Ethernet switch shall be configurable for an optional 9th port 10/100/1000TX or 100/1000FX optical single-mode aggregation port. The Ethernet switch shall utilize 1310nm optics capable of bi-directional data transmission of 100Mbps on two multimode or single-mode optical fibers.

The switch shall operate in an environment with an ambient temperature range of -40° C to +74° C without the assistance of fan-forced cooling. The switch shall operate in an environment with relative humidity of 0% to 95% (non-condensing). The Ethernet switch shall include a warranty by the manufacturer to be free from defects for the lifetime of the installation.

The Switch shall support the transmission of up to 2 channels of 100 Mbps over a single-mode or multimode fiber. The Switch shall support the transmission of 1 channel of 1000 Mbps over a single-mode fiber. The Switch shall support the Ethernet data IEEE 802.3 protocol using Auto-negotiating and Auto-MDI/MDI-X features. The Switch shall require no in-field electrical or optical adjustments or in-line attenuators. The Switch shall provide power, link speed, and fiber port status indicating LED's for monitoring proper system operation. The Switch shall provide a contact closure for an over temperature alarm. The Switch shall provide automatic re-settable solid-state current limiters and independent voltage. The module shall have redundant power supply. The module shall provide a serial connection for local management of the device. The Switch shall utilize 9/125 micron single-mode optical fiber, and shall be standardized for an optical wavelength of 1310nm. The Switch shall have a maximum operating distance of 8 miles. The Switch shall utilize standard SC optical connectors.

All optical connectors shall be covered with dust caps and remain on the module until installing cable connectors to module. The Switch shall be mounted on a properly prepared surface adequate for the size and weight of module. The placement of the unit shall allow provision for cable installation and maintenance as indicated on the Plans, herein, and in compliance with the manufacturer's installation manual. The number and type of optical fiber shall meet the requirements of the manufacturer. All optical fiber cables shall be properly installed and terminated with the proper mating optical connectors. The optical link shall be tested with an OTDR to ensure the link budget (overall path loss) plus an added 3dB of optical safety margin does not exceed the manufacturer's specified power budget. All optical connectors on cable shall be cleaned in compliance to optical connector manufactures specifications and covered with dust caps until connection to the fiber optic module.

This Switch shall not be supplied with the gigabit point-to-point option.

SURGE ARRESTOR:

Surge Arrestor supplied for this project shall be EDCO Inc., model TS-1200 or equivalent. It shall be designed, located, and installed in a manner permitting removal and replacement without affecting normal operation, and shall comply with all applicable surge suppression requirements by the manufacturers of equipment to be utilized with surge suppression in this project. Redundant, or series surge suppression shall not be permitted.

The Surge Arrestor shall meet or exceed the following feature-set and performance specifications:

L-N Response Time:	Less than 5 nanoseconds
Common Mode Response Time:	Less than 5 nanoseconds
L-N Maximum Surge Current:	13,000 Amps (8 x 20 microseconds)
Common Mode Maximum Surge Current:	13,000 Amps (8 x 20 microseconds)
L-N Thermal Protect Temperature:	83°C
Common Mode Thermal Protect Temperature:	83°C
L-N IEEE 587 CAT A Ring*:	265 V
Common Mode IEEE 587 CAT A Ring*:	290 V
L-N IEEE 587 CAT B Ring*:	275 V
Common Mode IEEE 587 CAT B Ring*:	290 V
L-N IEEE 587 CAT B Impulse*:	330 V
Common Mode IEEE 587 CAT B Impulse*:	370 V
L-N UL 1449 Rating:	330 V
Common Mode UL 1449 Rating:	330 V

*Measured from zero volts, 90° phase angle
Continuous Current Rating—15 Amps

CAMERA CONNECTION J-BOX:

The junction box enclosure shall be the American Dynamics RJ856UD, or equivalent. The enclosure shall be a single position junction box for use with outdoor camera and enclosure specified herein. The junction box enclosure shall be completely sealed to protect against moisture, ice, dust, and insect intrusion and must meet a minimum of NEMA-4 and IP66 ratings. The junction box enclosure shall be manufactured in a non-corrosive polycarbonate material. The junction box enclosure shall have a hinged door with quick-release lockable cover latches. All connections and switches shall be readily accessible when the door is open.

The junction box enclosure shall have three ½-inch NPT access holes and be supplied with liquid-tight fittings for external wiring.

The junction box enclosure shall operate to full specifications within the normal temperature range of -40 °C to 50 °C (-40 °F to 122 °F). The junction box enclosure shall allow for storage temperatures between -10 °C to 50 °C (14 °F to 122 °F).

The junction box enclosure shall contain a 28 VAC, 50/60 Hz, 66VA power supply. Input voltage shall be 120 VAC, 50/60 Hz.

High voltage and low voltage shall be separated inside the enclosure. It shall not be necessary to expose the high voltage wiring to install the dome housing.

The junction box enclosure shall meet all UL Class 2 standards and requirements.

The junction box enclosure shall provide lightning and surge protection for the external power and data lines. All fuses shall be readily accessible.

The junction box enclosure shall include an attached 120VAC line cord. The line cord shall be connected to a terminal strip inside the junction box. The inside cover of the junction box enclosure shall provide a wiring diagram, installation guide, and test procedures. The unit shall have a power switch on the input side of the transformer.

The junction box enclosure shall be equipped with diagnostic LEDs. At a minimum, the LEDs shall indicate host, auxiliary, dome activity, noise, and power status.

Wiring diagram, installation guide, test procedures included inside cover

The junction box must meet the following operating requirements:

- Dimensions (H x W x D) Less than 7.87 x 7.87 x 5.19 in
- Unit Weight..... Less than 8.25 lbs
- Construction Polycarbonate, nonmetallic enclosure, hinged lid
- Cover Locks Two quick-release lockable cover latches
- Cable Access Three ½-inch NPT strain relief fittings provided for power, host, and dome cables
- Input Voltage 100–120, 50/60 Hz
- Input Current 1.0/0.5 A
- Max Operational Limits 90–135 V, 50/60 Hz
- Output 26 VAC, 2.4 Amp, Class 2 LPS

Power Line TVS rated at 10 kA, 8/20 μ sec impulse rated gas tube
Environment Outdoor
Weatherproof Standard NEMA 4/IP66
Operating Temperature -40 °C to 50 °C
Storage Temperature -10 °C to 50 °C
Relative Humidity 0–95% RH (non-condensing)
Diagnostic LEDs Host, aux, dome activity, noise, power
Power On/off power switch
J-Box to Dome Limited by the length of the low-voltage AC power cable
Surge Protection Isolation transformer coupled, 2000 Vrms, 10 kA, 8/20 μ sec
impulse rated gas tube, TVS rated at 1 watt
Immunity CE: EN50130-4

This work will be paid for at the contract unit price each for **CLOSED CIRCUIT CAMERA SYSTEM COMPLETE**, which price shall be payment in full for furnishing and installing a closed circuit television camera system, with necessary connections and adjustments for proper operations to the satisfaction of the Engineer.

COMMUNICATION CENTER SUPPORT EQUIPMENT COMPLETE

This work shall consist of furnishing, installing, and placing into operation Communications Center Support Equipment. All new equipment shall be properly-installed to be compatible, fully-operational, and fully-integrated into the district's ITS system. All work and equipment required both to achieve this level of performance, and to complete the 30 day end-of-project performance milestone, whether or not specifically stated in either the Plans or this contract, shall be considered incidental to this contract. In addition to equipment and labor at the five peripheral field locations, satisfactory completion of this item will involve work at the district's communication center. The contractor may be utilizing and/or incorporating existing, ongoing, or related work and equipment done or installed by others in order to satisfactorily complete this project. Any coordinating efforts, equipment, or labor associated with existing, ongoing, or related work by others shall be incidental to this contract.

This system shall consist of, but shall not be limited to, the following equipment:

- Digital Video Decoder
- Managed Ethernet Switch
- Surge Arrestors
- LCD Wall Monitors (2)
- Workstation/Server
- System Software

All coaxial cable furnished shall be in accordance with the applicable portions of section 873 of the Standard Specifications for Road and Bridge Construction and as specified herein. A dedicated electrical branch circuit connection shall be installed in the Communication Center to supply power to all installed support equipment. Coaxial cable shall be a 75 ohm, 20AWG (solid) cable conforming to Belden Type 8281 or approved equal.

The cable shall be 100% sweep tested from 5 Mhz to 850 Mhz and suitable for outdoor use. The cable shall have the following nominal electrical characteristics:

- Inductance = 0.131 microH/ft.
- Capacitance = 21 pF/ft.
- Delay = 1.54 ns/ft.
- Conductor DC Resistance at 20 deg. C = 9.9 Ohms/1000 ft.
- Outer Shield DC Resistance at 20 deg. C = 1.1 Ohms/1000 ft.

The cable shall contain 1(one) 20AWG 0.031 in. bare copper conductor housed in polyethylene insulation with a 98% tinned copper double braided shield and polyethylene jacket. The insulation diameter shall be 0.198 in. The overall nominal diameter shall be 0.305 in.

Connectors shall be installed on each end of the coaxial cable after the cable has been installed. Connectors shall be Amphenol 31-71032 or approved equal. Connectors should be installed using a CTL-2 connector tool or approved equal.

DIGITAL VIDEO DECODER:

The Video Decoder shall be the Coretec VC2400D, or equivalent. The Video Decoder shall receive an Ethernet network connection containing a multicast UDP packetized video stream. The Video Decoder shall support decoding of a video stream that is MPEG-2 ISO/13818-2 compliant. The equipment shall provide the capability to establish an IP connection directly to any Video Encoder IP address and socket number transport serial data stream. The Decoder shall support auto-detection of stream bandwidth and dynamic bandwidth adjustment.

The resulting decoded video signal shall be a standard 30 frames/second video color signal that complies with NTSC and EIA requirements, including the *EIA-170* standard. The amplitude of the composite video output shall be 1 volt peak-to-peak (Vp-p). The equipment shall be capable of driving an electrical input resistance of 75 ohms (Ω) per 60 hertz (Hz).

Status shall be displayed locally for video, network and power interface conditions.

Decoder reconfiguration shall be accomplished via network connection. Configuration information shall be non-volatile and restored on power up.

The Video Decoder shall support two (2) bi-directional serial communication channels (Sub-Channels) over Ethernet 10/100 Base-T via the following methods:

3. Encoder serial port to Decoder serial port data stream
4. IP socket to Encoder/ Decoder serial port

Each serial communication channel shall support IP addressing and socket number selection. The Serial Communications Channels shall support reconfiguration of stop bits, data bits and Baud rate to 115 Kbps. The serial interface shall be transparent to the device (i.e. no additional or special protocols). The Video Decoder shall support a standard Ethernet Interface with a data rate of 10/100 MBits/Second, Base-T protocol, Full or Half-Duplex, Auto Sensing (per 802.3) with an RJ-45 style female connector.

The Decoder shall be specifically designed for network operation, adhere to both ISO/IEC 13818-1 Systems and ISO/13818-2 Video standards and the corresponding Transport Streams shall be encapsulated into an UDP packet.

Transmissions over Category-5/5e unshielded twisted pair (UTP)/shielded twisted pair (STP) network cables compliant with the *EIA/TIA 568-A* standard shall be supported. The generated stream shall also be compatible with an attached fiber optic media converter (i.e., an Ethernet switch); or an IP wireless device.

IP Addressing shall be static (class A, B, and C) or via Dynamic Host Configuration Protocol (DHCP).

UDP Unicast and IP Multicast (Internet Group Multicast Protocol / IGMP V2) features for digital video transmission shall be supported.

Session Announcement Protocol (SAP) and Session Description Protocol (SDP) shall be supported.

The Video Decoder shall be manageable through a management system interface using SNMP (v2), TFTP or FTP, or Telnet/CLI.

The management system interface shall provide the capability to remotely configure and diagnose the Decoder.

The management system interface shall have the capability to reset/reboot the Decoder remotely. The capability to change any of the device configuration settings including bit rates, image resolution and compression settings and serial interface type shall be supported.

Pre-defined optimized MPEG settings for various bit rates shall be defined and settable using the management system interface.

The management system interface shall have the capability to update firmware in one or multiple Encoders/Decoders from the central site. Ability to access the serial number, firmware revision, IP address and equipment configuration shall be provided.

The Video Decoder shall have the following ports:

4. Network: 10/100 Mbps RJ-45
5. Video: Composite binary network connector (BNC)
6. Serial Data Interface: Two (2) RJ-45 ports.

The video input performance measures shall comply with NTSC and EIA requirements, including the *EIA-170* standard, with a composite video of 1 volt peak-to-peak (Vp-p). The equipment shall have an electrical resistance of 75 ohms (Ω) per 60 hertz (Hz).

The Video Decoders shall operate with ambient temperature range of 0°C to +50°C (+32°F to +122°F), and relative humidity between 5% and 90% non-condensing.

The Decoders shall provide a local status display capability for video, data, network interfaces and power. Status indicators shall be LED.

Cable connections (signal / power) shall require no tools for installation or removal and be designed with positive locking devices such that they will not vibrate loose.

All connectors, indicators, and replaceable components shall be permanently marked. The external markings shall include the product function name, model number, serial number, and manufacturer's name.

The input power supply range shall be 95 to 230 VAC @ 50/60 Hz. The unit shall contain all power conversion and regulation necessary to support electronics operation.

The power consumption for the Video Decoder shall not exceed 10W.

The Video Decoder shall provide for automatic recovery from an over or under voltage condition when prime power has returned to the tolerance values specified herein. No reprogramming or manual adjustments shall be required upon power recovery.

User interface software shall be included with the digital video decoder.

The Video Decoders shall be obtained from the same manufacturer as the Video Encoders specified under this contract. The two shall be designed to function as a pair.

MANAGED ETHERNET SWITCH:

The managed Ethernet switch shall be the International Fiber Systems EtherNav D7600-SS-X environmentally hardened eight port 10/100 Mbps managed Ethernet switch, or equivalent. All units shall be obtained from one manufacturer.

The Ethernet switch shall provide up to 8 10/100TX ports or, 6 10/100TX ports and 2 100FX optical multimode, single-mode or, combination ports. The Ethernet switch shall be configurable for an optional 9th port 10/100/1000TX or 100/1000FX optical single-mode aggregation port. The Ethernet switch shall utilize 1310nm optics capable of bi-directional data transmission of 100Mbps on two multimode or single-mode optical fibers. The switch shall operate in an environment with an ambient temperature range of -40° C to +74° C without the assistance of fan-forced cooling. The switch shall operate in an environment with relative humidity of 0% to 95% (non-condensing). The Ethernet switch shall include a warranty by the manufacturer to be free from defects for the lifetime of the installation.

The Switch shall support the transmission of up to 2 channels of 100 Mbps over a single-mode or multimode fiber. The Switch shall support the transmission of 1 channel of 1000 Mbps over a single-mode fiber. The Switch shall support the Ethernet data IEEE 802.3 protocol using Auto-negotiating and Auto-MDI/MDI-X features. The Switch shall require no in-field electrical or optical adjustments or in-line attenuators. The Switch shall provide power, link speed, and fiber port status indicating LED's for monitoring proper system operation. The Switch shall provide a contact closure for an over temperature alarm. The Switch shall provide automatic re-settable solid-state current limiters and independent voltage. The module shall have redundant power supply. The module shall provide a serial connection for local management of the device. The Switch shall utilize 9/125 micron single-mode optical fiber, and shall be standardized for an optical wavelength of 1310nm. The Switch shall have a maximum operating distance of 8 miles. The Switch shall utilize standard SC optical connectors.

All optical connectors shall be covered with dust caps and remain on the module until installing cable connectors to module. The Switch shall be mounted on a properly prepared surface adequate for the size and weight of module. The placement of the unit shall allow provision for cable installation and maintenance as indicated on the Plans, herein, and in compliance with the manufacturer's installation manual. The number and type of optical fiber shall meet the requirements of the manufacturer. All optical fiber cables shall be properly installed and terminated with the proper mating optical connectors. The optical link shall be tested with an OTDR to ensure the link budget (overall path loss) plus an added 3dB of optical safety margin does not exceed the manufacturer's specified power budget. All optical connectors on cable shall be cleaned in compliance to optical connector manufactures specifications and covered with dust caps until connection to the fiber optic module.

This Switch shall not be supplied with the gigabit point-to-point option.

SURGE ARRESTOR:

Surge Arrestor supplied for this project shall be EDCO Inc., model TS-1200 or equal. It shall be designed, located, and installed in a manner permitting removal and replacement without affecting normal operation, and shall comply with all applicable surge suppression requirements by the manufacturers of equipment to be utilized with surge suppression in this project. Redundant, or series surge suppression shall not be permitted.

The following Communications Center equipment shall be connected through this surge arrestor:

- The Server/Workstation and Monitors
- The Managed Ethernet Switch
- The Digital Video Decoder
- Both Wall Mounted Monitors

The Surge Arrestor shall meet or exceed the following feature-set and performance specifications:

L-N Response Time:	Less than 5 nanoseconds
Common Mode Response Time:	Less than 5 nanoseconds
L-N Maximum Surge Current:	13,000 Amps (8 x 20 microseconds)
Common Mode Maximum Surge Current:	13,000 Amps (8 x 20 microseconds)
L-N Thermal Protect Temperature:	83°C
Common Mode Thermal Protect Temperature:	83°C
L-N IEEE 587 CAT A Ring*:	265 V
Common Mode IEEE 587 CAT A Ring*:	290 V
L-N IEEE 587 CAT B Ring*:	275 V
Common Mode IEEE 587 CAT B Ring*:	290 V
L-N IEEE 587 CAT B Impulse*:	330 V
Common Mode IEEE 587 CAT B Impulse*:	370 V
L-N UL 1449 Rating:	330 V
Common Mode UL 1449 Rating:	330 V

*Measured from zero volts, 90° phase angle
Continuous Current Rating—15 Amps

LCD WALL MONITORS (2):

This work shall consist of furnishing, installing, and integrating liquid crystal display (LCD) monitors at the locations shown on the Plans, including all necessary hardware, software, and accessories such as cabling, connections, and wall-mounting equipment required.

The primary purpose of the LCD Wall Monitors will be to display closed-circuit television (CCTV) camera images, DMS software images, and other computer generated images. The workstation/server within the Communications Center will control these images.

The Video Monitors shall consist of one 40-inch LCD Monitor, and one 30-inch LCD Monitor. These monitors will be mounted and configured to operate according to the Plans and Specifications. These monitors will be Samsung, Christie, NEC or approved equal, and shall satisfy the following requirements:

Pixel Pitch	0.68 mm
Brightness (typical)	450 cd/m ²
Contrast Ratio (typical)	600:1
Synchronization - Horizontal	31.5-75 kHz (analog) 31.5-48.4 kHz (digital)
Synchronization – Vertical	58-62 Hz
Input Signal – video	DVI <i>and</i> coaxial
Input Signal – synchronization	Composite sync on Green (0.3 Vp-p negative; 0.7 Vp-p pos)
Output Signal – video	DVI or coaxial
Native Resolution	1280 by 768
Viewing Angle	±85°
Input Power	100-130 VAC; 250 watts maximum
Resolutions Supported	640 by 480 at 60 Hz 800 by 600 at 60 Hz 1024 by 768 at 60 Hz 1280 by 768 at 60 Hz 1280 by 1024 (analog only/compressed) 1600 by 1200 (analog only/compressed) NTSC/HDTV/480i, 1080i
Operating Temperature Range	5°C (41°F) to 40°C (104°F)
Dimensions (nominal)	37-1/2" x 25-1/2" x 5-1/2" (wall mount)

FIBER OPTIC PATCH CENTER:

This work shall consist of furnishing and installing a fiber optic patch center within the District 6 Communications Center.

The patch center shall be indoor wall-mountable and shall be used to terminate the fiber optic cable that will be installed within the suspended ceiling of the District 6 Annex Building. The patch center shall have the capability of accepting two (2) standard CCH connector panels or modules and shall contain routing guides to organize fiber slack within the panel.

The housing shall consist of metal with nominal dimensions of 13" x 8.5" x 2.6" (H x W x D). A jumper protection door shall be included within the housing.

WORKSTATION:

The Computer Workstation shall consist of the following major components. In addition to the major components, the contractor shall be required to supply all incidental components, including all interconnecting cables, adapters, utility software, and other minor components, which are required to provide a fully operational system. For all components, at least one copy of the standard manufacturer's manuals shall be supplied for each assembly provided.

All workstations shall be a standard product of an established brand name company such as Dell, HP, Falcon Northwest and IBM, with a good track record of providing long-term maintenance and service. The company shall have been producing leading edge PC based components for a minimum of five years prior to the bid. The company shall be able to provide nation wide service and support on a 7 day a week, 24-hour basis and shall maintain an 800-customer support service. All major components such as the motherboard, power supply, processor, memory, hard disk, CD-ROM, integrated gigabit LAN, audio and video components, shall be designed, assembled and warranted by the manufacturer. The workstation, as configured, shall be a standard model number of the manufacturer.

Computers that are assembled from brand name components by system integrators or resellers will be considered "Clones" and are not acceptable.

The server/workstation shall be equipped with the following:

Operating System:	Windows XP-Professional
Processor:	2GHz minimum
Hard disk:	160 GB minimum
Motherboard:	Two PCI Express X16 slots minimum
Memory:	1 GB minimum
CD-ROM:	yes, typical specs
Power Supply	650 watts minimum
Video Card:	nVidia SLI chipset, with at least 128 MB DDR
Pointing Device:	A 3-button, optical wheel mouse
Monitor:	Two (2) 21" LCD Flat Panel Display with DVI inputs
Network Interface:	The workstation motherboard shall be equipped with a Gigabit LAN supporting 10/100 MB/s. The LAN shall have a UTP (RJ-45) connector. The LAN shall also support Netflex-3 technology.

VIDEO CARDS:

The Contractor shall supply video cards required by the camera control software and required to drive the video monitors as specified in the contract Plans and Specifications. These cards shall comply with the software developer's requirements and shall include NTSC inputs and DVI outputs compatible and consistent with the monitor configurations indicated in the Plans and Specifications for this contract.

SYSTEM SOFTWARE:

The software shall be the 360 Surveillance Cameleon ITS, or equivalent. The software shall operate on Windows 2000 Professional and Windows XP Professional. The software shall be programmed using the Microsoft Visual Studio 6.0 and Visual Studio .NET development environments.

The software shall be comprised of the following components:

- server application
- client application and device driver applications.

The various software components shall be able to be started in any order. The software shall allow clients, servers and device drivers to be added at any time during or after initial configuration. The software shall allow devices to be added at any time during or after initial configuration. The software shall allow equipment from different manufacturers to be combined.

The unexpected or unplanned termination of a component shall not cause any other component to fail. The software shall support client-to-server and client-to-multiple-server communications and operation. The software shall support server-to-server communications and operation to allow video sharing. The software shall be capable of linking to external access control and alarm systems to create an integrated security system. The server application shall have 'Hot Standby' capability with automatic switchover to the backup server.

The configuration interface shall provide a connection manager for defining switchable connections within the system. The switching algorithm shall route video based on configurable parameters for path selection. The configuration interface shall provide a means to define time servers for the server to synchronize to periodically. Any server shall be able to act as a network time server for other servers and devices to synchronize to.

The server application shall have two modes of operation, a run mode and a configuration mode. In the run mode, the server application shall accept client connections. In the configuration mode, the server application shall present a graphical user interface that allows all aspects of the software to be configured. The configuration and run modes shall be capable of running simultaneously to allow configuration to take place without interfering with the client connections and operation.

A single interface shall be used to configure all devices, including equipment from different manufacturers. The configuration interface shall provide the ability to add, remove and modify devices controlled by any configured device driver. The software shall provide a configurable arbitration system that eliminates CCTV resource conflicts and allows users to take exclusive control of specific devices. The configuration interface shall provide the means to define interlocks between devices that conditionally prevent a device from being controlled. The software shall provide configurable user groups with access privileges assigned to them.

Access privileges shall allow a user's access to administrative functions to be restricted. Access privileges shall allow a user's access to be restricted to each map independently. Access privileges shall allow a user's access to be restricted to each device independently. Access privileges shall allow a user's access to be restricted to a subset of a device's features. Access privileges shall allow a user's access to workspaces to be restricted.

The software shall provide an expression service that allows events to be triggered based on system states or conditions of devices. The software shall provide a scripting language to allow automation of common tasks. The software shall support local and global scripts and variables. The scripting language shall support conditionals to ensure the correct conditions exist before a particular action takes place. Scripts shall be capable of executing in response to user input, conditions within the system, access or alarm input, or according to a schedule. The software shall provide user-definable labels with scripting capability. The software shall provide user-definable prompts with scripting capability. The software shall provide configurable timer and schedule services for executing specific tasks on a one-time or repetitive basis.

The configuration interface shall provide a mechanism for configuring a group of users to notify when a scheduled event occurs. The software shall provide user-definable alarms and events that are triggered when specific conditions occur within the system.

Alarms and events shall have scripting capability. The configuration interface shall provide a mechanism for configuring a group of users to notify when an alarm or event occurs. The configuration interface shall provide the means to configure a plan for dynamically escalating user notification of alarms and events.

The software shall provide an archive engine capable of categorizing and storing up to 1 million alarms and events per day. Alarms and events shall have the capability to run one automated event when the alarm is triggered, a second automated event when a user selects the alarm or event in the viewer, and a third automated event when the user has acknowledged the alarm or event.

The software shall support the importation of maps in a variety of standard graphics file formats: .wmf, .emf, .bmp, .jpg. Maps shall be able to be customized by placing device icons, user-defined labels, user-defined hyperlinks, and alarm icons on them. The configuration interface shall provide drag-and-drop capability for placing labels, hyperlinks, device icons and alarm icons on maps. Device icons on maps shall be capable of showing the active status of the physical devices they represent. Labels on maps shall have single-click and double-click scripting capability. Hyperlinks on maps shall have controllable transparency and scripting capability.

Alarm icons on maps shall have scripting capability. Alarm icons on maps shall be capable of animation when triggered.

The client application shall provide a means of specifying which server(s) to log in to. The client application shall provide server auto-discover functionality. The client application shall automatically synchronize with the server application after a valid User name and password has been entered. This synchronization shall include all support and graphical files (i.e. maps) necessary for the client to run. The client interface shall be comprised of a main map display area, an event viewer, a device list, and any number of custom windows.

The client application shall provide multi-monitor support. The same interface shall be used to control equipment from different manufacturers. The same interface shall be used to retrieve archived video from different devices, no matter what type of device the video was recorded on.

A particular custom window shall be capable of displaying IP and analog video, and the client interface shall be capable of displaying IP and analog video simultaneously in different custom windows.

The client application shall have configurable workspaces that can be saved and loaded. There shall be no limit on the number of workspaces. Workspaces shall allow configuration of which predefined and custom windows are visible. Workspaces shall allow configuration of the size of predefined and custom windows, including the ability to make them fixed size or dynamically sizeable. Workspaces shall allow configuration of the position of predefined and custom windows, including the ability to make them fixed position or moveable. Workspaces shall allow configuration of the content of custom windows, including the permitted types of content and the default content. Workspaces shall allow configuration of the appearance of custom windows, including their borders and how they are layered. Workspaces shall support multi-monitor systems.

The client interface shall support any number of custom windows. Custom windows shall allow users to view live and archived video, load maps, connect to and control remote PCs, or connect to the Internet via an integral browser window. Multipurpose windows shall have context sensitive toolbars to control the different types of window content.

Custom windows shall have the ability to be opened and closed, moved, locked in place, scaled, and scaled to content. Custom windows shall be independent of each other, allowing different types of content to be displayed at the same time and different types of devices to be controlled. Custom windows shall allow video to be loaded by dragging the camera from a map or from the device list to the window's display area. Custom windows shall act as live control pads, allowing the user to control the currently loaded camera using the mouse or mouse wheel. Custom windows shall provide a search and filter utility to aid in locating archived alarms and events and archived video.

The client application shall provide an event viewer that shows activities as they occur, including alarms and events, scheduled events, and scripts. The event viewer shall have the ability to filter and sort activities on date, priority, event category, and key words in description fields. The event viewer shall provide the means to view archived alarms and events. The event viewer shall provide a search and filter utility to aid in locating archived alarms and events.

The device list shall list all the devices for which the user has access privileges. The device list shall provide access to each device's controls. The device list shall provide a means to switch devices.

The user shall be able to select a map from the list of available maps. The user shall be able to adjust the view of the currently loaded map by zooming in, zooming out, zooming to fit, and loading a stored view. Maps shall show icons representing physical devices and alarms. Clicking a device icon on a map shall provide access to controls for the device represented by that icon.

The device list and event viewer shall provide all the functionality of maps, effectively making maps optional. Device drivers shall be capable of communicating with any device via direct serial, IP, or modem pool. Multiple device drivers shall be able to share all or a portion of a modem pool. Each device driver shall be unique to the type of equipment it controls. The addition of a new device driver shall require no modification to the client or server application. Device drivers shall run anywhere on the network, not necessarily located where the server is installed. Device drivers shall have the capability of running as a Windows Service or as an executable. Device drivers shall be provided for existing cameras, switchers, network video recorders and DVRs, as well as any new cameras, switchers, network video recorders and DVRs to be installed as part of this project.

Camera advanced functions such as on-screen displays, patterns and presets shall be available through the driver interface.

The Client Manual shall clearly outline all steps necessary to operate the software. The Client Manual shall include screen captures taken directly from the software to illustrate the instructions. The Client Manual shall contain a table of contents. The Client Manual shall contain an index.

The Server Manual shall clearly outline all steps necessary to configure the software. The Server Manual shall include screen captures taken directly from the software to illustrate the instructions.

The Server Manual shall contain a table of contents. The Server Manual shall contain an index.

Each device driver shall have Driver Application Notes that document configuration and operation of the driver and its devices.

The Driver Application Notes shall clearly outline all steps necessary to configure the software.

The Driver Application Notes shall include screen captures taken directly from the software to illustrate the instructions. The Driver Application Notes shall contain a table of contents.

This work will be paid for as part of the contract unit price each for **COMMUNICATIONS CENTER SUPPORT EQUIPMENT COMPLETE**, which price shall be payment in full for furnishing and installing a closed circuit television camera system, with necessary connections and adjustments for proper operations.

FURNISH AND INSTALL TRUSS DAMPER

This work shall consist of furnishing and installing a truss damper on an aluminum overhead span sign structure. The damper shall be attached to the overhead sign structure as indicated on the attached details.

The damper design shall be as shown in the plans. The Contractor shall submit shop drawings for the damper for approval prior to fabrication and before any materials are ordered.

The Truss Dampers shall be installed and included in the cost for **OVERHEAD SIGN STRUCTURE – SPAN TY III A.**

PROJECT DESCRIPTIONS OVERVIEW

All equipment manufacturers must have a minimum of three years direct manufacturing experience in their respective fields. These respective fields include, but are not limited to surveillance camera systems, dynamic message signs, video equipment, Ethernet equipment, fiber optic equipment, and computer equipment. Manufacturers will be required to establish a record of proven field service for the system hardware and software being provided for this contract. The contractor also must have installed at least one system of the type to be provided for this contract. This system must have demonstrated at least one year of satisfactory operation prior to the letting of this contract. The system hardware and copyrighted software to be provided by this contract shall have been in full production, fully operational, and commercially utilized for a period of at least three months prior to the letting date of this contract. For each of the above-cited equipment and installation requirements, the contractor shall furnish the IDOT System Engineer with the location of the system(s) and contact information for the persons responsible for these systems.

This project also includes the installation of ITS system support equipment and software at the District's Communications Center.

Communications between the District 6 communications office and the Dynamic Message Signs is accomplished via a standard, voice grade, dial-up telephone line. This telephone line communication method is backed-up by a cellular communication modem included in the DMS structure. Communications between the District 6 communications office and the Cameras is accomplished via either existing fiber optic cable, or fiber optic cable installed according to this contract.

A Serial Transceiver and Ethernet switch are to be installed in an existing traffic signal control cabinet at 6th Street and Hazel Dell Road in Springfield, and connected to the existing Signal Controller within that cabinet. Communications between the District 6 communications office and these devices is accomplished via fiber optic cable installed according to this contract.

At the three camera field locations, a Junction Box is mounted on the same structure as the camera. This Junction Box houses the associated power and transmission equipment.

All the field locations shall require electrical services, as indicated in the Plans. Each camera field location requires a connection to the existing fiber backbone, and single-mode fiber interconnections between the backbone and the field devices.

The manufacturer of the Intelligent Transportation System equipment must have product liability insurance of not less than \$5 million in effect at the time of bid.

TESTING REQUIREMENTS:

The contractor shall test all equipment with connections made before the equipment is installed. The contractor shall document testing results for all equipment and submit documentation to the Engineer. The fiber optic cable shall be tested at 850 nm and 1300 nm.

The cost of performing the appropriate tests and providing the documentation shall be considered incidental to the over all cost of the contract.

DOCUMENTATION:

At the pre-construction meeting, the Contractor shall submit the following items for approval by the Engineer.

- Five complete copies of the manufacturer's descriptive literatures and technical data for the equipment that will be installed on the contract. The descriptive literatures and technical data shall be adequate for determining whether the equipment meets the requirements of the plans and specifications. If the literature contains more than one item, the Contractor shall indicate which item or items will be furnished.
- Five complete copies of the shop drawings for the surveillance camera system components showing in detail the fabrication thereof and the certified mill analysis on the materials used in the fabrication, anchor bolts and reinforcing materials.

Manuals shall be supplied for all equipment and components of the system. The system operator's manual and equipment manuals shall contain as a minimum the following:

Operator's manual which includes:

- Step-by-step system operation instructions.
- Theory of system operation
- Explanations and descriptions of data elements
- Recovery procedures to be followed in case of system malfunction
- Procedures for updating all elements of the data base
- Functional descriptions of all equipment in the system.

Equipment installation and maintenance manual for each controller and auxiliary device which includes:

- Technical descriptions of the operation of each system component
- Operation instructions for each type of equipment
- Theory of operation describing the interaction of equipment components and signal flow
- Detailed schematic diagrams
- Wiring diagrams that identify wire tagging used for all electrical connections
- Troubleshooting procedures to assist the maintenance staff in the identification and isolation of malfunctions
- Wiring diagrams for each location's cabinet

The Engineer will review the literature and furnish written approval or rejection to the Contractor within 15 calendar days after receipt of the literature. If the literature is rejected, the Contractor shall resubmit corrected literature within an additional 15 calendar days. Within 10 calendar days after receipt of written approval of any material or equipment, the Contractor shall order such material or equipment and shall furnish a copy of such order to the Engineer.

WARRANTY:

The Contractor shall guarantee the work according to Article 801.07 and the following. The contractor shall obtain from the manufacturers, warranties for all electronic and mechanical equipment. These warranties shall be transferred to the Department or other maintaining agencies upon the completion and acceptance of the project. The manufacturer shall warrant the equipment and all parts thereof against any defects of design, workmanship, and materials, and guarantee to promptly repair or replace, free of charge, any item that has become defective for reasons not proven to have been caused by negligence on the part the user or acts of a third party during the warranty period.

FINAL INSPECTION:

The Contractor shall request a turn-on of the Closed Circuit Television Camera System and the Communication Office Monitoring System after all of the equipment has been completely installed, fully operable, fully documented, IDOT staff training completed, and when the roadway is open to traffic. The Dynamic Message Signs, the Closed Circuit Television Camera System, and the Communications Center must be inspected at the same time.

Inspecting one system without the others will not be permitted. All required system hardware and software shall be completely installed and fully operable prior to the systems inspection request. The inspection request must be made to the Engineer a minimum of three working days prior to the time of the requested inspection. During the inspection all items will be tested for proper operation according to the contract and to the satisfaction of the Engineer and the Bureau of Operations.

The Contractor shall be provided with a punch list indicating which equipment failed the inspection and require corrective measures. Upon the turn-on inspection, the Engineer may allow the systems to operate in continuous operation but this shall not relieve the Contractor from correcting the failed items. The Contractor shall notify the Engineer when all the failed items on the punch list have been corrected and shall request an inspection.

A turn-on inspection shall not be considered successful until each item on the punch list has been corrected by the Contractor to operate according to the contract and to the satisfaction of the Engineer.

After a successful turn-on inspection the Closed Circuit Television Camera Systems and the Communications Office Monitoring System shall enter a 30-calendar day minimum on site monitoring phase. During this phase the Contractor shall monitor the operation of the systems. Failure of any component during the monitoring period, with the exception of expendable items such as fuses, shall be reported to the Engineer and corrective measures shall be taken by the Contractor to the satisfaction of the Engineer.

A failed item in any system shall necessitate restarting the 30-calendar day monitoring period for all systems for the full 30-day duration beginning at the time when the failed item was corrected by the contractor to the satisfaction of the Engineer.

At the end of a 30-calendar day monitoring period the Contractor shall provide the Engineer with a monitoring log for the items covering the thirty-calendar day period. The Contractor shall utilize the system software capabilities to store and generate monitoring logs. Upon review of the logs and further equipment performance testing to the satisfaction of the Engineer, he/she will issue a Closed Circuit Television Camera Systems and Communications Office Monitoring System Acceptance Notice or notify the Contractor in writing of the deficiencies.

This is not a pay item and cost shall be considered included in the cost of **COMMUNICATION CENTER SUPPORT EQUIPMENT COMPLETE.**

TRAINING AND INSTALLATION:

The suppliers of the fiber optic cable, the video/data transmitting equipment, the camera, and the video/data receiving equipment shall supervise the installation and testing of the equipment. A factory certified representative shall be present for the turn-on. In addition to the turn-on, the representative from the supplier shall be on-site for a minimum of one day. The representative shall work with the other suppliers and representatives.

This representative shall be available for troubleshooting and if need be to meet with Department personnel and other suppliers for troubleshooting the project.

Each representative shall provide training to maintenance, communications and engineering personnel in the operation, setup, and maintenance of their company's equipment.

The cost of providing the factory certified representative and training of Department of Transportation personnel shall be considered **COMMUNICATION CENTER SUPPORT EQUIPMENT COMPLETE.**

CONCRETE ADMIXTURES (BDE)

Effective: January 1, 2003

Revised: July 1, 2004

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

“(b) Admixtures. Except as specified, the use of admixtures to increase the workability or to accelerate the hardening of the concrete will be permitted only when approved in writing by the Engineer. The Department will maintain an Approved List of Concrete Admixtures. When the Department permits the use of a calcium chloride accelerator, it shall be according to Article 442.02, Note 5.

When the atmosphere or concrete temperature is 18 °C (65 °F) or higher, a retarding admixture meeting the requirements of Article 1021.03 shall be used in the Class BD Concrete and portland cement concrete bridge deck overlays. The amount of retarding admixture to be used will be determined by the Engineer. The proportions of the ingredients of the concrete shall be the same as without the retarding admixture except that the amount of mixing water shall be reduced, as may be necessary, in order to maintain the consistency of the concrete as required. In addition, a high range water-reducing admixture shall be used in Class BD Concrete. The amount of high range water-reducing admixture will be determined by the Engineer. At the option of the Contractor, a water-reducing admixture may be used. Type I cement shall be used.

For Class PC and PS Concrete, a retarding admixture may be added to the concrete mixture when the concrete temperature is 18 °C (65 °F) or higher. Other admixtures may be used when approved by the Engineer, or if specified by the contract. If an accelerating admixture is permitted by the Engineer, it shall be the non-chloride type.

At the Contractor's option, admixtures in addition to an air-entraining admixture may be used for Class PP-1 concrete. The accelerator shall be the non-chloride type. If a water-reducing or retarding admixture is used, the cement factor may be reduced a maximum 18 kg/cu m (0.30 hundredweight/cu yd). If a high range water-reducing admixture is used, the cement factor may be reduced a maximum 36 kg/cu m (0.60 hundredweight/cu yd). Cement factor reductions shall not be cumulative when using multiple admixtures. An accelerator shall always be added prior to a high range water-reducing admixture, if both are used.

If Class C fly ash or ground granulated blast-furnace slag is used in Class PP-1 concrete, a water-reducing or high range water-reducing admixture shall be used. However, the cement factor shall not be reduced if a water-reducing, retarding, or high range water-reducing admixture is used. In addition, an accelerator shall not be used.

For Class PP-2 or PP-3 concrete, a non-chloride accelerator followed by a high range water-reducing admixture shall be used, in addition to the air-entraining admixture. For Class PP-3 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-2 or PP-3 concrete, the Contractor has the option to use a water-reducing admixture. A retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

When the air temperature is less than 13 °C (55 °F) for Class PP-1 or PP-2 concrete, the non-chloride accelerator shall be calcium nitrite.

For Class PP-4 concrete, a high range water-reducing admixture shall be used in addition to the air-entraining admixture. The Contractor has the option to use a water-reducing admixture. An accelerator shall not be used. For stationary or truck mixed concrete, a retarding admixture shall be used to allow for haul time. The Contractor has the option to use a mobile portland cement concrete plant according to Article 1103.04, but a retarding admixture shall not be used unless approved by the Engineer. A water-reducing, retarding, or high range water-reducing admixture shall not be used to reduce the cement factor.

If the Department specifies a calcium chloride accelerator for Class PP-1 concrete, the maximum chloride dosage shall be 1.0 L (1.0 quart) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.0 L (2.0 quarts) per 45 kg (100 lb) of cement if approved by the Engineer. If the Department specifies a calcium chloride accelerator for Class PP-2 concrete, the maximum chloride dosage shall be 1.3 L (1.3 quarts) of solution per 45 kg (100 lb) of cement. The dosage may be increased to a maximum 2.6 L (2.6 quarts) per 45 kg (100 lb) of cement if approved by the Engineer.

For Class PV, MS, SI, RR, SC and SH concrete, at the option of the Contractor, or when specified by the Engineer, a water-reducing admixture or a retarding admixture may be used. The amount of water-reducing admixture or retarding admixture permitted will be determined by the Engineer. The air-entraining admixture and other admixtures shall be added to the concrete separately, and shall be permitted to intermingle only after they have separately entered the concrete batch. The sequence, method and equipment for adding the admixtures shall be approved by the Engineer. The water-reducing admixture shall not delay the initial set of the concrete by more than one hour. Type I cement shall be used.

When a water-reducing admixture is added, a cement factor reduction of up to 18 kg/cu m (0.30 hundredweight/cu yd), from the concrete designed for a specific slump without the admixture, will be permitted for Class PV, MS, SI, RR, SC and SH concrete. When an approved high range water-reducing admixture is used, a cement factor reduction of up to 36 kg/cu m (0.60 hundredweight/cu yd), from a specific water cement/ratio without the admixture, will be permitted based on a 14 percent minimum water reduction. This is applicable to Class PV, MS, SI, RR, SC and SH concrete. A cement factor below 320 kg/cu m (5.35 hundredweight/cu yd) will not be permitted for Class PV, MS, SI, RR, SC and SH concrete. A cement factor reduction will not be allowed for concrete placed underwater. Cement factor reductions shall not be cumulative when using multiple admixtures.

For use of admixtures to control concrete temperature, refer to Articles 1020.14(a) and 1020.14(b).

The maximum slumps given in Table 1 may be increased to 175 mm (7 in.) when a high range water-reducing admixture is used for all classes of concrete except Class PV and PP.”

Revise Section 1021 of the Standard Specifications to read:

“SECTION 1021. CONCRETE ADMIXTURES”

1021.01 General. Admixtures shall be furnished in liquid form ready for use. The admixtures may be delivered in the manufacturer's original containers, bulk tank trucks or such containers or tanks as are acceptable to the Engineer. Delivery shall be accompanied by a ticket which clearly identifies the manufacturer and trade name of the material. Containers shall be readily identifiable to the satisfaction of the Engineer as to manufacturer and trade name of the material they contain.

Prior to inclusion of a product on the Department's Approved List of Concrete Admixtures, the manufacturer shall submit a report prepared by an independent laboratory accredited by the AASHTO Accreditation Program. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications.

Tests shall be conducted using materials and methods specified on a "test" concrete and a "reference" concrete, together with a certification that no changes have been made in the formulation of the material since the performance of the tests. Per the manufacturer's option, the cement content for all required tests shall either be according to applicable specifications or 335 kg/cu m (5.65 cwt/cu yd). Compressive strength test results for six months and one year will not be required.

In addition to the report, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The test and reference concrete mixture shall contain a cement content of 335 kg/cu m (5.65 cwt/cu yd). The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by the AASHTO Accreditation Program.

Prior to the approval of an admixture, the Engineer may conduct all or part of the applicable tests on a sample that is representative of the material to be furnished. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 335 kg/cu m (5.65 cwt/cu yd). For freeze-thaw testing, the Department will perform the test according to Illinois Modified AASHTO T 161, Procedure B.

The manufacturer shall include in the submittal the following information according to ASTM C 494; the average and manufacturing range of specific gravity, the average and manufacturing range of solids in the solution, and the average and manufacturing range of pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

When test results are more than seven years old, the manufacturer shall re-submit the infrared spectrophotometer trace and the report prepared by an independent laboratory accredited by the AASHTO Accreditation Program.

All admixtures, except chloride-based accelerators, shall contain no more than 0.3 percent chloride by mass (weight).

1021.02 Air-Entraining Admixtures. Air-entraining admixtures shall conform to the requirements of AASHTO M 154.

If the manufacturer certifies that the air-entraining admixture is an aqueous solution of Vinsol resin that has been neutralized with sodium hydroxide (caustic soda), testing for compliance with the requirements may be waived by the Engineer. In the certification, the manufacturer shall show complete information with respect to the formulation of the solution, including the number of parts of Vinsol resin to each part of sodium hydroxide. Before the approval of its use is granted, the Engineer will test the solution for its air-entraining quality in comparison with a solution prepared and kept for that purpose.

1021.03 Retarding and Water-Reducing Admixtures. The admixture shall comply with the following requirements:

- (a) The retarding admixture shall comply with the requirements of AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
- (b) The water-reducing admixture shall comply with the requirements of AASHTO M 194, Type A.
- (c) The high range water-reducing admixture shall comply with the requirements of AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).

When a Type F or Type G high range water-reducing admixture is used, water-cement ratios shall be a minimum of 0.32.

Type F or Type G admixtures may be used, subject to the following restrictions:

For Class MS, SI, RR, SC and SH concrete, the water-cement ratio shall be a maximum of 0.44.

The Type F or Type G admixture shall be added at the jobsite unless otherwise directed by the Engineer. The initial slump shall be a minimum of 40 mm (1 1/2 in.) prior to addition of the Type F or Type G admixture, except as approved by the Engineer.

When a Type F or Type G admixture is used, retempering with water or with a Type G admixture will not be allowed. An additional dosage of a Type F admixture, not to exceed 40 percent of the original dosage, may be used to retemper concrete once, provided set time is not unduly affected. A second retempering with a Type F admixture may be used for all classes of concrete except Class PP and SC, provided that the dosage does not exceed the dosage used for the first retempering, and provided that the set time is not unduly affected. No further retempering will be allowed.

Air tests shall be performed after the addition of the Type F or Type G admixture.

1021.04 Set Accelerating Admixtures. The admixture shall comply with the requirements of AASHTO M 194, Type C (accelerating) or Type E (water reducing and accelerating)”

CURING AND PROTECTION OF CONCRETE CONSTRUCTION (BDE)

Effective: January 1, 2004

Revise the second and third sentences of the eleventh paragraph of Article 503.06 of the Standard Specifications to read:

“Forms on substructure units shall remain in place at least 24 hours. The method of form removal shall not result in damage to the concrete.”

Delete the twentieth paragraph of Article 503.22 of the Standard Specifications.

Revise the “Unit Price Adjustments” table of Article 503.22 of the Standard Specifications to read:“UNIT PRICE ADJUSTMENTS	
Type of Construction	Percent Adjustment in Unit Price
For concrete in substructures, culverts (having a waterway opening of more than 1 sq m (10 sq ft)), pump houses, and retaining walls (except concrete pilings, footings and foundation seals): When protected by: Protection Method II Protection Method I	 115% 110%
For concrete in superstructures: When protected by: Protection Method II Protection Method I	 123% 115%
For concrete in footings: When protected by: Protection Method I, II or III	 107%
For concrete in slope walls: When protected by: Protection Method I	 107%”

Delete the fourth paragraph of Article 504.05(a) of the Standard Specifications.

Revise the second and third sentences of the fifth paragraph of Article 504.05(a) of the Standard Specifications to read:

“All test specimens shall be cured with the units according to Article 1020.13.”

Revise the first paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

“Curing and Low Air Temperature Protection. The curing and protection for precast, prestressed concrete members shall be according to Article 1020.13 and this Article.”

Revise the first sentence of the second paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

“For curing, air vents shall be in place, and shall be so arranged that no water can enter the void tubes during the curing of the members.”

Revise the first sentence of the third paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

“As soon as each member is finished, the concrete shall be covered with curing material according to Article 1020.13.”

Revise the eighth paragraph of Article 504.06(c)(6) of the Standard Specifications to read:

“The prestressing force shall not be transferred to any member before the concrete has attained the compressive strength of 28,000 kPa (4000 psi) or other higher compressive release strength specified on the plans, as determined from tests of 150 mm (6 in.) by 300 mm (12 in.) cylinders cured with the member according to Article 1020.13. Members shall not be shipped until 28-day strengths have been attained and members have a yard age of at least 4 days.”

Delete the third paragraph of Article 512.03(a) of the Standard Specifications.

Delete the last sentence of the second paragraph of Article 512.04(d) of the Standard Specifications.

Revise the “Index Table of Curing and Protection of Concrete Construction” table of Article 1020.13 of the Standard Specifications to read:

"INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Cast-in-Place Concrete: ^{11/}			
Pavement			
Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/ 5/}	3	1020.13(c)
Base Course			
Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 2/}	3	1020.13(c)
Driveway			
Median			
Curb			
Gutter	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 5/}	3	1020.13(c) ^{16/}
Curb and Gutter			
Sidewalk			
Slope Wall			
Paved Ditch			
Catch Basin			
Manhole	1020.13(a)(1)(2)(3)(4)(5) ^{4/}	3	1020.13(c)
Inlet			
Valve Vault			
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3 ^{12/}	1020.13(c)
Pavement Replacement	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 2/}	3	442.06(h) and 1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles	1020.13(a)(3)(5)	7	1020.13(e)(1)(2)(3)
Footings			
Foundation Seals	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(e)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) ^{1/7/}	7	1020.13(e)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) ^{8/}	7	1020.13(e)(1)(2)
Deck	1020.13(a)(5)	7	1020.13(e)(1)(2) ^{17/}
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) ^{1/7/}	7	1020.13(e)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) ^{1/}	7	1020.13(e)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) ^{4/6/}	7	1020.13(e)(1)(2) ^{18/}
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete: ^{11/}			
Bridge Beams			
Piles			
Bridge Slabs	1020.13(a)(3)(5) ^{9/10/}	As required.	^{13/} 504.06(c)(6), 1020.13(e)(2) ^{19/}
Nelson Type Structural Member			
All Other Precast Items	1020.13(a)(3)(4)(5) ^{2/9/10/}	As required.	^{14/} 504.06(c)(6), 1020.13(e)(2) ^{19/}
Precast, Prestressed Concrete: ^{11/}			
All Items	1020.13(a)(3)(5) ^{9/10/}	Until strand tensioning is released. ^{15/}	504.06(c)(6), 1020.13(e)(2) ^{19/}

Notes-General:

- 1/ Type I, membrane curing only
- 2/ Type II, membrane curing only
- 3/ Type III, membrane curing only
- 4/ Type I, II and III membrane curing
- 5/ Membrane curing will not be permitted between November 1 and April 15.
- 6/ The use of water to inundate footings, foundation seals or the bottom slab of culverts is permissible when approved by the Engineer, provided the water temperature can be maintained at 7 °C (45 °F) or higher.
- 7/ Asphalt Emulsion for Waterproofing may be used in lieu of other curing methods when specified and permitted according to Article 503.18.
- 8/ On non-traffic surfaces which receive protective coat according to Article 503.19, a linseed oil emulsion curing compound may be used as a substitute for protective coat and other curing methods. The linseed emulsion curing compound will be permitted between April 16 and October 31 of the same year, provided it is applied with a mechanical sprayer according to Article 1101.09 (b), and meets the material requirements of Article 1022.07.
- 9/ Steam curing (heat and moisture) is acceptable and shall be accomplished by the method specified in Article 504.06(c)(6).
- 10/ A moist room according to AASHTO M 201 is acceptable for curing.
- 11/ If curing is required and interrupted because of form removal for cast-in-place concrete items, precast concrete products, or precast prestressed concrete products, the curing shall be resumed within two hours from the start of the form removal.
- 12/ Curing maintained only until opening strength is attained, with a maximum curing period of three days.
- 13/ The curing period shall end when the concrete has attained the mix design strength. The producer has the option to discontinue curing when the concrete has attained 80 percent of the mix design strength or after seven days. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 14/ The producer shall determine the curing period or may elect to not cure the product. All strength test specimens shall remain with the units and shall be subjected to the same curing method and environmental condition as the units, until the time of testing.
- 15/ The producer has the option to continue curing after strand release.
- 16/ When structural steel or structural concrete is in place above slope wall, Article 1020.13(c) shall not apply. The protection method shall be according to Article 1020.13(e)(1).
- 17/ When Article 1020.13(e)(2) is used to protect the deck, the housing may enclose only the bottom and sides. The top surface shall be protected according to Article 1020.13(e)(1).
- 18/ For culverts having a waterway opening of 1 sq m (10 sq ft) or less, the culverts may be protected according to Article 1020.13(e)(3).
- 19/ The seven day protection period in the first paragraph of Article 1020.13(e)(2) shall not apply. The protection period shall end when curing is finished. For the third paragraph of Article 1020.13(e)(2), the decrease in temperature shall be according to Article 504.06(c)(6)."

Add the following to Article 1020.13(a) of the Standard Specifications:

“(5) Wetted Cotton Mat Method. After the surface of concrete has been textured or finished, it shall be covered immediately with dry cotton mats. The cotton mats shall be placed in a manner which will not mar the concrete surface. A texture resulting from the cotton mat material is acceptable. The cotton mats shall then be wetted immediately and thoroughly soaked with a gentle spray of water. For bridge decks, a foot bridge shall be used to place and wet the cotton mats.

The cotton mats shall be maintained in a wetted condition until the concrete has hardened sufficiently to place soaker hoses without marring the concrete surface. The soaker hoses shall be placed on top of the cotton mats at a maximum 1.2 m (4 ft) spacing. The cotton mats shall be kept wet with a continuous supply of water for the remainder of the curing period. Other continuous wetting systems may be used if approved by the Engineer.

After placement of the soaker hoses, the cotton mats shall be covered with white polyethylene sheeting or burlap-polyethylene blankets.

For construction items other than bridge decks, soaker hoses or a continuous wetting system will not be required if the alternative method keeps the cotton mats wet. Periodic wetting of the cotton mats is acceptable.

For areas inaccessible to the cotton mats on bridge decks, curing shall be according to Article 1020.13(a)(3).”

Revise the first paragraph of Article 1020.13(c) of the Standard Specifications to read:

“Protection of Portland Cement Concrete, Other Than Structures, From Low Air Temperatures. When the official National Weather Service forecast for the construction area predicts a low of 0 °C (32 °F), or lower, or if the actual temperature drops to 0 °C (32 °F), or lower, concrete less than 72 hours old shall be provided at least the following protection:”

Delete Article 1020.13(d) and Articles 1020.13(d)(1),(2),(3),(4) of the Standard Specifications.

Revise the first five paragraphs of Article 1020.13(e) of the Standard Specifications to read:

“Protection of Portland Cement Concrete Structures From Low Air Temperatures. When the official National Weather Service Forecast for the construction area predicts a low below 7 °C (45 °F), or if the actual temperature drops below 7 °C (45 °F), concrete less than 72 hours old shall be provided protection. Concrete shall also be provided protection when placed during the winter period of December 1 through March 15. Concrete shall not be placed until the materials, facilities and equipment for protection are approved by the Engineer.

When directed by the Engineer, the Contractor may be required to place concrete during the winter period. If winter construction is specified, the Contractor shall proceed with the construction, including concrete, excavation, pile driving, steel erection and all appurtenant work required for the complete construction of the item, except at times when weather conditions make such operations impracticable.

Regardless of the precautions taken, the Contractor shall be responsible for protection of the concrete placed and any concrete damaged by cold temperatures shall be removed and replaced by the Contractor at his/her own expense.”

Add the following at the end of the third paragraph of Article 1020.13(e)(1) of the Standard Specifications:

“The Contractor shall provide means for checking the temperature of the surface of the concrete during the protection period.”

Revise the second sentence of the first paragraph of Article 1020.13(e)(2) of the Standard Specifications to read:

“The Contractor shall provide means for checking the temperature of the surface of the concrete or air temperature within the housing during the protection period.”

Delete the last sentence of the first paragraph of Article 1020.13(e)(3) of the Standard Specifications.

Add the following Article to Section 1022 of the Standard Specifications:

“1022.06 Cotton Mats. Cotton mats shall consist of a cotton fill material, minimum 400 g/sq m (11.8 oz/sq yd), covered with unsized cloth or burlap, minimum 200 g/sq m (5.9 oz/sq yd), and be tufted or stitched to maintain stability.

Cotton mats shall be in a condition satisfactory to the Engineer. Any tears or holes in the mats shall be repaired.

Add the following Article to Section 1022 of the Standard Specifications:

“1022.07 Linseed Oil Emulsion Curing Compound. Linseed oil emulsion curing compound shall be composed of a blend of boiled linseed oil and high viscosity, heavy bodied linseed oil emulsified in a water solution. The curing compound shall meet the requirements of a Type I, II, or III according to Article 1022.01, except the drying time requirement will be waived. The oil phase shall be 50 ± 4 percent by volume. The oil phase shall consist of 80 percent by mass (weight) boiled linseed oil and 20 percent by mass (weight) Z-8 viscosity linseed oil. The water phase shall be 50 ± 4 percent by volume.”

Revise Article 1020.14 of the Standard Specifications to read:

“1020.14 Temperature Control for Placement. Temperature control for concrete placement shall conform to the following requirements:

- (a) Temperature Control other than Structures. The temperature of concrete immediately before placing, shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

Plastic concrete temperatures up to 35 °C (96 °F), as placed, may be permitted provided job site conditions permit placement and finishing without excessive use of water on and/or overworking of the surface. The occurrence within 24 hours of unusual surface distress shall be cause to revert to a maximum 32 °C (90 °F) plastic concrete temperature.

Concrete shall not be placed when the air temperature is below 5 °C (40 °F) and falling or below 2 °C (35 °F), without permission of the Engineer. When placing of concrete is authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F). The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

For pavement patching, refer to Article 442.06(e) for additional information on temperature control for placement.

- (b) Temperature Control for Structures. The temperature of concrete as placed in the forms shall be not less than 10 °C (50 °F) nor more than 32 °C (90 °F). Aggregates and/or water shall be heated or cooled as necessary to produce concrete within these temperature limits. When insulated forms are used, the temperature of the concrete mixture shall not exceed 25 °C (80 °F). If the Engineer determines that heat of hydration might cause excessive temperatures in the concrete, the concrete shall be placed at a temperature between 10 °C (50 °F) and 15 °C (60 °F), per the Engineer's instructions. When concrete is placed in contact with previously placed concrete, the temperature of the concrete may be increased as required to offset anticipated heat loss.

Concrete shall not be placed when the air temperature is below 7 °C (45 °F) and falling or below 4 °C (40 °F), without permission of the Engineer. When placing of concrete is authorized during cold weather, the Engineer may require the water and/or the aggregates to be heated to not less than 20 °C (70 °F) nor more than 65 °C (150 °F). The aggregates may be heated by either steam or dry heat prior to being placed in the mixer. The apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might damage the materials. No frozen aggregates shall be used in the concrete.

When the temperature of the plastic concrete reaches 30 °C (85 °F), an approved retarding admixture shall be used or the approved water reducing admixture in use shall have its dosage increased by 50 percent over the dosage recommended on the Department's Approved List of Concrete Admixtures for the temperature experienced. The amount of retarding admixture to be used will be determined by the Engineer. This requirement may be waived by the Engineer when fly ash compensated mixtures are used.

- (c) Temperature. The concrete temperature shall be determined according to ASTM C 1064.”

FLAGGER VESTS (BDE)

Effective: April 1, 2003

Revised: April 1, 2005

Revise the first sentence of Article 701.04(c)(1) of the Standard Specifications to read:

“The flagger shall be stationed to the satisfaction of the Engineer and be equipped with a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments and approved flagger traffic control signs conforming to Standard 702001 and Article 702.05(e).”

Revise Article 701.04(c)(6) of the Standard Specifications to read:

“(6) Nighttime Flagging. The flagger station shall be lit by additional overhead lighting other than streetlights. The flagger shall be equipped with a fluorescent orange, fluorescent yellow/green, or a combination of fluorescent orange and fluorescent yellow/green garment meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 3 garments.”

IMPACT ATTENUATORS (BDE)

Effective: November 1, 2003

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

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

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

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

CONSTRUCTION REQUIREMENTS

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

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

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

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

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

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

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

MINIMUM LANE WIDTH WITH LANE CLOSURE (BDE)

Effective: January 1, 2005

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

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

PARTIAL PAYMENTS (BDE)

Effective: September 1, 2003

Revise Article 109.07 of the Standard Specifications to read:

“**109.07 Partial Payments.** Partial payments will be made as follows:

- (a) Progress Payments. At least once each month, the Engineer will make a written estimate of the amount of work performed in accordance with the contract, and the value thereof at the contract unit prices. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1000.00 will be approved for payment other than the final payment.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved. Furthermore, progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c).

- (b) Material Allowances. At the discretion of the Department, payment may be made for materials, prior to their use in the work, when satisfactory evidence is presented by the Contractor. Satisfactory evidence includes justification for the allowance (to expedite the work, meet project schedules, regional or national material shortages, etc.), documentation of material and transportation costs, and evidence that such material is properly stored on the project or at a secure location acceptable and accessible to the Department.

Material allowances will be considered only for nonperishable materials when the cost, including transportation, exceeds \$10,000 and such materials are not expected to be utilized within 60 days of the request for the allowance. For contracts valued under \$500,000, the minimum \$10,000 requirement may be met by combining the principal (material) product of no more than two contract items. An exception to this two item limitation may be considered for any contract regardless of value for items in which material (products) are similar except for type and/or size.

Material allowances shall not exceed the value of the contract items in which used and shall not include the cost of installation or related markups. Amounts paid by the Department for material allowances will be deducted from estimates due the Contractor as the material is used. Two-sided copies of the Contractor's cancelled checks for materials and transportation must be furnished to the Department within 60 days of payment of the allowances or the amounts will be reclaimed by the Department."

PAYMENTS TO SUBCONTRACTORS (BDE)

Effective: June 1, 2000

Revised: September 1, 2003

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts no later than 30 days from the receipt of each payment made to the Contractor.

State law addresses the timing of payments to be made to subcontractors. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, generally requires that when a Contractor receives any payment from the Department, the Contractor is required to make corresponding, proportional payments to each subcontractor performing work within 15 calendar days after receipt of the state payment. Section 7 of the State Prompt Payment Act further provides that interest in the amount of 2% per month, in addition to the payment due, shall be paid to any subcontractor by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors throughout the contracting chain.

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

As progress payments are made to the Contractor in accordance with Article 109.07 of the Standard Specifications for Road and Bridge Construction, the Contractor shall make a corresponding partial payment within 15 calendar days to each subcontractor in proportion to the work satisfactorily completed by each subcontractor. The proportionate amount of partial payment due to each subcontractor shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors shall be paid in full within 15 calendar days after the subcontractor's work has been satisfactorily completed. The Contractor shall hold no retainage from the subcontractors.

This Special Provision does not create any rights in favor of any subcontractor against the State of Illinois or authorize any cause of action against the State of Illinois on account of any payment, nonpayment, delayed payment or interest claimed by application of the State Prompt Payment Act. The Department will neither determine the reasonableness of any cause for delay of payment nor enforce any claim to payment, including interest. Moreover, the Department will not approve any delay or postponement of the 15 day requirement. State law creates remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond in accordance with the Public Construction Bond Act, 30 ILCS 550.

PERSONAL PROTECTIVE EQUIPMENT (BDE)

Effective: July 1, 2004

All personnel, excluding flaggers, working outside of a vehicle (car or truck) within 7.6 m (25 ft) of pavement open to traffic shall wear a fluorescent orange, fluorescent yellow/green or a combination of fluorescent orange and fluorescent yellow/green vest meeting the requirements of the American National Standards Institute specification ANSI/ISEA 107-1999 for Conspicuity Class 2 garments. Other types of garments may be substituted for the vest as long as the garments have manufacturers tags identifying them as meeting the ANSI Class 2 requirement.

PORTABLE CHANGEABLE MESSAGE SIGNS (BDE)

Effective: November 1, 1993

Revised: April 2, 2004

Description. This work shall consist of furnishing, placing, and maintaining changeable message sign(s) at the locations(s) shown on the plans or as directed by the Engineer.

The sign(s) shall be trailer mounted. The message panel shall be at least 2.1 m (7 ft) above the pavement, present a level appearance, and be capable of displaying up to eight characters in each of three lines at a time. Character height shall be 450 mm (18 in.).

The message panel shall be of either a bulb matrix or disc matrix design controlled by an onboard computer capable of storing a minimum of 99 programmed messages for instant recall. The computer shall be capable of being programmed to accept messages created by the operator via an alpha-numeric keyboard and able to flash any six messages in sequence. The message panel shall also be capable of being controlled by a computer from a remote location via a cellular linkage. The Contractor shall supply the modem, the cellular phone, and the necessary software to run the sign from a remote computer at a location designated by the Engineer. The Contractor shall promptly program and/or reprogram the computer to provide the messages as directed by the Engineer.

The message panel shall be visible from 400 m (1/4 mile) under both day and night conditions. The letters shall be legible from 250 m (750 ft).

The sign shall include automatic dimming for nighttime operation and a power supply capable of providing 24 hours of uninterrupted service.

The Contractor shall provide all preventive maintenance efforts s(he) deems necessary to achieve uninterrupted service. If service is interrupted for any cause and not restored within 24 hours, the Engineer will cause such work to be performed as may be necessary to provide this service. The cost of such work shall be borne by the Contractor or deducted from current or future compensation due the Contractor.

When the sign(s) are displaying messages, they shall be considered a traffic control device. At all times when no message is displayed, they shall be considered equipment.

Basis of Payment. When portable changeable message signs are shown on the Standard, this work will not be paid for separately but shall be considered as included in the cost of the Standard.

For all other portable changeable message signs, this work will be paid for at the contract unit price per calendar month for each sign as CHANGEABLE MESSAGE SIGN.

PORTLAND CEMENT (BDE)

Effective: January 1, 2005

Replace the first sentence of the second paragraph of Article 1001.01 of the Standard Specifications with the following:

“For portland cement according to ASTM C 150, the addition of up to 5.0 percent limestone by mass (weight) to the cement will not be permitted. Also, the total of all organic processing additions shall not exceed 1.0 percent by mass (weight) of the cement and the total of all inorganic processing additions shall not exceed 4.0 percent by mass (weight) of the cement.”

PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2002

Add the following paragraph after the fourth paragraph of Article 1103.01(b) of the Standard Specifications:

“The truck mixer shall be approved before use according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

Add the following paragraph after the first paragraph of Article 1103.01(c) of the Standard Specifications:

“The truck agitator shall be approved before use according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

Add the following paragraph after the first paragraph of Article 1103.01(d) of the Standard Specifications:

“The nonagitator truck shall be approved before use according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

Revise the first sentence of the first paragraph of Article 1103.02 of the Standard Specifications to read:

“The plant shall be approved before production begins according to the Bureau of Materials and Physical Research’s Policy Memorandum, “Approval of Concrete Plants and Delivery Trucks”.”

TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE)

Effective: April 1, 1992

Revised: January 1, 2005

To ensure a prompt response to incidents involving the integrity of work zone traffic control, the Contractor shall provide a telephone number where a responsible individual can be contacted 24 hours-a-day.

When the Engineer is notified, or determines a traffic control deficiency exists, he/she will notify and direct the Contractor to correct the deficiency within a specified time. The specified time, which begins upon notification to the Contractor, will be from 1/2 hour to 12 hours based upon the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge.

A deficiency may be any lack of repair, maintenance, or non-compliance with the traffic control plan. A deficiency may also be applied to situations where corrective action is not an option such as the use of non-certified flaggers for short term operations; working with lane closures beyond the time allowed in the contract; or failure to perform required contract obligations such as traffic control surveillance.

If the Contractor fails to correct a deficiency within the specified time, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency exists. The calendar day(s) will begin with notification to the Contractor and end with the Engineer's acceptance of the correction. The daily monetary deduction will be either \$1,000 or 0.05 percent of the awarded contract value, whichever is greater. For those deficiencies where corrective action was not an option this monetary deduction will be immediate.

In addition, if the Contractor fails to respond, the Engineer may correct the deficiency and the cost thereof will be deducted from monies due or which may become due the Contractor. This corrective action will in no way relieve the Contractor of his/her contractual requirements or responsibilities.

WORK ZONE PUBLIC INFORMATION SIGNS (BDE)

Effective: September 1, 2002

Revised: January 1, 2005

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

Camera-ready artwork for the signs will be provided to sign manufacturing companies upon request by contacting the Central Bureau of Operations at 217-782-2076. The sign number is W21-1116-6048.

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

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

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

WORK ZONE SPEED LIMIT SIGNS (BDE)

Effective: April 2, 2004

Revised: April 15, 2004

Delete Article 702.05(c).

Revise Article 702.05(d) to read:

“(d) Work Zone Speed Limit Signs. Work zone speed limit sign assemblies shall be provided and located as shown on the plans. Two additional assemblies shall be placed 150 m (500 ft) beyond the last entrance ramp for each interchange. The individual signs that make up an assembly may be combined on a single panel. The sheeting for the signs shall be reflective and conform to the requirements of Article 1084.02.

All permanent “SPEED LIMIT” signs located within the work zone shall be removed or covered. This work shall be coordinated with the lane closure(s) by promptly establishing a reduced posted speed zone when the lane closure(s) are put into effect and promptly reinstating the posted speed zone when the lane closure(s) are removed.

The work zone speed limit signs and end work zone speed limit signs shown in advance of and at the end of the lane closure(s) shall be used for the entire duration of the closure(s).

The work zone speed limit signs shown within the lane closure(s) shall only be used when workers are present in the closed lane adjacent to traffic; at all other times, the signs shall be promptly removed or covered. The sign assemblies shown within the lane closure(s) will not be required when the worker(s) are located behind a concrete barrier wall.

WORK ZONE TRAFFIC CONTROL (BDE)

Effective: April 2, 2004

Revised: January 2, 2005

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

“(b) Standards 701401, 701422, and 701446 will be measured for payment on an each basis only when the traffic control and protection applies to isolated stationary work areas and does not involve or is not a part of other protected areas.”

Revise the Article 701.07(c) to read:

“(c) Measured As Lump Sum. Traffic control and protection required under Standards 701201, 701206, 701306, 701326, 701336, 701400, 701406, 701421, 701501, 701502, 701601, 701602, 701606, 701701 and 701801 will be measured for payment on a lump sum basis. Traffic control protection required under Standards 701401, 701422, and 701446 will be measured for payment on a lump sum basis, except as specified under Article 701.07(b). Where the Contractor's operations result in daily changing, or two or more work areas each of which requires traffic control according to one of the above Standards, each work area installation will not be paid for separately, but shall be included in the lump sum price for the type of protection furnished.”

Revise the first paragraph of Article 701.08(a) to read:

“(a) Traffic control and protection will be paid for at the contract unit price each for TRAFFIC CONTROL AND PROTECTION STANDARD 701316; TRAFFIC CONTROL AND PROTECTION STANDARD 701321; TRAFFIC CONTROL AND PROTECTION STANDARD 701331; TRAFFIC CONTROL AND PROTECTION STANDARD 701401; TRAFFIC CONTROL AND PROTECTION STANDARD 701402; TRAFFIC CONTROL AND PROTECTION STANDARD 701411; TRAFFIC CONTROL AND PROTECTION STANDARD 701416; TRAFFIC CONTROL AND PROTECTION STANDARD 701422; TRAFFIC CONTROL AND PROTECTION STANDARD 701423; TRAFFIC CONTROL AND PROTECTION STANDARD 701431; or TRAFFIC CONTROL AND PROTECTION STANDARD 701446 at the location specified.”

Revise the first paragraph of Article 701.08(b) to read:

“(b) Traffic control and protection indicated in Article 701.07(c) will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION STANDARD 701201; TRAFFIC CONTROL AND PROTECTION STANDARD 701206; TRAFFIC CONTROL AND PROTECTION STANDARD 701306; TRAFFIC CONTROL AND PROTECTION STANDARD 701326; TRAFFIC CONTROL AND PROTECTION STANDARD 701336; TRAFFIC CONTROL AND PROTECTION STANDARD 701400; TRAFFIC CONTROL AND PROTECTION STANDARD 701401; TRAFFIC CONTROL AND PROTECTION STANDARD 701406; TRAFFIC CONTROL AND PROTECTION STANDARD 701421; TRAFFIC CONTROL AND PROTECTION STANDARD 701422; TRAFFIC CONTROL AND PROTECTION STANDARD 701446; TRAFFIC CONTROL AND PROTECTION STANDARD 701501; TRAFFIC CONTROL AND PROTECTION STANDARD 701502; TRAFFIC CONTROL AND PROTECTION STANDARD 701601; TRAFFIC CONTROL AND PROTECTION STANDARD 701602; TRAFFIC CONTROL AND PROTECTION STANDARD 701606; TRAFFIC CONTROL AND PROTECTION STANDARD 701701; or TRAFFIC CONTROL AND PROTECTION STANDARD 701801.”

WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: January 1, 2003

Revised: November 1, 2004

Add the following to Article 702.01 of the Standard Specifications:

“All devices and combinations of devices shall meet the requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 for their respective categories. The categories are as follows:

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, flexible delineators and plastic drums with no attachments. Category 1 devices shall be crash tested and accepted or may be self-certified by the manufacturer.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include drums and vertical panels with lights, barricades and portable sign supports. Category 2 devices shall be crash tested and accepted for Test Level 3.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions, truck mounted attenuators and other devices not meeting the definitions of Category 1 or 2. Category 3 devices shall be crash tested and accepted for either Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as arrow boards, changeable message signs, temporary traffic signals and area lighting supports. Currently, there is no implementation date set for this category and it is exempt from the NCHRP 350 compliance requirement.

The Contractor shall provide a manufacturer’s self-certification letter for each Category 1 device and an FHWA acceptance letter for each Category 2 and Category 3 device used on the contract. The letters shall state the device meets the NCHRP 350 requirements for its respective category and test level, and shall include a detail drawing of the device.”

Delete the third, fourth and fifth paragraphs of Article 702.03(b) of the Standard Specifications.

Delete the third sentence of the first paragraph of Article 702.03(c) of the Standard Specifications.

Revise the first sentence of the first paragraph of Article 702.03(e) of the Standard Specifications to read:

“Drums shall be nonmetallic and have alternating reflectorized Type AA or Type AP fluorescent orange and reflectorized white horizontal, circumferential stripes.”

Add the following to Article 702.03 of the Standard Specifications:

“(h) Vertical Barricades. Vertical barricades may be used in lieu of cones, drums or Type II barricades to channelize traffic.”

Delete the fourth paragraph of Article 702.05(a) of the Standard Specifications.

Revise the sixth paragraph of Article 702.05(a) of the Standard Specifications to read:

“When the work operations exceed four days, all signs shall be post mounted unless the signs are located on the pavement or define a moving or intermittent operation. When approved by the Engineer, a temporary sign stand may be used to support a sign at 1.2 m (5 ft) minimum where posts are impractical. Longitudinal dimensions shown on the plans for the placement of signs may be increased up to 30 m (100 ft) to avoid obstacles, hazards or to improve sight distance, when approved by the Engineer. “ROAD CONSTRUCTION AHEAD” signs will also be required on side roads located within the limits of the mainline “ROAD CONSTRUCTION AHEAD” signs.”

Delete all references to “Type 1A barricades” and “wing barricades” throughout Section 702 of the Standard Specifications.

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.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4 and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. Selection of Labor: During the performance of this contract, the contractor shall not:

- a. Discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
- b. Employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60 (and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job-training."

2. EEO Officer: The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above

agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employees referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish which such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any

evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to

the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or quailifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the

contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or

disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the question, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not

listed on the wage determination unless the Administrator of the

be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits

Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which cases such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV. 2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainee's and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall, upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan

or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period).

The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V.

This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S. C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for

inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all federal-aid contracts on the national highway system, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a

whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract.

Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S. C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification,

distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

“Whoever, being an officer, agent or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.”

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more).

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of

any communication from the Director, Office of Federal Activities, EPA indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms “covered transaction,” “debarred,” “suspended,” “ineligible,” “lower tier covered transaction,” “participant,” “person,” “primary covered transaction,” “principal,” “proposal,” and “voluntarily excluded,” as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled

"Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded from Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealing.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion-Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

MINIMUM WAGES FOR FEDERAL AND FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision

NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <http://www.dot.il.gov/desenv/delett.html>.

In addition, ten (10) days prior to the letting, the applicable Federal wage rates will be e-mailed to subscribers. It is recommended that all contractors subscribe to the Federal Wage Rates List or the Contractor's Packet through IDOT's subscription service.

PLEASE NOTE: if you have already subscribed to the Contractor's Packet you will automatically receive the Federal Wage Rates.

The instructions for subscribing are at <http://www.dot.il.gov/desenv/subsc.html>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.