### **BID PROPOSAL INSTRUCTIONS**

**ABOUT IDOT PROPOSALS:** All proposals are potential bidding proposals. Each proposal contains all certifications and affidavits, a proposal signature sheet and a proposal bid bond.

#### **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.

#### 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.

#### **REQUESTS FOR AUTHORIZATION TO BID**

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

#### WHAT CONSTITUTES WRITTEN AUTHORIZATION TO BID?

When a prospective prime bidder submits a "Request for Authorization to Bid/or Not For Bid Status" (BDE 124) 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 an **Authorization to Bid or Not for Bid Report**, approved by the Central Bureau of Construction and the Chief Procurement Officer that indicates which items have been approved For Bidding. If **Authorization to Bid** cannot be approved, the **Authorization to Bid or Not for Bid Report** will indicate the reason for denial.

#### **ABOUT AUTHORIZATION TO BID**

Firms that have not received an Authorization to Bid or Not For Bid Report within a reasonable time of complete and correct original document submittal should contact the Department as to the status. 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 bidder'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 or revision will be included with the Electronic Plans and Proposals. 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 service emails are an added courtesy the Department provides. It is suggested that bidders check IDOT's website at <a href="http://www.dot.il.gov/desenv/delett.html">http://www.dot.il.gov/desenv/delett.html</a> before submitting final bid information.

#### IDOT IS NOT RESPONSIBLE FOR ANY E-MAIL FAILURES.

Addenda questions may be directed to the Contracts Office at (217)782-7806 or <a href="mailto:DOT.D&Econtracts@illlinois.gov">DOT.D&Econtracts@illlinois.gov</a>

Technical questions about downloading these files may be directed to Tim Garman at (217)524-1642 or <a href="mailto:Timothy.Garman@illinois.gov">Timothy.Garman@illinois.gov</a>.

#### STANDARD GUIDELINES FOR SUBMITTING BIDS

- All pages should be single sided.
- Use the Cover Page that is provided in the Bid Proposal (posted on the IDOT Web Site) as the first page of your submitted bid. It has the item number in large bold type in the upper left-hand corner and lines provided for your company name and address in the upper right-hand corner.
- Do not use report covers, presentation folders or special bindings and do not staple multiple times on left side like a book. Use only 1 staple in the upper left hand corner. Make suer all elements of your bid are stapled together including the bid bond or guaranty check (if required).
- Do not include any certificates of eligibility, your authorization to bid, Addendum Letters or affidavit of availability.
- Do not include the Subcontractor Documentation with your bid (pages i iii and pages a g). This documentation is required only if you are awarded the project.
- Use the envelope cover sheet (provided with the proposal) as the cover for the proposal envelope.
- Do not rely on overnight services to deliver your proposal prior to 10 AM on letting day. It will not be read if it is delivered after 10 AM.
- Do not submit your Substance Abuse Prevention Program (SAPP) with your bid. If you are awarded the contract this form is to be submitted to the district engineer at the pre-construction conference.

#### **BID SUBMITTAL CHECKLIST**

Cover page (the sheet that has the item number on it) – This should be the first page of your bid proposal, followed by your bid (the Schedule of Prices/Pay Items). If you are using special software or CBID to generate your schedule of prices, do not include the blank pages of the schedule of prices that came with the proposal package.
☐ Page 4 (Item 9) — Check "YES" if you will use a subcontractor(s) with an annual value over \$50,000. Include the subcontractor(s) name, address, general type of work to be performed and the dollar amount. If you will use subcontractor(s) but are uncertain who or the dollar amount; check "YES" but leave the lines blank.
After page 4 – Insert the following documents: The Illinois Office Affidavit (Not applicable to federally funded projects) followed by Cost Adjustments for Steel, Bituminous and Fuel (if applicable) and the Contractor Letter of Assent (if applicable). The general rule should be, if you don't know where it goes, put it after page 4.
☐ Page 10 (Paragraph J) – Check "YES" or "NO" whether your company has any business in Iran.
☐ Page 10 (Paragraph K) — (Not applicable to federally funded projects) List the name of the apprenticeship and training program sponsor holding the certificate of registration from the US Department of Labor. If no applicable program exists, please indicate the work/job category Your bid will not be read if this is not completed. Do not include certificates with your bid. Keep the certificates in your office in case they are requested by IDOT.
☐ Page 11 (Paragraph L) – A copy of your State Board of Elections certificate of registration is no longer required with your bid.
☐ Page 11 (Paragraph M) – Indicate if your company has hired a lobbyist in connection with the job for which you are submitting the bid proposal.
☐ Page 12 (Paragraph C) – This is a work sheet to determine if a completed Form A is required. It is not part of the form and you do not need to make copies for each completed Form A.
Pages 14-17 (Form A) – One Form A (4 pages) is required for each applicable person in your company. Copies of the forms can be used and only need to be changed when the information changes. The certification signature and date must be original for each letting. Do not staple the forms together. If you answered "NO" to all of the questions in Paragraph C (page 12), complete the first section (page 14) with your company information and then sign and date the Not Applicable statement on page 17.
Page 18 (Form B) - If you check "YES" to having other current or pending contracts it is acceptable to use the phrase, "See Affidavit of Availability on file". Ownership Certification (at the bottom of the page) - Check N/A if the Form A(s) you submitted accounts for 100 percent of the company ownership. Check YES if any percentage of ownership falls outside of the parameters that require reporting on the Form A. Checking NO indicates that the Form A(s) you submitted is not correct and you will be required to submit a revised Form A.
☐ <b>Page 20 (Workforce Projection)</b> – Be sure to include the Duration of the Project. It is acceptable to use the phrase "Per Contract Specifications".

☐ <b>Proposal Bid Bond</b> – (Insert after the proposal signature page) Submit you using the current Proposal Bid Bond form provided in the proposal package. the Proposal Bid Bond. If you are using an electronic bond, include your bid the Proof of Insurance printed from the Surety's Web Site.	The Power of Attorney page should be stapled to
☐ <b>Disadvantaged Business Utilization Plan and/or Good Faith Effort</b> – T Utilization Plan (SBE 2026), followed by the DBE Participation Statement (SB documentation of a Good Faith Effort, it is to follow the SBE Forms.	
The Bid Letting is now available in streaming Audio/Video from the IDOT the main page of the current letting on the day of the Letting. The stream will bids does not begin until approximately 10:30 AM.	<b>T Web Site.</b> A link to the stream will be placed on not begin until 10 AM. The actual reading of the
Following the Letting, the As-Read Tabulation of Bids will be posted by the en Web page for the current letting.	nd of the day. You will find the link on the main
QUESTIONS: pre-letting up to execution of the contract	
Contractor pre-qualification	217-782-3413
Small Business, Disadvantaged Business Enterprise (DBE)	
Contracts, Bids, Letting process or Internet downloads	
Estimates Unit	
Aeronautics	
IDNR (Land Reclamation, Water Resources, Natural Resources)	217-782-6302
QUESTIONS: following contract execution	
Subcontractor documentation, payments	217-782-3413
Railroad Insurance	217-785-0275

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Proposal Submitted By	
Name	
Address	
City	

# Letting June 13, 2014

# 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.

**BIDDERS NEED NOT RETURN THE ENTIRE PROPOSAL** 

# Notice to Bidders, Specifications, Proposal, Contract and Contract Bond



Springfield, Illinois 62764

Contract No. 63709
WILL County
Section 96-00014-00-PV (University Park)
Route FAU 1637 (University Parkway)
Project M-CMM-4003(013)
District 1 Construction Funds

PLEASE MARK THE APPROPRIATE BOX BELOW:
☐ A <u>Bid</u> <u>Bond</u> is included.
☐ A Cashier's Check or a Certified Check is included
☐ An Annual Bid Bond is included or is on file with IDOT.

Prepared by

Checked by

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(Printed by authority of the State of Illinois)

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### **PROPOSAL**

#### TO THE DEPARTMENT OF TRANSPORTATION

1.	Proposal of
Ta	xpayer Identification Number (Mandatory)  For the improvement identified and advertised for bids in the Invitation for Bids as:
	Contract No. 63709 WILL County Section 96-00014-00-PV (University Park) Project M-CMM-4003(013) Route FAU 1637 (University Parkway) District 1 Construction Funds

Reconstruct the intersection of University Parkway at Cicero Avenue to include pavement widening, resurfacing, storm sewer, curb and gutter, sidewalks, traffic signals; a pedestrian path and pavement markings, located in the Village of University Park.

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 will govern performance and payments.

- 3. **ASSURANCE OF EXAMINATION AND INSPECTION/WAIVER.** The undersigned bidder further declares that he/she has carefully examined the proposal, plans, specifications, addenda 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 bid proposal he/she waives all right to plead any misunderstanding regarding the same.
- 4. **EXECUTION OF CONTRACT AND CONTRACT BOND.** The undersigned bidder 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, or as specified in the special provisions, 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>A</u>	mount o	of Bid	Proposal <u>Guaranty</u>	<u>Am</u>	ount c		roposal luaranty
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\$	3400,000
\$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\$	000,008
\$1,000,000	to	\$1,500,000	\$50,000	\$30,000,000	to	\$35,000,000\$	3900,000
\$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 bid proposals will be made payable to the Treasurer, State of Illinois.

If a combination bid is submitted, the proposal guaranties which accompany the individual bid 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 will fail to execute a contract bond as required herein, it is hereby	y agreed that the amount of	the proposal guaranty will become the
property of the State of Illinois, and shall be considered as payment of damages due	e to delay and other causes	s suffered by the State because of the
failure to execute said contract and contract bond; otherwise, the bid bond will bec	ome void or the proposal	guaranty check will be returned to the
undersigned.		

undersigned.		sine told of the proposal guaranty officer will be foldined to the
Attach Cashier's C	heck or Certif	ied Check Here
In the event that one proposal guaranty check is intended to cover two of the proposal guaranties which would be required for each individual proposal, state below where it may be found.		
The proposal guaranty check will be found in the bid proposal for:	Item	
	Section No.	
	County	

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

6.	following the comb proportion	combination bid not to the total contraction to the bic contraction	OS. The undersigned bidder further agrees that if awarded the on, he/she will perform the work in accordance with the requirement specified in the schedule below, and that the combination bid is submitted for the same. If an error is found to exist in the gross a combination, the combination bid shall be corrected as provide	ents of each individual contract comprising shall be prorated against each section in s sum bid for one or more of the individual
			combination bid is submitted, the schedule below must be cong the combination.	mpleted in each proposal
			te bids are submitted for one or more of the sections compri- tion bid must be submitted for each alternate.	sing the combination, a
			Schedule of Combination Bids	
Со	mbination No.	l	Sections Included in Combination	Combination Bid Dollars Cents
	110.		Geotions included in Combination	Donais Cents
7.	schedule all extens schedule is an erro will be man The sche provided	of prices f sions and are approx or in the ex ade only for eduled qual elsewhere	RICES. The undersigned bidder submits herewith, in accordant or the items of work for which bids are sought. The unit prices I summations have been made. The bidder understands that ximate and are provided for the purpose of obtaining a gross surtension of the unit prices, the unit prices will govern. Payment to ractual quantities of work performed and accepted or materials ntities of work to be done and materials to be furnished may be in the contract.	bid are in U.S. dollars and cents, and the quantities appearing in the bid in for the comparison of bids. If there is the contractor awarded the contract is furnished according to the contract. Increased, decreased or omitted as
8.	500/20-43	3) provides	O BUSINESS IN ILLINOIS. Section 20-43 of the Illinois Proceeds that a person (other than an individual acting as a sole proprieto state of Illinois prior to submitting the bid.	
9.	Departme and make Purchasin Neither	ent procure e payments ng Officer the CPO i	CONTRACT: The Department of Transportation will, in accements, execute the contract and shall be the sole entity having a under the contract. Execution of the contract by the Chief Pro (SPO) is for approval of the procurement process and execution or the SPO shall be responsible for administration of the coment there under except as otherwise permitted in the Code.	the authority to accept performance ocurement Officer (CPO) or the State n of the contract by the Department.
10.	The serv	ices of a s	subcontractor will be used.	
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	their		contractors with subcontracts with an annual value of more than fress, general type of work to be performed, and the dollar allocat 0-120)	

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CONTRACT NOMBER	UNIT OF MEASURE	ACRE	POUND	1		I	SQ YD	l	POUND			l !	SQ YD		CU YD	SQ YD
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ECMS002 DTGECM03 ECMR003 PAGE	RUN DATE - 05/12/14	RUN TIME - 183144
ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF PRICES	CONTRACT NUMBER - 63709
	96-00014-00-PV (UNIVERSITY PK)	WILL

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# NOTE:

- EACH PAY ITEM SHOULD HAVE A UNIT PRICE AND A TOTAL PRICE
- 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. 2
- IF A UNIT PRICE IS OMITTED, THE TOTAL PRICE WILL BE DIVIDED BY THE QUANTITY IN ORDER ESTABLISH A UNIT PRICE. . თ
- A BID MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN. 4

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

#### I. GENERAL

- **A.** Article 50 of the Code establishes the duty of all State CPOs, SPOs, 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. Except as otherwise required in subsection III, paragraphs J-M, by execution of the Proposal Signature Sheet, the bidder indicates that each of the mandated assurances have 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 the CPO to void the contract, and may result in the suspension or debarment of the bidder or subcontractor. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

	I acknowledge.	understand and	accept these	terms and	conditions.
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#### II. ASSURANCES

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.

#### A. Conflicts of Interest

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 State 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 State 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 \$177,412.00. Sixty percent of the salary is \$106,447.20.

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. Information concerning the exemption process is available from the Department upon request.

#### B. Negotiations

Section 50-15. Negotiations.

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.

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.

#### C. Inducements

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.

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.

#### D. Revolving Door Prohibition

Section 50-30. Revolving door prohibition.

CPOs, SPOs, procurement compliance monitors, 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.

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.

#### E. Reporting Anticompetitive Practices

Section 50-40. Reporting anticompetitive practices.

When, for any reason, any vendor, bidder, contractor, CPO, SPO, 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 CPO.

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.

#### F. Confidentiality

Section 50-45. Confidentiality.

Any CPO, SPO, 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.

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.

#### G. Insider Information

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.

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.

☐ I acknowledge, understand and accept these terms and conditions for the above assurances.

#### **III. CERTIFICATIONS**

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. Section 50-2 of the Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible CPO whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

#### A. Bribery

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, or subcontracting under such a contract, 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, or which is signatory to the contract which the subcontract relates, 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 2012.
- (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, and every subcontract subject to Section 20-120 of the Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50.5.

#### B. Felons

Section 50-10. Felons.

- (a) Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, 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.
- (b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any of the certifications required by this Section are false.

#### C. Debt Delinquency

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

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

#### D. Prohibited Bidders, Contractors and Subcontractors

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, 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 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontract is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

#### E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code 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 bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

#### F. Educational Loan

Section 3 of the Educational Loan Default Act provides 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.

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.

#### G. Bid-Rigging/Bid Rotating

Section 33E-11 of the Criminal Code of 2012 provides:

- (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.
- (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.

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.

#### H. International Anti-Boycott

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

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

#### I. Drug Free Workplace

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.

The bidder certifies that if awarded a contract in excess of \$5,000 it will provide a drug free workplace in compliance with the provisions of the

#### J. Disclosure of Business Operations in Iran

Section 50-36 of the Code, 30ILCS 500/50-36 provides that each bid, offer, or proposal submitted for a State contract shall include a disclosure of whether or not the Company acting as the bidder, offeror, or proposing entity, or any of its corporate parents or subsidiaries, within the 24 months before submission of the bid, offer, or proposal had business operations that involved contracts with or provision of supplies or services to the Government of Iran, companies in which the Government of Iran has any direct or indirect equity share, consortiums or projects commissioned by the Government of Iran and either of the following conditions apply:

- (1) More than 10% of the Company's revenues produced in or assets located in Iran involve oil-related activities or mineral-extraction activities; less than 75% of the Company's revenues produced in or assets located in Iran involve contracts with or provision of oil-related or mineral-extraction products or services to the Government of Iran or a project or consortium created exclusively by that government; and the Company has failed to take substantial action.
- (2) The Company has, on or after August 5, 1996, made an investment of \$20 million or more, or any combination of investments of at least \$10 million each that in the aggregate equals or exceeds \$20 million in any 12-month period, which directly or significantly contributes to the enhancement of Iran's ability to develop petroleum resources of Iran.

The terms "Business operations", "Company", "Mineral-extraction activities", "Oil-related activities", "Petroleum resources", and "Substantial action" are all defined in the Code.

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

Check the appro	priate statement:
//	Company has no business operations in Iran to disclose.
/ /	Company has business operations in Iran as disclosed the attached document.

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

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

NA-FEDERAL		

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

#### L. Political Contributions and Registration with the State Board of Elections

Sections 20-160 and 50-37 of the Code regulate political contributions from business entities and any affiliated entities or affiliated persons bidding on or contracting with the state. Generally under Section 50-37, any business entity, and any affiliated entity or affiliated person of the business entity, whose current year contracts with all state agencies exceed an awarded value of \$50,000, are prohibited from making any contributions to any political committees established to promote the candidacy of the officeholder responsible for the awarding of the contracts or any other declared candidate for that office for the duration of the term of office of the incumbent officeholder or a period 2 years after the termination of the contract, whichever is longer. Any business entity and affiliated entities or affiliated persons whose state contracts in the current year do not exceed an awarded value of \$50,000, but whose aggregate pending bids and proposals on state contracts exceed \$50,000, either alone or in combination with contracts not exceeding \$50,000, are prohibited from making any political contributions to any political committee established to promote the candidacy of the officeholder responsible for awarding the pending contract during the period beginning on the date the invitation for bids or request for proposals is issued and ending on the day after the date of award or selection if the entity was not awarded or selected. Section 20-160 requires certification of registration of affected business entities in accordance with procedures found in Section 9-35 of The Election Code.

By submission of a bid, the contractor business entity acknowledges and agrees that it has read and understands Sections 20-160 and 50-37 of the Code, and that it makes the following certification:

The undersigned bidder certifies that it has registered as a business with the State Board of Elections and acknowledges a continuing duty to update the registration in accordance with the above referenced statutes. If the business entity is required to register, the CPO shall verify that it is in compliance on the date the bid or proposal is due. The CPO shall not accept a bid or proposal if the business entity is not in compliance with the registration requirements.

These requirements and compliance with the above referenced statutory sections are a material part of the contract, and any breach thereof shall be cause to void the contract under Section 50-60 of the Code. This provision does not apply to Federal-aid contracts.

#### M. Lobbyist Disclosure

Section 50-38 of the Code requires that any bidder or offeror on a State contract that hires a person required to register under the Lobbyist Registration Act to assist in obtaining a contract shall:

- (i) Disclose all costs, fees, compensation, reimbursements, and other remunerations paid or to be paid to the lobbyist related to the contract,
- (ii) Not bill or otherwise cause the State of Illinois to pay for any of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration, and
- (iii) Sign a verification certifying that none of the lobbyist's costs, fees, compensation, reimbursements, or other remuneration were billed to the State.

This information, along with all supporting documents, shall be filed with the agency awarding the contract and with the Secretary of State. The CPO shall post this information, together with the contract award notice, in the online Procurement Bulletin.

Pursuant to Subsection (c) of this Section, no person or entity shall retain a person or entity to attempt to influence the outcome of a procurement decision made under the Code for compensation contingent in whole or in part upon the decision or procurement. Any person who violates this subsection is guilty of a business offense and shall be fined not more than \$10,000.

Bidder acknowledges that it is required to disclose the hiring of any person required to register pursuant to the Illinois Lobbyist Registration Act (25 ILCS 170) in connection with this contract.

	Bidder has not hired any person required to register pursuant to the Illinois Lobbyist Registration Act in connection with this contract.
Or	
	Bidder has hired the following persons required to register pursuant to the Illinois Lobbyist Registration Act in connection with the contract:
	l address of person:ees, compensation, reimbursements and other remuneration paid to said person:
☐ Lackn	owledge, understand and accept these terms and conditions for the above certifications.

#### 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 bidder further certifies that the Department has received the disclosure forms for each bid.

The CPO may void the bid, or contract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Code. Furthermore, the CPO may void the contract 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 Code provides that all bids of more than \$25,000 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, filed with the Procurement Policy Board, and shall be incorporated as a material term of the contract. Furthermore, pursuant to Section 5-5, the Procurement Policy Board may review a proposal, bid, or contract and issue a recommendation to void a contract or reject a proposal or bid based on any violation of the Code or the existence of a conflict of interest as provided in subsections (b) and (d) of Section 50-35.

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 200 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.

The current annual salary of the Governor is \$177,412.00.

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. <u>Disclosure Forms</u>. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification. **The forms must be included with each bid.** 

#### C. Disclosure Form Instructions

#### Form A Instructions for Financial Information & Potential Conflicts of Interest

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 200 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 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 60% of the annual salary of the Governor? YES NO
3.	Does anyone in your organization receive more than 60% of the annual salary of the Governor of the bidding entity's or parent entity's 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 60% of the annual salary of the Governor? YES NO
	(Note: Only one set of forms needs to be completed <u>per person per bid</u> 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 <u>NOT APPLICABLE STATEMENT</u> of Form A must be signed and dated by a person that is authorized to execute contracts for your company.

#### Form B: Instructions for Identifying Other Contracts & Procurement Related Information

Disclosure Form B must be completed for each bid submitted by the bidding entity. *Note: Checking the <u>NOT APPLICABLE STATEMENT</u> on Form A <u>does not</u> allow the bidder to ignore Form B. Form B must be completed, checked, and dated or the bidder may be considered nonresponsive and the bid will not be accepted.* 

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

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

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

# **ILLINOIS DEPARTMENT** OF TRANSPORTATION

### Form A **Financial Information & Potential Conflicts of Interest Disclosure**

Contractor Name		
Legal Address		
O'the Otate 7's		
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 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 \$25,000, 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.

The current annual salary of the Governor is \$177,412.00.

#### 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 60% of the annual salary of the Governor. (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 owner	rship/distributable income share	:	
	stock	sole proprietorship	Partnership	other: (explain on separate sheet):
	% or \$ value of	f ownership/distributable income sh	are:	

- 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 ves. please answer each of the following questions.

- 1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Yes \_\_\_No \_\_ Toll Highway Authority?
- 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 60% of the annual salary of the Governor provide the name the State agency for which you are employed and your annual salary.

3.	If you are currently appointed to or employed by any agency of the Salary exceeds 60% of the annual salary of the Governor, are you e (i) more than 7 1/2% of the total distributable income of your firm corporation, or (ii) an amount in excess of 100% of the annual salary	ntitled to receive n, partnership, association or
4.	If you are currently appointed to or employed by any agency of the Salary exceeds 60% of the annual salary of the Governor, are you a or minor children entitled to receive (i) more than 15% in aggregate of your firm, partnership, association or corporation, or (ii) an amour salary of the Governor?	nd your spouse of the total distributable income
	employment of spouse, father, mother, son, or daughter, including con previous 2 years.	
If your	answer is yes, please answer each of the following questions.	YesNo
1.	Is your spouse or any minor children currently an officer or employee Board or the Illinois State Toll Highway Authority?	of the Capitol Development YesNo
2.	Is your spouse or any minor children currently appointed to or employ of Illinois? If your spouse or minor children is/are currently appointed agency of the State of Illinois, and his/her annual salary exceeds 60 annual salary of the Governor, provide the name of the spouse and/of the State agency for which he/she is employed and his/her annual	d to or employed by any 0% of the or minor children, the name
3.	If your spouse or any minor children is/are currently appointed to or estate of Illinois, and his/her annual salary exceeds 60% of the annual are you entitled to receive (i) more than 71/2% of the total distributable firm, partnership, association or corporation, or (ii) an amount in excannual salary of the Governor?	I salary of the Governor, e income of your
4.	If your spouse or any minor children are currently appointed to or er State of Illinois, and his/her annual salary exceeds 60% of the annual and your spouse or any minor children entitled to receive (i) more that aggregate of the total distributable income from your firm, partnership (ii) an amount in excess of two times the salary of the Governor?	salary of the Governor, are you an 15% in the
		Yes No
unit of	e status; the holding of elective office of the State of Illinois, the govern government authorized by the Constitution of the State of Illinoic currently or in the previous 3 years.	
	nship to anyone holding elective office currently or in the previous 2 ye daughter.	ears; spouse, father, mother, YesNo
Americ of the S	tive office; the holding of any appointive government office of the State a, or any unit of local government authorized by the Constitution of the State of Illinois, which office entitles the holder to compensation in exceptage of that office currently or in the previous 3 years.	State of Illinois or the statues
	nship to anyone holding appointive office currently or in the previous 2 daughter.	years; spouse, father, mother, YesNo
(g) Employ	yment, currently or in the previous 3 years, as or by any registered lob	byist of the State government. YesNo

son, or daughter.	YesNo
(i) Compensated employment, currently or in the previous committee registered with the Secretary of State or any caction committee registered with either the Secretary of State or any or action committee registered with either the Secretary of State or any or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary of State or action committee registered with either the Secretary or action committee registered with either the secretary or action committee registered with either the secretary or action committee registered wit	county clerk of the State of Illinois, or any political
(j) Relationship to anyone; spouse, father, mother, son, or clast 2 years by any registered election or re-election comcounty clerk of the State of Illinois, or any political action State or the Federal Board of Elections.	mittee registered with the Secretary of State or any committee registered with either the Secretary of
	Yes No
Communication Disclosure.	
Section 2 of this form, who is has communicated, is comemployee concerning the bid or offer. This disclosure is a	ner agent of the bidder or offeror who is not identified in municating, or may communicate with any State officer or continuing obligation and must be promptly supplemented erm of the contract. If no person is identified, enter "None"
Name and address of person(s):	

3.

**4. Debarment Disclosure.** For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below:

Name of person(s):	
Nature of disclosure:	
Trace of dississance.	
ADDITO ADI E CTATEMENT	
APPLICABLE STATEMENT  This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Un	dor
penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of knowledge.	
Completed by:	
Signature of Individual or Authorized Representative Date	
NOT APPLICABLE STATEMENT	<u>.</u>
Under penalty of perjury, I have determined that no individuals associated with this organization the criteria that would require the completion of this Form A.	n meet
This Disclosure Form A is submitted on behalf of the CONTRACTOR listed on the previous page	е.
Signature of Authorized Representative Date	_

The bidder has a continuing obligation to supplement these disclosures under Sec. 50-35 of the Code.

# ILLINOIS DEPARTMENT OF TRANSPORTATION

# Form B Other Contracts & Financial Related Information Disclosure

	ractor Name			
Lega	al Address			
City,	State, Zip			
Tele	phone Number	Email Address	Fax Number (if available)	
This i	osure of the information contained in thi information shall become part of the pul- cess of \$25,000, and for all open-ended	olicly available contract file. This For I contracts.	m B must be completed for bids	_
	DISCLOSURE OF OTHER	CONTRACTS AND PROCUREMEN	IT RELATED INFORMATION	
has any	dentifying Other Contracts & Procure any pending contracts (including leases other State of Illinois agency: Yes_ No" is checked, the bidder only needs	s), bids, proposals, or other ongoing No	procurement relationship with	
info	f "Yes" is checked. Identify each such rmation such as bid or project number ( TRUCTIONS:			otive
ı	THE FOL	LOWING STATEMENT MUST BE	CHECKED	
	THE FOL	LOWING STATEMENT MUST BE	CHECKED	
	THE FOL	LOWING STATEMENT MUST BE	CHECKED	
	THE FOL			
			Date	
	Please certify that the following stater 100% of ownership.	Signature of Authorized Representative  OWNERSHIP CERTIFICATION	Date	ot total
	Please certify that the following stater 100% of ownership.  Any remaining ownership int	Signature of Authorized Representative  OWNERSHIP CERTIFICATION	Date  Date  Date  Date  Date  Date  Date  Date  Date	

#### **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.



**PART I. IDENTIFICATION** 

Contract No. 63709
WILL County
Section 96-00014-00-PV (University Park)
Project M-CMM-4003(013)
Route FAU 1637 (University Parkway)
District 1 Construction Funds

Dept. Human Rights #						Duration of Project:												
Name of Bidder:																		
PART II. WORKFO A. The undersigned which this contract wor projection including a p	bidder hark is to be	as analyz e perform	ed mir ed, an	d for th d fema	ne locati	ons from	n whic	h the b	idder re	cruits	employe	es, and he	rebý su	ıbmit	s the follo	owir con	ig workfo	
		TOTA	AL Wo	rkforce	Projec	tion for	Contra	ct						Cl	JRRENT		_	:S
				MINIC	ORITY I	=MDLO	VEEC			TD	AINEES				TO BE			
JOB	TO	TAL		IVIIIV	I	_IVIF LO	*OTF	HER	APPF			HE JOB		TOT	ΓAL		MINO	RITY
CATEGORIES		OYEES		ACK	HISP		MIN	_	TIC			INEES			DYEES	ļ	EMPLO	
OFFICIALS (MANAGERS)	M	F	M	F	М	F	M	F	M	F	М	F	M	1	F		М	<u> </u>
SUPERVISORS																		
FOREMEN																		
CLERICAL																İ		
EQUIPMENT OPERATORS																•		
MECHANICS																		
TRUCK DRIVERS																		
IRONWORKERS																		
CARPENTERS																		
CEMENT MASONS																		
ELECTRICIANS																		
PIPEFITTERS, PLUMBERS																		
PAINTERS																		
LABORERS, SEMI-SKILLED LABORERS,																		
UNSKILLED																		
TOTAL		1.50																
Т	OTAL Tra	BLE C	niactio	n for C	ontract				7			FOR	DEPAF	RTME	ENT USE	ON	ILY	
EMPLOYEES		TAL	Jectio	11 101 0	Ontract		*OT	HER	1									
IN		OYEES	BLA	ACK	HISP	ANIC	_	NOR.										
TRAINING	М	F	М	F	М	F	М	F										
APPRENTICES																		
ON THE JOB TRAINEES																		

Note: See instructions on page 2

BC 1256 (Rev. 12/11/07)

\*Other minorities are defined as Asians (A) or Native Americans (N).
Please specify race of each employee shown in Other Minorities column.

Contract No. 63709
WILL County
Section 96-00014-00-PV (University Park)
Project M-CMM-4003(013)
Route FAU 1637 (University Parkway)
District 1 Construction Funds

#### PART II. WORKFORCE PROJECTION - continued

B.	Included in "Total Employees" under Table A is the total event the undersigned bidder is awarded this contract.	number of <b>new hires</b> tha	at would be employed in the						
	The undersigned bidder projects that: (number)		new hires would be						
	recruited from the area in which the contract project is lonew hires would	cated; and/or (number)	ea in which the bidder's principal						
	office or base of operation is located.		·						
C.	C. Included in "Total Employees" under Table A is a projection of numbers of persons to be employed dire undersigned bidder as well as a projection of numbers of persons to be employed by subcontractors.								
	The undersigned bidder estimates that (number) be directly employed by the prime contractor and that (number) employed by subcontractors.	umber)	persons will be						
PART II	III. AFFIRMATIVE ACTION PLAN								
	The undersigned bidder understands and agrees that is utilization projection included under <b>PART II</b> is determined in any job category, and in the event that the undersign commencement of work, develop and submit a writte (geared to the completion stages of the contract) who utilization are corrected. Such Affirmative Action Plant the <b>Department of Human Rights</b> .	ed to be an underutilizat ned bidder is awarded n Affirmative Action Pla nereby deficiencies in n	ion of minority persons or women this contract, he/she will, prior to an including a specific timetable ninority and/or female employee						
	The undersigned bidder understands and agrees that the submitted herein, and the goals and timetable included uto be part of the contract specifications.								
Compa	pany	Telephone Numb	er						
Addres									
	NOTICE REGARDING	G SIGNATURE							
	Bidder's signature on the Proposal Signature Sheet will constitut completed only if revisions are required.	e the signing of this form.	The following signature block needs						
Signatu	uture:	Title:	Date:						
Instruction	tions: All tables must include subcontractor personnel in addition to	prime contractor personnel.							
Table A	A - Include both the number of employees that would be hired (Table B) that will be allocated to contract work, and include should include all employees including all minorities, apprentic	all apprentices and on-the-job	trainees. The "Total Employees" column						
Table B	<ul> <li>Include all employees currently employed that will be allocate currently employed.</li> </ul>	d to the contract work includin	g any apprentices and on-the-job trainees						
Table C	C - Indicate the racial breakdown of the total apprentices and on-	the-job trainees shown in Tabl	e A.						
			DO 1050 (D 10111107)						

## **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. <u>CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY:</u>

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

Contract No. 63709
WILL County
Section 96-00014-00-PV (University Park)
Project M-CMM-4003(013)
Route FAU 1637 (University Parkway)
District 1 Construction Funds

#### PROPOSAL SIGNATURE SHEET

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

	Firm Name	
(IF AN INDIVIDUAL)		
	Firm Name	
(IF A CO-PARTNERSHIP)		
(II / CO I / II I I I I I I I I I I I I I I I I	Basilless Address	
		Name and Address of All Members of the Firm:
-		
	Corporate Name	
	Ву	Signature of Authorized Representative
(IF A CORPORATION)		
		Typed or printed name and title of Authorized Representative
	Attact	
	Allesi	Signature
(IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE	Business Address	
SECOND PARTY SHOULD SIGN BELOW)		
	Corporate Name	
	Ву	
(IF A JOINT VENTURE)		Signature of Authorized Representative
		Typed or printed name and title of Authorized Representative
	Attest	Signature
	Business Address	
	200000 / 100.000	
If more than two parties are in the joint venture,	please attach an addit	ional signature sheet.

# **Return with Bid**



# Division of Highways Annual Proposal Bid Bond

This Annual Proposal Bid Bond shall become effective at 12:01 AM (CDST) on	and shall be valid until 11:59 PM (CDST).
KNOW ALL PERSONS BY THESE PRESENTS, That We	
as PRINCIPAL, and	
price, or for the amount specified in the bid proposal under "	ne STATE OF ILLINOIS in the penal sum of 5 percent of the total bid 'Proposal Guaranty" in effect on the date of the Invitation for Bids, d STATE OF ILLINOIS, for the payment of which we bind ourselves,
	SUCH that whereas, the PRINCIPAL may submit bid proposal(s) to tof Transportation, for various improvements published in the e.
the time and as specified in the bidding and contract document into a contract in accordance with the terms of the bidding ar coverages and providing such bond as specified with good and the prompt payment of labor and material furnished in the prosenter into such contract and to give the specified bond, the P penalty hereof between the amount specified in the bid propo	d proposal(s) of the PRINCIPAL; and if the PRINCIPAL shall, within its; and if, after award by the Department, the PRINCIPAL shall enter and contract documents including evidence of the required insurance I sufficient surety for the faithful performance of such contract and for secution thereof; or if, in the event of the failure of the PRINCIPAL to RINCIPAL pays to the Department the difference not to exceed the sal and such larger amount for which the Department may contract oposal, then this obligation shall be null and void, otherwise, it shall
preceding paragraph, then Surety shall pay the penal sum to t Surety does not make full payment within such period of time	PAL has failed to comply with any requirement as set forth in the he Department within fifteen (15) days of written demand therefor. If e, the Department may bring an action to collect the amount owed. If attorney's fees, incurred in any litigation in which it prevails either in
In TESTIMONY WHEREOF, the said PRINCIPAL has caused this instrument to be signed by its officer day of A.D.,	In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer  day of A.D.,
(Company Name)	(Company Name)
Ву	Ву
(Signature and Title)	(Signature of Attorney-in-Fact)
Notary for PRINCIPAL	Notary for SURETY
STATE OF	STATE OF
COUNTY OF	COUNTY OF
Signed and attested before me on (date)	Signed and attested before me on (date)
by	
(Name of Notary Public)	(Name of Notary Public)
(Seal) (Signature of Notary Public)	(Seal) (Signature of Notary Public)
(Date Commission Expires)	(Date Commission Expires)

signing the proposal(s) 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.

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

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

This bond may be terminated, at Surety's request, upon giving not less than thirty (30) days prior written notice of the cancellation/termination of the bond. Said written notice shall be issued to the Illinois Department of Transportation, Chief Contracts Official, 2300 South Dirksen Parkway, Springfield, Illinois, 62764, and shall be served in person, by receipted courier delivery or certified or registered mail, return receipt requested. Said notice period shall commence on the first calendar day following the Department's receipt of written cancellation/termination notice. Surety shall remain firmly bound to all obligations herein for proposals submitted prior to the cancellation/termination. Surety shall be released and discharged from any obligation(s) for proposals submitted for any letting or date after the effective date of cancellation/termination.

# Illinois Department of Transportation

# **Return with Bid**

# Division of Highways Proposal Bid Bond

		Item No.	
		Letting Date	te
(NOW ALL PERSONS BY TH	HESE PRESENTS, That We		
as PRINCIPAL, and			
he amount specified in the bi	y, severally and firmly bound unto the ST d proposal under "Proposal Guaranty" in STATE OF ILLINOIS, for the payment of	effect on the date of the Invitation for	or Bids, whichever is the lesser sum, wel
	FOREGOING OBLIGATION IS SUCH the Expartment of Transportation, for the improper transportation for the Expartment of Transportation, for the Improvement of Transportation for Improvement of Improvement		
specified in the bidding and count the terms of the bidding a with good and sufficient sure prosecution thereof; or if, in the pays to the Department the difference of the properties of the Department the difference of the Department the De	e Department shall accept the bid propo ontract documents; and if, after award b and contract documents including evidenc ty for the faithful performance of such one event of the failure of the PRINCIPAL iference not to exceed the penalty hereof intract with another party to perform the volume	y the Department, the PRINCIPAL ce of the required insurance coverage contract and for the prompt payment to enter into such contract and to between the amount specified in the	shall enter into a contract in accordance ges and providing such bond as specified nt of labor and material furnished in the give the specified bond, the PRINCIPAL bid proposal and such larger amount fo
hen Surety shall pay the pen vithin such period of time, the	tment determines the PRINCIPAL has fatal sum to the Department within fifteen be Department may bring an action to collected in any litigation in which it prevails eit	(15) days of written demand thereforect the amount owed. Surety is liable	or. If Surety does not make full paymen
n TESTIMONY WHEREO caused this instrument to b day of	F, the said PRINCIPAL has be signed by its officer A.D.,	In TESTIMONY WHEREOF, instrument to be signed by it day of	the said SURETY has caused this sofficer  A.D.,
(Com	pany Name)		npany Name)
	party Name)	·	npany Name)
By(Sig	nature and Title)	By(Signatu	re of Attorney-in-Fact)
lotary for PRINCIPAL		Notary for SURETY	
STATE OF		STATE OF	
COUNTY OF	_	COUNTY OF	
Gigned and attested before	e me on (date)	Signed and attested before r	me on (date)
(Name o	f Notary Public)	(Name o	of Notary Public)
Seal)		(Seal)	
•	(Signature of Notary Public)	· ·	(Signature of Notary Public)
	(Date Commission Expires)	-	(Date Commission Expires)
proposal the Principal is e	pove section of the Proposal Bid Bon ensuring the identified electronic bid nois under the conditions of the bid b	I bond has been executed and	

Company/Bidder Name

Electronic Bid Bond ID #

Signature and Title



#### **DBE Utilization Plan**

#### (1) Policy

It is public policy that disadvantaged businesses as defined in 49 CFR Part 26 and the Special Provision shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal or State funds. Consequently the requirements of 49 CFR Part 26 apply to this contract.

#### (2) Obligation

Date

The contractor agrees to ensure that disadvantaged businesses as defined in 49 CFR Part 26 and the Special Provision have the maximum opportunity to participate in the performance of contracts or subcontracts financed in whole or in part with Federal or State funds. The contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 and the Special Provision to ensure that said businesses have the maximum opportunity to compete for and perform under this contract. The contractor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts.

(3) Pro	ject and Bid Identification			
Complet	te the following information concerning the project and bid:			
Route		Total Bid		_
Section		Contract DBE Goal		
Project			(Percent)	(Dollar Amount)
County				
Letting [	Date			
Contrac	t No.			
Letting I	Item No.			
(4) Ass	surance			
	in my capacity as an officer of the undersigned bidder (or bidding company: (check one)  Meets or exceeds contract award goals and has provided do Disadvantaged Business Participation percent  Attached are the signed participation statements, forms SBE use of each business participating in this plan and assuring the work of the contract.  Failed to meet contract award goals and has included good for provided participation as follows:  Disadvantaged Business Participation percent  The contract goals should be accordingly modified or waiv support of this request including good faith effort. Also a required by the Special Provision evidencing availability and	cumented participation as fort  2025, required by the Spectat each business will perfort aith effort documentation to the ed. Attached is all informattached are the signed participation.	cial Provision evident a commercial meet the goals a stion required by articipation state	dencing availability and ly useful function in the and that my company has the Special Provision in the ments, forms SBE 2025,
	business will perform a commercially useful function in the wo			
Bv	Company	The "as read" Low Bidder is re		•
•		Submit only one utilization pla submitted in accordance with		
Title		Bureau of Small Business Ent	erprises	Local Let Projects

The Department of Transportation is requesting disclosure of information that is necessary to accomplish the purpose as outlined under State and Federal law. Disclosure of this information is **REQUIRED**. Failure to provide any information will result in the contract not being awarded. This form has been approved by the State Forms Manager Center.

2300 South Dirksen Parkway

Springfield, Illinois 62764

Submit forms to the

Local Agency



# **DBE Participation Statement**

	•						
Subcontractor	r Registration Number	Letting					
Participation	Statement		Item No.				
(1) Instruction	าร		Contract No.				
	st be completed for each disadvantaged busines: vith the special provision and will be attached to t n for the firm.						
(2) Work:							
Please indica	te: J/V Manufacturer	Supplier (60%)	Subcon	tractor	Trucking		
Pay Item No.	Description		Quantity	Unit Price	Total		
				l Total			
	yment Items (For any of the above items which a ust be sufficient to determine a Commercially Usefu				et dollar amount:		
Boothpaon	active comments to determine a commencial, cools	ii r unotion, opoon	iodily docorroo the t	von and odpooning	or donar arribarri		
	ent is to be a second-tier subcontractor, or if the first t must be clearly indicated on the DBE Participat						
	DBE subcontractor second-tiers a portion of its			•	•		
	orime must submit a DBE Participation Statemen						
perform a con contractor or	ned certify that the information included herein is nmercially useful function in the work of the contr 1 <sup>st</sup> Tier subcontractor. The undersigned further u	ract item(s) listed understand that r	d above and to exe no changes to this	cute a contract wit statement may be	h the prime made without		
	from the Department's Bureau of Small Busines erformed on this project and the payment therefo				ation regarding		
aotaa wom p	one med on the project and the payment thereof	no maor do provi	idod to the Doparti				
Sigr	nature for Contractor 1 <sup>st</sup> Tier 2 <sup>nd</sup> Tier		Signature for D	BE Firm 1 <sup>st</sup> Tier	2 <sup>nd</sup> Tier		
Title		Title					
Date		Date					
Contact Pers	on	Cont	act Person				
Phone		Phor	ıΔ				
Firm Name		Firm	Nama				
Address		Addr	ess				
City/State/Zip		City/S					
		ŕ		E			
The Department of Tr	ansportation is requesting disclosure of information that is necessary to acco	mnlish the statutory purpo	ose as outlined under the stat	e and WC			
federal law. Disclosur	an spondator in sequesting obscission of information that is necessary to according to the original of the sequestion of	esult in the contract not be	ing awarded. This form has t	peen			

# PROPOSAL ENVELOPE



# **PROPOSALS**

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

Item No.	Item No.	Item No.

### Submitted By:

lame:	
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. 63709
WILL County
Section 96-00014-00-PV (University Park)
Project M-CMM-4003(013)
Route FAU 1637 (University Parkway)
District 1 Construction Funds



# **SUBCONTRACTOR DOCUMENTATION**

Public Acts 96-0795, 96-0920, and 97-0895 enacted substantial changes to the provisions of the Code (30 ILCS 500). Among the changes are provisions affecting subcontractors. The Contractor awarded this contract will be required as a material condition of the contract to implement and enforce the contract requirements applicable to subcontractors that entered into a contractual agreement with a total value of \$50,000 or more with a person or entity who has a contract subject to the Code and approved in accordance with article 108.01 of the Standard Specifications for Road and Bridge Construction.

If the Contractor seeks approval of subcontractors to perform a portion of the work, and approval is granted by the Department, the Contractor shall provide a copy of the subcontract to the Illinois Department of Transportation's CPO upon request within 15 calendar days after execution of the subcontract.

Financial disclosures required pursuant to Sec. 50-35 of the Code must be submitted for all applicable subcontractors. The subcontract shall contain the certifications required to be made by subcontractors pursuant to Article 50 of the Code. This Notice to Bidders includes a document incorporating all required subcontractor certifications and disclosures for use by the Contractor in compliance with this mandate. The document is entitled <u>State Required Ethical Standards Governing Subcontractors</u>.

# STATE ETHICAL STANDARDS GOVERNING SUBCONTRACTORS

Article 50 of the Code establishes the duty of all State CPOs, SPOs, 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.

The certifications hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed should the Department approve the subcontractor. The CPO may terminate or void the contract approval if it is later determined that the bidder or subcontractor rendered a false or erroneous certification. If a false certification is made by a subcontractor the contractor's submitted bid and the executed contract may not be declared void unless the contractor refuses to terminate the subcontract upon the State's request after a finding that the subcontractor's certification was false.

Section 50-2 of the Code provides that every person that has entered into a multi-year contract and every subcontractor with a multi-year subcontract shall certify, by July 1 of each fiscal year covered by the contract after the initial fiscal year, to the responsible CPO whether it continues to satisfy the requirements of Article 50 pertaining to the eligibility for a contract award. If a contractor or subcontractor is not able to truthfully certify that it continues to meet all requirements, it shall provide with its certification a detailed explanation of the circumstances leading to the change in certification status. A contractor or subcontractor that makes a false statement material to any given certification required under Article 50 is, in addition to any other penalties or consequences prescribed by law, subject to liability under the Whistleblower Reward and Protection Act for submission of a false claim.

#### A. Bribery

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, or subcontracting under such a contract, 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, or which is signatory to the contract to which the subcontract relates, 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 2012.
- (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, and every subcontract subject to Section 20-120 of the Code shall contain a certification by the contractor or the subcontractor, respectively, that the contractor or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any certifications required by this Section are false. A contractor who makes a false statement, material to the certification, commits a Class 3 felony.

The contractor or subcontractor certifies that it is not barred from being awarded a contract under Section 50.5.

#### B. Felons

Section 50-10. Felons.

- (a) Unless otherwise provided, no person or business convicted of a felony shall do business with the State of Illinois or any State agency, or enter into a subcontract, 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.
- (b) Certification. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder or contractor or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO may declare the related contract void if any of the certifications required by this Section are false.

#### C. <u>Debt Delinquency</u>

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

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

#### D. Prohibited Bidders, Contractors and Subcontractors

Section 50-10.5 and 50-60(c). Prohibited bidders, contractors and subcontractors.

The bidder or contractor or subcontractor, respectively, 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 or if in violation of Subsection (c) for a period of five years from the date of conviction. Every bid submitted to and contract executed by the State and every subcontract subject to Section 20-120 of the Code shall contain a certification by the bidder, contractor, or subcontractor, respectively, that the bidder, contractor, or subcontractor is not barred from being awarded a contract or subcontract under this Section and acknowledges that the CPO shall declare the related contract void if any of the certifications completed pursuant to this Section are false.

#### E. Section 42 of the Environmental Protection Act

The bidder or contractor or subcontractor, respectively, certifies in accordance with 30 ILCS 500/50-14 that the bidder, contractor, or subcontractor, is not barred from being awarded a contract or entering into a subcontract under this Section which prohibits the bidding on or entering into contracts with the State of Illinois or a State agency, or entering into any subcontract, that is subject to the Code 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 bidder or contractor or subcontractor, respectively, acknowledges that the CPO may declare the contract void if this certification is false.

Name of Subcontracting Company

Authorized Officer

Date

The undersigned, on behalf of the subcontracting company, has read and

#### SUBCONTRACTOR DISCLOSURES

#### I. DISCLOSURES

**A.** The disclosures hereinafter made by the subcontractor are each a material representation of fact upon which reliance is placed. The subcontractor further certifies that the Department has received the disclosure forms for each subcontract.

The CPO may void the bid, contract, or subcontract, respectively, if it is later determined that the bidder or subcontractor rendered a false or erroneous disclosure. A contractor or subcontractor may be suspended or debarred for violations of the Code. Furthermore, the CPO may void the contract.

#### B. Financial Interests and Conflicts of Interest

1. Section 50-35 of the Code provides that all subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, shall be accompanied by disclosure of the financial interests of the subcontractor. This disclosed information for the subcontractor, will be maintained as public information subject to release by request pursuant to the Freedom of Information Act, filed with the Procurement Policy Board, and shall be incorporated as a material term of the Prime Contractor's contract. Furthermore, pursuant to this Section, the Procurement Policy Board may recommend to allow or void a contract or subcontract based on a potential conflict of interest.

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 subcontracting entity or its parent entity, whichever is less, unless the subcontractor 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 subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 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.

The current annual salary of the Governor is \$177,412.00.

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

2. <u>Disclosure Forms</u>. Disclosure Form A is attached for use concerning the individuals meeting the above ownership or distributive share requirements. A separate Disclosure Form A must be submitted with the bid for each individual meeting the above requirements. In addition, a second form (Disclosure Form B) provides for the disclosure of current or pending procurement relationships with other (non-IDOT) state agencies and a total ownership certification. **The forms must be included with each bid.** 

#### C. <u>Disclosure Form Instructions</u>

#### Form A Instructions for Financial Information & Potential Conflicts of Interest

If the subcontractor 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 subcontractor is a privately held entity that is exempt from Federal 10K reporting, but has more than 200 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 subcontractor is not subject to Federal 10K reporting, the subcontractor must determine if any individuals are required by law to complete a financial disclosure form. To do this, the subcontractor 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 subcontracting 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 60% of the annual salary of the Governor? YES NO
3.	Does anyone in your organization receive more than 60% of the annual salary of the Governor of the subcontracting entity's or parent entity's distributive income? YES NO
	(Note: Distributive income is, for these purposes, any type of distribution of profits. An annual salary is not distributive income.)
4.	Does anyone in your organization receive greater than 5% of the subcontracting entity's or parent entity's total distributive income, but which is less than 60% of the annual salary of the Governor? YES NO
	(Note: Only one set of forms needs to be completed <u>per person per subcontract</u> even if a specific individual would require a yes answer to more than one question.)
	answer to any of these questions requires the completion of Form A. The subcontractor must determine each individual in the

A "YES" answer to any of these questions requires the completion of Form A. The subcontractor must determine each individual in the subcontracting entity or the subcontracting 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 subcontractor is responsible for the accuracy of any information provided.

If the answer to each of the above questions is "NO", then the <u>NOT APPLICABLE STATEMENT</u> 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: Instructions for Identifying Other Contracts & Procurement Related Information

Disclosure Form B must be completed for each subcontract submitted by the subcontracting entity. *Note: Checking the <u>NOT APPLICABLE STATEMENT</u> on Form A <u>does not</u> allow the subcontractor to ignore Form B. Form B must be completed, checked, and dated or the subcontract will not be approved.* 

The Subcontractor shall identify, by checking Yes or No on Form B, whether it has any pending contracts, subcontracts, leases, bids, proposals, or other ongoing procurement relationship with any other (non-IDOT) State of Illinois agency. If "No" is checked, the subcontractor only needs to complete the check box on the bottom of Form B. If "Yes" is checked, the subcontractor must list all non-IDOT State of Illinois agency pending contracts, subcontracts, leases, bids, proposals, and other ongoing procurement relationships. These items may be listed on Form B or on an attached sheet(s). Contracts with cities, counties, villages, etc. are not considered State of Illinois agency contracts and are not to be included. Contracts or subcontracts with other State of Illinois agencies such as the Department of Natural Resources or the Capital Development Board must be included.

# ILLINOIS DEPARTMENT OF TRANSPORTATION

# Form A Subcontractor: Financial Information & Potential Conflicts of Interest Disclosure

Subcontractor 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 Code (30 ILCS 500). Subcontractors desiring to enter into a subcontract of a State of Illinois contract 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 subcontracts with a total value of \$50,000 or more, from subcontractors identified in Section 20-120 of the Code, and for all openended 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.

The current annual salary of the Governor is \$177,412.00.

FOR INDIVIDUAL (type or print information)

#### DISCLOSURE OF FINANCIAL INFORMATION

1. Disclosure of Financial Information. The individual named below has an interest in the SUBCONTRACTOR (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 60% of the annual salary of the Governor. (Make copies of this form as necessary and attach a separate Disclosure Form A for each individual meeting these requirements)

NAN	re-
NAM	
ADD	RESS
Туре	of ownership/distributable income share:
stock % or	sole proprietorship Partnership other: (explain on separate shee
	sure of Potential Conflicts of Interest. Check "Yes" or "No" to indicate which, if any, of the following onflict of interest relationships apply. If the answer to any question is "Yes", please attach additional describe.
(a) State e	mployment, currently or in the previous 3 years, including contractual employment of services.  YesNo
If your a	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 State Toll Highway Authority?  YesNo
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 60% of the annual salary of the Governor, provide the name the State agency for which you are employed and your annual salary.

	3.	If you are currently appointed to or employed by any agency of t salary exceeds 60% of the annual salary of the Governor, are yo (i) more than 7 1/2% of the total distributable income of your corporation, or (ii) an amount in excess of 100% of the annual salary	ou entitled to receive firm, partnership, association or
	4.	If you are currently appointed to or employed by any agency of the salary exceeds 60% of the annual salary of the Governor, are your minor children entitled to receive (i) more than 15% in the income of your firm, partnership, association or corporation, or the salary of the Governor?	ou and your spouse aggregate of the total distributable
(b)		employment of spouse, father, mother, son, or daughter, includir previous 2 years.	ng contractual employment services  YesNo
	If	your answer is yes, please answer each of the following question	
	1.	Is your spouse or any minor children currently an officer or empl Board or the Illinois State Toll Highway Authority?	oyee of the Capitol Development YesNo
		Is your spouse or any minor children currently appointed to or er of Illinois? If your spouse or minor children is/are currently agency of the State of Illinois, and his/her annual salary ex annual salary of the Governor, provide the name of your spouse of the State agency for which he/she is employed and his/her an	appointed to or employed by any ceeds 60% of the and/or minor children, the name
	3.	If your spouse or any minor children is/are currently appointed to State of Illinois, and his/her annual salary exceeds 60% of the are you entitled to receive (i) more than 71/2% of the total distribution, partnership, association or corporation, or (ii) an amount annual salary of the Governor?	nnual salary of the Governor, utable income of your
	4.	If your spouse or any minor children are currently appointed to State of Illinois, and his/her annual salary exceeds 60% of the are you and your spouse or minor children entitled to receive aggregate of the total distributable income of your firm, partner (ii) an amount in excess of two times the salary of the Governor?	nual salary of the Governor, (i) more than 15 % in the ship, association or corporation, or
<u></u>	<b>-</b> 1		YesNo
(C)	unit of	ve status; the holding of elective office of the State of Illinois, the glocal government authorized by the Constitution of the State of Illicurrently or in the previous 3 years.	
(d)		onship to anyone holding elective office currently or in the previour daughter.	s 2 years; spouse, father, mother, YesNo
(e)	Americ of the	ntive office; the holding of any appointive government office of the ca, or any unit of local government authorized by the Constitution State of Illinois, which office entitles the holder to compensation is charge of that office currently or in the previous 3 years.	of the State of Illinois or the statutes
		onship to anyone holding appointive office currently or in the previous daughter.	ous 2 years; spouse, father, mother, YesNo
(g)	Emplo	yment, currently or in the previous 3 years, as or by any registere	d lobbyist of the State government. YesNo

(h) Relationship to anyone who is or was a registered lobbyist son, or daughter.	in the previous 2 years; spouse, father, mother, YesNo
(i) Compensated employment, currently or in the previous 3 y committee registered with the Secretary of State or any contact action committee registered with either the Secretary of States	ounty clerk of the State of Illinois, or any political
(j) Relationship to anyone; spouse, father, mother, son, or data last 2 years by any registered election or re-election common county clerk of the State of Illinois, or any political action of State or the Federal Board of Elections.	ttee registered with the Secretary of State or any ommittee registered with either the Secretary of
	YesNo
Communication Disclosure.	
Disclose the name and address of each lobbyist and other a Section 2 of this form, who is has communicated, is communic employee concerning the bid or offer. This disclosure i supplemented for accuracy throughout the process and throidentified, enter "None" on the line below:	eating, or may communicate with any State officer or s a continuing obligation and must be promptly
Name and address of person(s):	

3

**4. Debarment Disclosure.** For each of the persons identified under Sections 2 and 3 of this form, disclose whether any of the following has occurred within the previous 10 years: debarment from contracting with any governmental entity; professional licensure discipline; bankruptcies; adverse civil judgments and administrative findings; and criminal felony convictions. This disclosure is a continuing obligation and must be promptly

supplemented for accuracy throughout the procurement process and term of the contract. If no person is identified, enter "None" on the line below: Name of person(s): Nature of disclosure: APPLICABLE STATEMENT This Disclosure Form A is submitted on behalf of the INDIVIDUAL named on previous page. Under penalty of perjury, I certify the contents of this disclosure to be true and accurate to the best of my knowledge. Completed by: Signature of Individual or Authorized Officer Date **NOT APPLICABLE STATEMENT** Under penalty of perjury, 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 SUBCONTRACTOR listed on the previous page. Signature of Authorized Officer Date

# ILLINOIS DEPARTMENT OF TRANSPORTATION

# Form B Subcontractor: Other Contracts & Financial Related Information Disclosure

Subcontractor Name			
Legal Address			
City, State, Zip			
Telephone Number	Email Address	Fax Number (if available)	
Disclosure of the information contained in information shall become part of the publicl a total value of \$50,000 or more, from subcontracts.	y available contract file. This Form	B must be completed for subcontracts	with
DISCLOSURE OF OTHER CONTRA	CTS, SUBCONTRACTS, AND PR	OCUREMENT RELATED INFORMATION	<u>NC</u>
1. Identifying Other Contracts & Procurement Related Information. The SUBCONTRACTOR shall identify whether it has any pending contracts, subcontracts, including leases, bids, proposals, or other ongoing procurement relationship with any other State of Illinois agency:  Yes No  If "No" is checked, the subcontractor only needs to complete the signature box on the bottom of this page.			
2. If "Yes" is checked. Identify each such information such as bid or project number (a INSTRUCTIONS:			<b>)</b>
THE FOLLO	WING STATEMENT MUST BE CH	ECKED	
•	Signature of Authorized Officer	Date	
	OWNERSHIP CERTIFICATION	<u>l</u>	
Please certify that the following statement is of ownership	s true if the individuals for all submi	tted Form A disclosures do not total 100	1%
Any remaining ownership interest is parent entity's distributive income o		than \$106,447.20 of the bidding entity's interest.	or
☐ Yes ☐ No ☐ N/A (Form	A disclosure(s) established 100% of	ownership)	

# 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. Electronic bids are to be submitted to the electronic bidding system (ics-Integrated Contractors Exchange). Paper-based bids are to be submitted to the Chief Procurement Officer for the Department of Transportation in care of the Chief Contracts Official at the Harry R. Hanley Building, 2300 South Dirksen Parkway, in Springfield, Illinois until 10:00 o'clock a.mJune 13, 2014. 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. 63709
WILL County
Section 96-00014-00-PV (University Park)
Project M-CMM-4003(013)
Route FAU 1637 (University Parkway)
District 1 Construction Funds

Reconstruct the intersection of University Parkway at Cicero Avenue to include pavement widening, resurfacing, storm sewer, curb and gutter, sidewalks, traffic signals; a pedestrian path and pavement markings, located in the Village of University Park.

- 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

Ann L. Schneider, Secretary

#### CONTRACT 63709

# INDEX FOR SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS

#### Adopted January 1, 2014

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

ERRATA Standard Specifications for Road and Bridge Construction (Adopted 1-1-12) (Revised 1-1-14)

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14		Pavement and Shoulder Resurfacing (Eff. 2-1-00) (Rev. 1-1-09)	
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31	Х		
32		Digital Terrain Modeling for Earthwork Calculations (Eff. 4-1-07)	
33	Х		
34		Preventive Maintenance – Bituminous Surface Treatment (Eff. 1-1-09) (Rev. 1-1-12)	
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37		Preventive Maintenance – Slurry Seal (Eff. 1-1-09) (Rev. 1-1-12)	
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LR 102-2 LR 105 LR 107-2 LR 107-4 LR 107-7 LR 108 LR 109 LR 212	187 190	Bidding Requirements and Conditions for Contract Proposals Cooperation with Utilities Railroad Protective Liability Insurance for Local Lettings Insurance Wages of Employees on Public Works Combination Bids Equipment Rental Rates Shaping Roadway	Jan. 1, 2001 Jan. 1, 1999 Mar. 1, 2005 Feb. 1, 2007 Jan. 1, 1999 Jan. 1, 1994 Jan. 1, 2012 Aug. 1, 1969	Jan. 1, 2014 Jan. 1, 2007 Jan. 1, 2006 Aug. 1, 2007 Jan. 1, 2014 Mar. 1, 2005 Jan. 1, 2002
LR 355-1 LR 355-2 LR 400-1 LR 400-2 LR 400-3 LR 400-4		Bituminous Stabilized Base Course, Road Mix or Traveling Plant Mix Bituminous Stabilized Base Course, Plant Mix Bituminous Treated Earth Surface Bituminous Surface Plant Mix (Class B) Hot In-Place Recycling (HIR) – Surface Recycling Full-Depth Reclamation (FDR) with Emulsified Asphalt	Oct. 1, 1973 Feb. 20, 1963 Jan. 1, 2007 Jan. 1, 2008 Jan. 1, 2012 Apr. 1, 2012	Jan. 1, 2007 Jan. 1, 2007 Apr. 1, 2012 Jun. 1, 2012
LR 400-5 LR 400-6 LR 400-7 LR 402 LR 403-1		Cold In-Place Recycling (CIR) With Emulsified Asphalt Cold In Place Recycling (CIR) with Foamed Asphalt Full-Depth Reclamation (FDR) with Foamed Asphalt Salt Stabilized Surface Course Surface Profile Milling of Existing, Recycled or Reclaimed Flexible	Apr. 1, 2012 June 1, 2012 June 1, 2012 Feb. 20, 1963 Apr. 1, 2012	Jun. 1, 2012 Jan. 1, 2007 Jun. 1, 2012
LR 403-2 LR 406 LR 420 LR 442 LR 451 LR 503-1 LR 503-2		Pavement Bituminous Hot Mix Sand Seal Coat Filling HMA Core Holes with Non-shrink Grout PCC Pavement (Special) Bituminous Patching Mixtures for Maintenance Use Crack Filling Bituminous Pavement with Fiber-Asphalt Furnishing Class SI Concrete Furnishing Class SI Concrete (Short Load)	Aug. 1, 1969 Jan. 1, 2008 May 12, 1964 Jan. 1, 2004 Oct. 1, 1991 Oct. 1, 1973 Jan. 1, 1989	Jan. 1, 2007 Jan. 2, 2007 Jun. 1, 2007 Jan. 1, 2007 Jan. 1, 2002 Jan. 1, 2002
LR 542 LR 663 LR 702 LR 1000-1		Pipe Culverts, Type (Furnished) Calcium Chloride Applied Construction and Maintenance Signs Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures	Sep. 1, 1964 Jun. 1, 1958 Jan. 1, 2004 Apr. 1, 2012	Jan. 1, 2007 Jan. 1, 2007 Jun. 1, 2007 Jun. 1, 2012
LR 1000-2 LR 1004 LR 1030 LR 1032-1 LR 1102		Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Foamed Asphalt Mix Design Procedures Coarse Aggregate for Bituminous Surface Treatment Growth Curve Emulsified Asphalts Road Mix or Traveling Plan Mix Equipment	June 1, 2012 Jan. 1, 2002 Mar. 1, 2008 Jan. 1, 2007 Jan. 1, 2007	Jan. 1, 2007 Jan. 1, 2010 Feb. 7, 2008

## BDE SPECIAL PROVISIONS For the April 25 and June 13, 2014 Lettings

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

File Name	<u>Pg.</u>		Special Provision Title	<u>Effective</u>	Revised
80240			Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099			Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
80274			Aggregate Subgrade Improvement	April 1, 2012	Jan. 1, 2013
80192			Automated Flagger Assistance Device	Jan. 1, 2008	
80173			Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2013
80241			Bridge Demolition Debris	July 1, 2009	
50261			Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481		,	Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491			Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531			Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80292			Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	April 1, 2013
80310	191	Χ	Coated Galvanized Steel Conduit	Jan. 1, 2013	
80198			Completion Date (via calendar days)	April 1, 2008	
80199			Completion Date (via calendar days) Plus Working Days	April 1, 2008	
* 80293	Served week	460.5222	Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤	April 1, 2012	April 1, 2014
			5 Feet		
* 80294	garbitek:		Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of	April 1, 2012	April 1, 2014
			Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet		
80311			Concrete End Sections for Pipe Culverts	Jan. 1, 2013	
* 80334		22 20 20 20 20 20 20 20 20 20 20 20 20 2	Concrete Gutter, Curb, Median, and Paved Ditch	April 1, 2014	
80277	1-21-22-2-2-2		Concrete Mix Design – Department Provided	Jan. 1, 2012	Jan. 1, 2014
80261	192	X	Construction Air Quality – Diesel Retrofit	June 1, 2010	Jan. 1, 2014
* 80335	195	X	Contract Claims	April 1, 2014	
80029	196	Х	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80265			Friction Aggregate	Jan. 1, 2011	<b>J</b>
80229			Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80329			Glare Screen	Jan. 1, 2014	• •
80303	206	Х	Granular Materials	Nov. 1, 2012	
80304			Grooving for Recessed Pavement Markings	Nov. 1, 2012	Jan. 1, 2013
80246	207	Х	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80322			Hot-Mix Asphalt – Mixture Design Composition and Volumetric	Nov 1, 2013	
			Requirements		
80323			Hot-Mix Asphalt – Mixture Design Verification and Production	Nov 1, 2013	
80315			Insertion Lining of Culverts	Jan. 1, 2013	Nov 1, 2013
* 80336		191037	Longitudinal Joint and Crack Patching	April 1, 2014	
* 80324		ativis) v	LRFD Pipe Culvert Burial Tables	Nov 1, 2013	April 1, 2014
80325	209	Χ	LRFD Storm Sewer Burial Tables	Nov 1, 2013	itaristikus i koloniusti sika kerimaa an madiisikite
80045			Material Transfer Device	June 15, 1999	Jan. 1, 2009
80165			Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
* 80337			Paved Shoulder Removal	April 1, 2014	
80330		en en en en en en	Pavement Marking for Bike Symbol	Jan. 1, 2014	1200
80298			Pavement Marking Tape Type IV	April 1, 2012	
80254	219	Х	Pavement Patching	Jan. 1, 2010	
80331	220	X	Payrolls and Payroll Records	Jan. 1, 2014	
80332	220	<del>  ^</del>	Portland Cement Concrete – Curing of Abutments and Piers		
80326	222	Х	Portland Cement Concrete Equipment	Jan. 1, 2014	
* 80338	<b>444</b>	^	Portland Cement Concrete Equipment  Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	Nov 1, 2013	
80300		3503550	Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2014	
00300		L	Transmitted Flastic Flavement Marking Type D - Illiaid	April 1, 2012	

<u>File Name</u>	<u>Pg.</u>		Special Provision Title	<u>Effective</u>	Revised
80328	223	Х	Progress Payments	Nov. 2, 2013	
80281	224	Х	Quality Control/Quality Assurance of Concrete Mixes	Jan. 1, 2012	Jan. 1, 2014
34261			Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157			Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80306			Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt	Nov. 1, 2012	April 1, 2014
		65.06	Shingles (RAS)		
80327			Reinforcement bars	Nov 1, 2013	
80283	225	Х	Removal and Disposal of Regulated Substances	Jan. 1, 2012	Nov. 2, 2012
80319	229	Χ	Removal and Disposal of Surplus Materials	Nov. 2, 2012	
80307	1460-964-44-11 (1460-144-144)		Seeding	Nov. 1, 2012	Dulle investorial and control in property control and an extension
* 80339			Stabilized Subbase	April 1, 2014	
80127			Steel Cost Adjustment	April 2, 2004	April 1, 2009
80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	
80301	230	Х	Tracking the Use of Pesticides	Aug. 1, 2012	
80333			Traffic Control Setup and Removal Freeway/Expressway	Jan. 1, 2014	
20338	231	Χ	Training Special Provisions	Oct. 15, 1975	
* 80318			Traversable Pipe Grate	Jan. 1, 2013	April 1, 2014
80288	234	Χ	Warm Mix Asphalt	Jan. 1, 2012	Nov. 1, 2013
80302	238	Χ	Weekly DBE Trucking Reports	June 2, 2012	
80289			Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071			] Working Days	Jan. 1, 2002	

The following special provisions are in the 2014 Supplemental Specifications and Recurring Special Provisions:

File Name	Special Provision Title	New Location	<u>Effective</u>	Revised
80309	Anchor Bolts	Articles 1006.09, 1070.01,	Jan. 1, 2013	
		and 1070.03		
80276	Bridge Relief Joint Sealer	Article 503.19 and Sections	Jan. 1, 2012	Aug. 1, 2012
00040	Dunin Dina Tila Duningan Mat and Mali Dunin	588 and 589	l== 4 0040	
80312	Drain Pipe, Tile, Drainage Mat, and Wall Drain	Article 101.01, 1040.03, and 1040.04	Jan. 1, 2013	
80313	Fabric Bearing Pads	Article 1082.01	Jan. 1, 2013	
80169	High Tension Cable Median Barrier	Section 644 and Article	Jan. 1, 2007	Jan. 1, 2013
00100	Tright Tollows Oddie Wedian Barrier	1106.02	0011. 1, 2001	our. 1, 2010
80320	Liquidated Damages	Article 108.09	April 1, 2013	
80297	Modified Urethane Pavement Marking	Section 780, Articles 1095.09	April 1, 2012	
	•	and 1105.04	·	
80253	Moveable Traffic Barrier	Section 707 and Article	Jan. 1, 2010	Jan. 1, 2013
		1106.02		
80231	Pavement Marking Removal	Recurring CS #33	April 1, 2009	
80321	Pavement Removal	Article 440.07	April 1, 2013	
80022	Payments to Subcontractors	Article 109.11	June 1, 2000	Jan. 1, 2006
80316	Placing and Consolidating Concrete	Articles 503.06, 503.07, and	Jan. 1, 2013	
		516.12		
80278	Planting Woody Plants	Section 253 and Article	Jan. 1, 2012	Aug. 1, 2012
		1081.01		
80305	Polyurea Pavement Markings	Article 780.14	Nov. 1, 2012	Jan. 1, 2013
80279	Portland Cement Concrete	Sections 312, 503, 1003,	Jan. 1, 2012	Nov. 1, 2013
		1004, 1019, and 1020		
80218	Preventive Maintenance – Bituminous Surface Treatment	Recurring CS #34	Jan. 1, 2009	April 1, 2012
90240	***************************************	Decurring CC #25	lon 1 2000	April 1 2012
80219	Preventive Maintenance – Cape Seal	Recurring CS #35	Jan. 1, 2009	April 1, 2012
80220 80221	Preventive Maintenance – Micro Surfacing	Recurring CS #36	Jan. 1, 2009	April 1, 2012
00221	Preventive Maintenance – Slurry Seal	Recurring CS #37	Jan. 1, 2009	April 1, 2012

File Name	Special Provision Title	New Location	<b>Effective</b>	Revised
80224	Restoring Bridge Approach Pavements Using High- Density Foam	Recurring CS #39	Jan. 1, 2009	Jan. 1, 2012
80255	Stone Matrix Asphalt	Sections 406, 1003, 1004, 1030, and 1011	Jan. 1, 2010	Aug. 1, 2013
80143	Subcontractor Mobilization Payments	Article 109.12	April 2, 2005	April 1, 2011
80308	Synthetic Fibers in Concrete Gutter, Curb, Median and Paved Ditch	Articles 606.02 and 606.11	Nov. 1, 2012	•
80286	Temporary Erosion and Sediment Control	Articles 280.04 and 280.08	Jan. 1, 2012	
80225	Temporary Raised Pavement Marker	Recurring CS #38	Jan. 1, 2009	
80256	Temporary Water Filled Barrier	Section 708 and Article 1106.02	Jan. 1, 2010	Jan. 1, 2013
80273	Traffic Control Deficiency Deduction	Article 105.03	Aug. 1, 2011	
80270	Utility Coordination and Conflicts	Articles 105.07, 107.19, 107.31, 107.37, 107.38, 107.39 and 107.40	April 1, 2011	Jan. 1, 2012

The following special provisions require additional information from the designer. The Special Provisions are:

- Bridge Demolition Debris
- Building Removal-Case I
- Building Removal-Case II
- Building Removal-Case III
- Building Removal-Case IV
- Completion Date
- Completion Date Plus Working Days
- DBE Participation

- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

## **STATE OF ILLINOIS**

#### **SPECIAL PROVISIONS**

The following Special Provisions supplement the following: "Standard Specifications for Road and Bridge Construction", adopted January 1, 2012, (hereafter referred to as the Standard Specifications); the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", and the "Manual of Test Procedures of 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 proposed construction of Section 96-00014-00-PV; Project No. M-CMM-4003(013); Job No. C-91-404-12 in Will County. In case of conflict with any part or parts of said specifications, the said Special Provisions shall take precedence and shall govern.

#### **LOCATION OF PROJECT**

The project begins on the centerline of University Parkway, 1857 feet east of the centerline of Central Avenue and proceeds east 3,381 feet to a point 575 feet east of Cicero Avenue and includes 1,151 feet of improvements on Cicero Avenue. The project is located in the Village of University Park, Will County, Illinois. The total net and gross length is 4532 ft. (0.86 miles).

#### **DESCRIPTION OF PROJECT**

The work consist of earth excavation and embankment, construction of storm sewers, aggregate subbase and subgrade, surface removal, bituminous binder and surface courses, combination concrete curb and gutter, traffic signals and street signing, pavement markings, restoration with sod and seed, and all other appurtenant and collateral work necessary to complete the project.

#### **CONTRACT COMPLETION TIME**

The completion of this project is on the basis of a completion date.

The contractor is to complete all necessary construction items in order to open traffic on the binder course on or before Nov. 30, 2014.

The contractor shall complete all contract items, including clean-up and punch list items, and safely open all lanes of the roadway to traffic on or before August 1, 2015.

#### **COOPERATION BETWEEN CONTRACTORS**

The Contractor is to be aware that an adjacent project (IDOT Contract 60L69) will be ongoing during the construction of this project. The Contractor shall coordinate their work and traffic control / access with the other Contractors to facilitate work and minimize possible conflicts. The Contractor shall also notify the Engineer at least 5 working days in advance of any work that may affect other adjacent contracts.

#### **CONTACTS**

The Contractor will be required to coordinate all maintenance of traffic operations with all municipality, township and county entities within the project limits. The following are the contacts for the Village Of University Park and Village of Park Forest.

Village of University Park	Mr. Lafayette Linear	708-534-4823
Village of Park Forest	Mr. Ken Eyer	708-748-1112
IDOT – Operations Engineer	Mr. Cory Jucius	847-705-4411

#### **MAINTENANCE OF ROADWAYS**

Effective: September 30, 1985 Revised: November 1, 1996

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

If items of work have not been provided in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

#### FAILURE TO COMPLETE THE WORK ON TIME

Effective: September 30, 1985 Revised: January 1, 2007

Should the Contractor fail to complete the work on or before the completion date as specified in the Special Provision for "Completion Date Plus Working Days", or within such extended time as may have been allowed by the Department, the Contractor shall be liable to the Department in the amount in accordance with Section 108.09 of the Standard Specifications, not as a penalty but as liquidated damages, for each calendar day or a portion thereof of overrun in the contract time or such extended time as may have been allowed.

In fixing the damages as set out herein, the desire is to establish a certain mode of calculation for the work since the Department's actual loss, in the event of delay, cannot be predetermined, would be difficult of ascertainment, and a matter of argument and unprofitable litigation. This said mode is an equitable rule for measurement of the Department's actual loss and fairly takes into account the loss of use of the roadway if the project is delayed in completion. The Department shall not be required to provide any actual loss in order to recover these liquidated damages provided herein, as said damages are very difficult to ascertain. Furthermore, no provision of this clause shall be construed as a penalty, as such is not the intention of the parties.

A calendar day is every day shown on the calendar and starts at 12:00 midnight and ends at the following 12:00 midnight, twenty-four hours later.

#### STORM SEWER ADJACENT TO OR CROSSING WATER MAIN

Effective: February 1, 1996 Revised: January 1, 2007

This work consists of constructing storm sewer adjacent to or crossing a water main, at the locations shown on the plans. The material and installation requirements shall be according to the latest edition of the "Standard Specifications for Water and Sewer Main Construction in Illinois", and the applicable portions of Section 550 of the Standard Specifications; which may include concrete collars and encasing pipe with seals if required.

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 52.

Encasing of standard type storm sewer, according to the details for "Water and Sewer Separation Requirements (Vertical Separation)" in the "STANDARD DRAWINGS" Division of the "Standard Specifications for Water and Sewer Main Construction in Illinois", may be used for storm sewers crossing water mains.

<u>Basis of Payment</u>: This work will be paid according to Article 550.10 of the Standard Specifications, except the pay item shall be STORM SEWER (WATER MAIN REQUIREMENTS), of the diameter specified.

#### TRAFFIC CONTROL PLAN

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

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

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

#### **STANDARDS**:

701001	701006	701011	701101	701106	701301	701311	701501
701502	701601	701701	701801	701901			

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

701001 This standard should be used for, grading, seeding, and other miscellaneous work which is performed beyond 15' to the edge of the traffic lane.

Anticipated major operations for application of this standard:

- Constructing proposed embankments, storm sewers, fencing, landscaping, and bike path adjacent to University Parkway Stage 1 and Stage 2.
- 701006 This standard should be used for, grading, seeding, and other miscellaneous work which is performed within 15', but not closer than 2', to the edge of the traffic lane.

Anticipated major operations for application of this standard:

- Constructing proposed embankments, storm sewers, landscaping, and signing adjacent to University Parkway Stage 1 and Stage 2.
- 701011 This standard should be used when the Contractor's work is confined to the shoulder, such as stringing guardrail posts and rail.
- 701101 This standard should be used when the Contractor's work is confined to the shoulder, landscaping and sign installation.

Anticipated major operations for application of this standard:

 Constructing proposed embankments, landscaping and signing adjacent Cicero Avenue – Stage 1. 701106 This standard should be used for, minor grading, seeding, and other miscellaneous work which is performed beyond 15' to the edge of the traffic lane.

Anticipated major operations for application of this standard:

- Constructing proposed embankments, and landscaping adjacent Cicero Avenue – Stage 1.
- This standard will apply when short time work operations are being performed. Typical such operations are bituminous density testing, application of temporary pavement marking, marking patches, and miscellaneous survey operations.
- 701311 This standard should be used on two-lane, two-lane roadways for pavement marking, weed spraying, or other continuous or intermittent moving operations.

Anticipated major operations for application of this standard:

- Permanent pavement marking removal and placement of temporary pavement markings, various locations Stage 1 and 2.
- 701501 This standard is used where at any time, day or night, any vehicle, equipment, worker or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.
- 701502 This standard is used to close one lane of an urban, two lane, two way roadway with a bidirectional turn lane.
- 701601 This standard is used where at any time, day or night, any vehicle, equipment or their workers or their activities encroach on the pavement during shoulder operations or where construction requires lane closure in urban areas.
- 701701 This standard is used where at any time, day or night, any vehicle, equipment or their workers or their activities encroach on the pavement during shoulder operations or where construction requires lane closures in urban area.
- 701801 This standard should be used during construction where pedestrian traffic must be rerouted or traffic areas closed due to work being performed.

Anticipated major operations for application of this standard:

- All bike path crossings – Stage 1 and 2.

#### 701901 Traffic Control Devices

1. Related Standards:

District 1 Standards: TC-10, TC-11, TC-13, TC-14, TC-16

Bureau of Local Roads Standards:

BLR-22

- 2. Recurring Special Provisions:
  - a) Night Time Inspection of Roadway Lighting
- 3. Related Special Provisions:
  - a) Maintenance of Roadways
  - b) Temporary Pavement
  - c) Temporary Pavement Markings
  - d) Traffic Control and Protection
  - e) Aggregate for Temporary Access
  - f) Construction Zone Traffic Control (Check Sheet LRS 3)
  - g) Flaggers in Work Zone (Check Sheet LRS 4)
  - h) Traffic Control Deficiency Deduction (BDE)
  - i) Placement of Arrow Boards (ISP)
- 4. Plan Details:
  - a) Suggested Maintenance of Traffic
  - b) Detour Plan
  - c) Suggested Maintenance of Traffic Typical Sections
  - d) Traffic Control Device Details (Miscellaneous Construction Details)

#### Basis of Payment:

The cost of furnishing, erecting, maintaining, relocating and removing the required temporary traffic control measures to implement the traffic control standards and requirements described herein and as shown on the Maintenance of Traffic Plans shall be included in the contract price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### TRAFFIC CONTROL AND PROTECTION

#### **Description**

This work shall consist of furnishing, installation, maintenance, relocation, and removal of all traffic control devices according with Section 700 of the Standard Specifications.

#### 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. During the construction of this section at least one lane in each direction on University Parkway, Cicero Avenue shall remain open at all times during the peak traffic hours established herein, except as otherwise specified in the Maintenance of Traffic Plans.
- 2. The Contractor shall provide, erect, and maintain all the necessary signs, 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 (O)-48) at both ends of the project and at 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 supports must be 4 x 4 inches wood posts according to Article 1093.01(b). The use of metal posts will not be permitted."
- 5. Drop-offs at the edge of any lane will not be allowed during winter shutdown. The Contractor shall schedule his operations so that leveling binder or surface course can be constructed across all adjacent lanes prior to winter shutdown.
- 6. Open trenches and excavations for storm sewers, inlets, etc. remaining overnight shall be marked with additional lighted Type II barricades at 25' centers and at appropriate locations to safely protect the vehicle and pedestrian traffic. This protection shall be provided in all cases; including areas within the defined work zones. These barricades will not be paid for separately, but shall be considered included in the unit price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).
- 7. Uneven pavement signs (W8-11 (4848)) shall be required at any time there is a 1" difference in elevation in pavement grades between lanes. This shall apply to both long-term and short-term conditions that result in a temporary drop-off

between two traffic lanes and is open to traffic. The Contractor shall place the signs at the beginning of the drop-off area, just prior to the work zones and shall remain in place until the drop-off is eliminated. These signs will not be paid for separately, but shall be considered included in the contract price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### **Drop-Off Exposure**

The IDOT drop-off exposure policy shall be maintained as described in the following two tables.

#### <u>CONDITION 1 — DROP-OFF BETWEEN TRAVELED LANES</u> (Excludes Pavement Patching) (US Customary)

Drop-off Location	Normal Posted Speed	Drop-off Height (x) and Type	Physical Treatment (1)(2)	Additional Requirements
		≤ 1 in lift difference or ≤ 1 in vertical milled face	None	None
		1 in < x ≤ 2 in lift difference or 1 in < x ≤ 1.5 in vertical milled face	None	Uneven lane signs (2 mile spacing on Interstate & Expressway)
Between Lanes	≥ 45 mph	2 in < x ≤ 4 in lift difference	Notched longitudinal wedge <sup>(4)</sup>	(1 mile spacing on rural highway)
		1.5 in < x ≤ 4 in vertical milled face	Temporary wedge or milled sloped edge min 1:3 <sup>(4)</sup>	(Spacing as per the TCP on urban sections)
	4 in < x ≤ 12 in <sup>(3)</sup>	Lane closure using channelizing devices	As per lane closure	
		> 12 in Lane closure using temporary traffic barrier		standard
		≤ 1 in lift difference or ≤ 1.5 in vertical milled face	None	None
		1 in < x ≤ 2.5 in lift difference	None	
Between Lanes < 45 mph	2.5 in < x ≤ 4 in lift difference	Notched longitudinal wedge <sup>(4)</sup>	Uneven lane signs	
		1.5 in < x ≤ 4 in vertical milled face	Temporary or milled sloped edge min of 1:3 <sup>(4)</sup>	
		4 in < x ≤ 12 in <sup>(3)</sup>	Lane closure using channelizing devices	As per lane closure
		> 12 in	Lane closure using temporary traffic barrier	standard

#### Notes:

- (1) Place channelizing devices and/or temporary barrier at the same level as the traveling lane.
- (2) Channelizing devices may be placed at the drop-off elevation to preserve lane width. Raise the reflective area and warning light (if required) to the required elevation above the traveling lane as per Highway Standard 701901.
- (3) Drop-off 4 in < x ≤ 12 in is permitted for less than 0.5 mile length of drop-off exposure in work zone or less than 48-hour closure time. Length and duration of drop-off in excess of limits require temporary traffic barrier. Adjacent work spaces that are essentially continuous in drop-off exposure should be considered as one work zone.
- (4) Or the same physical treatment and sign requirements as 4 in  $< x \le 12$  in.

## <u>CONDITION 2 — DROP-OFF BETWEEN TRAVEL LANE AND SHOULDER/EDGE OF</u> <u>PAVEMENT (US Customary)</u>

Drop-off Location	Normal Posted Speed	Drop-off Height (x) and Type	Treatment Required
	all ≤ 1 in		None
	all	1 in < x ≤ 3 in	Low Shoulder signs (2 mile spacing)
	< 45 mph	3 in < x ≤ 18 in	Place channelizing devices at 50-ft spacing
	≥ 45 mph	3 in < x ≤ 12 in	Place channelizing devices at 100-ft spacing
m e/(1)(2)	< 45 mph	18 in $< x \le 24$ in for $< 0.5$ mile or $< 48$ hours $^{(4)}$	Place channelizing devices at 50-ft spacing
$\leq 3 \text{ ft}^{(1)(2)}$	≥ 45 mph	12 in < x ≤ 18 in for < 0.5 mile or < 48 hours	Place channelizing devices at 100-ft spacing
	≥ 45 mph	12 in $< x \le 24$ in for $>0.5$ mile or $>48$ hours	Closure using temporary traffic barrier
	< 45 mph	18 in < x ≤ 24 in <sup>(5)</sup>	Closure using temporary traffic barrier
	≥ 45 mph	18 in < x ≤ 24 in for < 0.5 mile or < 48 hours <sup>(5)</sup>	Closure using temporary traffic barrier
	all	> 24 in <sup>(5)</sup>	Closure using temporary traffic barrier
	all	≤ 1 in	none
	all	1 in < x ≤ 3 in	Low Shoulder signs (2-mile spacing)
$3 \text{ ft} < x \le 8$	< 45 mph	3 in < x ≤ 24 in <sup>(4)</sup>	Place channelizing devices at 50-ft spacing
I III	≥ 45 mph	3 in < x ≤ 24 in	Place channelizing devices at 100-ft spacing
	all	24 in <sup>(5)</sup>	Closure using temporary traffic barrier
> 8 ft to the	< 45 mph	12 in < x ≤ 24 in <sup>(4)</sup>	Place channelizing devices at 50-ft spacing
work zone clear zone <sup>(3)</sup>	≥ 45 mph	12 in < x ≤ 24 in	Place channelizing devices at 100-ft spacing
	all	> 24 in <sup>(5)</sup>	Closure using temporary traffic barrier

#### Notes:

- (1) Place channelizing devices and/or temporary barrier at the same level as the traveling lane or shoulder profile.
- (2) Channelizing devices may be placed at the drop-off elevation to preserve lane width. Raise the reflective area and warning light (if required) to the elevation above the traveling lane or shoulder profile as per Highway Standard 701901.
- (3) Place channelizing devices or temporary barrier at same level as the side slope profile to be fully visible.
- (4) Length and duration may be exceeded for urban areas when engineering judgment indicates sight distance will be adversely affected by temporary barrier.
- (5) Temporary traffic barrier may be eliminated for stationary operations of less than 24 hours for multilane, and may be eliminated for stationary operations of less than 96 hours per stage for two lanes, based on engineering judgment.

#### Off-peak Hours

The "Off-Peak" hours are defined as the daytime hours from 9:00 A.M. to 3:00 P.M. and night time hours from 9:00 P.M. to 6:00 A.M., Monday through Friday.

#### Keeping Roads Open to Traffic

The Contractor shall schedule his sequence of operations to permit the construction of this section with the least inconvenience to the traveling public. The Contractor's schedule shall reflect the following requirements and sequence of construction. These requirements follow the Suggested Traffic Control Plan included in the drawings.

- 1. Side Roads shall be kept open to two lanes of traffic during the established peak hours for the duration of the construction of this project.
- 2. Central Avenue may be closed to one lane during Off-Peak hours with the prior approval of the Engineer. Work activities which are anticipated to be performed under "Off-Peak" hours include the following:
  - a. Installation of temporary culverts and storm sewers as identified in the maintenance of traffic plan, including backfilling with trench backfill and construction of Class D patches as shown.
  - b. Placement of temporary pavement markings and traffic control devices necessary to switch traffic between construction stages, including the placement and relocation of precast concrete barrier wall, sand module impact attenuators and reusable energy absorbing crash terminals.
  - c. Placing and switching temporary traffic signal orientation as part of staging operations.
  - d. Pavement widening activities during which work activities are anticipated to encroach upon adjacent lanes of traffic.
  - e. Earth moving operations that involve crossing active lanes of traffic.
- 3. Side streets may be temporarily closed for the purpose of the construction of the roadway realignment. Closure of these side streets shall be limited to one street at one time. Multiple closures may also be considered so long as the closures are not adjacent to each other. All closures shall be coordinated with the resident engineer, Village Of University Park and Village of Park Forest. No individual street closure will be for a period greater than 14 calendar days counted from the day the street is officially closed. These requirements apply to the following streets:

- 4. Generally side streets shall remain open at all times. Special consideration may be given to a short-term closure on an as needed bases. These closure will be coordinated with the Resident Engineer and Villages impacted by the closures.
- 5. Access to field, private and commercial entrances shall remain open at all times. On properties that have more than one access, one entrance may be temporarily closed, however, vehicular access must remain open to traffic for the opposite entrance. These requirements apply to the following properties:

Applied Systems Maintenance Facility – University Parkway Facility One – University Parkway Governors State University – University Parkway

#### **Detours**

All detours must be approved prior to construction by IDOT, the Village of University Park and the Engineer.

#### Trailer Mounted Arrow Board

A trailer mounted arrow board will be provided at all locations shown in the Maintenance of Traffic Plans. The trailer mounted arrow board will be a Type B meeting the requirements of Section 1106 of the Standard Specifications. All trailer mounted arrow boards will not be paid for separately, but shall be considered included in the unit price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

#### Basis of Payment:

The basis of payment for traffic control and protection will be as follows:

1. Traffic Control and Protection will not be paid for separately, but shall be considered included in the unit price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

The price for these items shall be payment in full for all labor, materials, transportation, signs, drums and barricades and incidental work necessary to furnish, install, maintain and remove all traffic control as shown in the plans and as required in these Special Provisions.

#### TRAFFIC CONTROL AND PROTECTION (ARTERIALS)

Effective: February 1, 1996 Revised: March 1, 2011

Specific traffic control plan details and Special Provisions have been prepared for this contract. This work shall include all labor, materials, transportation, handling and incidental work

necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

When traffic is to be directed over a detour route, the Contractor shall furnish, erect, maintain and remove all applicable traffic control devices along the detour route according to the details shown in the plans.

<u>Method of Measurement</u>: All traffic control (except "Traffic Control and Protection (Expressways)" and temporary pavement markings) indicated on the traffic control plan details and specified in the Special Provisions will be measured for payment on a lump sum basis.

<u>Basis of Payment</u>: All traffic control and protection will be not be paid for separately but shall be included in the contract price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

Temporary pavement markings will be paid for separately unless shown on a Standard.

#### ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

"602.04 Concrete. Cast-in-place concrete for structures shall be constructed of Class SI concrete according to the applicable portions of Section 503. Cast-in-place concrete for pavement patching around adjustments and reconstructions shall be constructed of Class PP-1 concrete, unless otherwise noted in the plans, according to the applicable portions of Section 1020."

Revise the third, fourth and fifth sentences of the second paragraph of Article 602.11(c) to read:

"Castings shall be set to the finished pavement elevation so that no subsequent adjustment will be necessary, and the space around the casting shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.05 to read:

"603.05 Replacement of Existing Flexible Pavement. After the castings have been adjusted, the surrounding space shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b."

Revise Article 603.06 to read:

"603.06 Replacement of Existing Rigid Pavement. After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-1 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface."

Revise the first sentence of Article 603.07 to read:

"603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b."

#### AGGREGATE SUBGRADE IMPROVEMENT (D-1)

Effective: February 22, 2012 Revised: November 1, 2013

Add the following Section to the Standard Specifications:

#### "SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

303.01 Description. This work shall consist of constructing an aggregate subgrade improvement.

#### **303.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2 and 3)	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01 or CS 02 but shall not exceed 40 percent of the total product. The top size of the Coarse RAP shall be less than 4 in. (100 mm) and well graded.

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01 or CS 02 are used in lower lifts. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

- Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".
- **303.03 Equipment.** The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.
- **303.04 Soil Preparation.** The stability of the soil shall be according to the Department's Subgrade Stability Manual for the aggregate thickness specified.
- 303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradations CS 01 or CS 02 shall be 24 in. (600 mm).
- 303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When Reclaimed Asphalt Pavement (RAP) is used, it shall be crushed and screened where 100 percent is passing the 1 1/2 in. (37.5 mm) sieve and being well graded. RAP that has been fractionated to size will not be permitted for use in capping. Capping aggregate will not be required when the aggregate subgrade improvement is used as a cubic yard pay item for undercut applications. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.
- 303.07 Compaction. All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.
- 303.08 Finishing and Maintenance of Aggregate Subgrade Improvement. The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.
- **303.09 Method of Measurement.** This work will be measured for payment according to Article 311.08.
- 303.10 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.

Add the following to Section 1004 of the Standard Specifications:

"1004.06 Coarse Aggregate for Aggregate Subgrade Improvement. The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.
  - (1) The coarse aggregate gradation for total subgrade thicknesses of 12 in. (300 mm) or greater shall be CS 01 or CS 02.

	COARSE AGGREGATE SUBGRADE GRADATIONS				
Grad No.	Sieve Size and Percent Passing				
Grad No.	8"	6"	4"	2"	#4
CS 01	100	$97 \pm 3$	$90 \pm 10$	$45 \pm 25$	$20 \pm 20$
CS 02		100	$80 \pm 10$	$25 \pm 15$	

	COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)				
Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 01	100	$97 \pm 3$	$90 \pm 10$	$45 \pm 25$	$20 \pm 20$
CS 02		100	80 ± 10	$25 \pm 15$	

- (2) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.
- (3) Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

#### COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1)

Effective: November 1, 2011 Revised: November 1, 2013

This work shall be according to Section 1004.05 of the Standard Specifications except for the following:

Reclaimed Asphalt Pavement (RAP) maybe blended with gravel, crushed gravel, crushed stone crushed concrete, crushed slag, chats, crushed sand stone or wet bottom boiler slag. The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". The RAP shall be uniformly graded and shall pass the 1.0 in. (25 mm) screen. When RAP is blended with any of the coarse aggregate listed above, the blending shall be done mechanically with calibrated feeders. The feeders shall have an accuracy of  $\pm$  2.0 percent of the actual quantity of material delivered. The final blended product shall not contain more than 40 percent by weight RAP.

The coarse aggregate listed above shall meet CA 6 and CA 10 gradations prior to being blended with the processed and uniformly graded RAP. Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

#### **DRAINAGE AND INLET PROTECTION UNDER TRAFFIC (DISTRICT 1)**

Effective: April 1, 2011 Revised: April 2, 2011

Add the following to Article 603.02 of the Standard Specifications:

- (j) Temporary Rubber Ramps (Note 2)
  - Note 1. The HMA shall have maximum aggregate size of 3/8 in. (95 mm).

Note 2. The rubber material shall be according to the following.

Property	Test Method	Requirement
Durometer Hardness, Shore A	ASTM D 2240	75 ±15
Tensile Strength, psi (kPa)	ASTM D 412	300 (2000) min
Elongation, percent	ASTM D 412	90 min
Specific Gravity	ASTM D 792	1.0 - 1.3
Brittleness, °F (°C)	ASTM D 746	-40 (-40)"

Revise Article 603.07 of the Standard Specifications to read:

"603.07 Protection Under Traffic. After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.

When castings are under traffic before the final surfacing operation has been started, properly sized temporary ramps shall be placed around the drainage and/or utility castings according to the following methods.

- (a) Temporary Asphalt Ramps. Temporary hot-mix asphalt ramps shall be placed around the casting, flush with its surface and decreasing to a featheredge in a distance of 2 ft (600 mm) around the entire surface of the casting.
- (b) Temporary Rubber Ramps. Temporary rubber ramps shall only be used on roadways with permanent posted speeds of 40 mph or less and when the height of the casting to be protected meets the proper sizing requirements for the rubber ramps as shown below.

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting ± 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

## HMA MIXTURES, EGA MOD. PERFORMANCE GRADED (PG) ASPHALT BINDER

Effective: March 16, 2009

<u>Description</u>. This work shall consist of constructing Hot Mix Asphalt (HMA) mixtures containing ethylene-glycidyl-acrylate (EGA) Modified Performance Graded (PG) Asphalt Binder. Work shall be according to Sections 406, 1030, and 1032 of the Standard Specifications, except as modified herein.

The asphalt binder shall meet the following requirements:

EGA Modified Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 "Standard Specification for Performance Graded Asphalt Binder" for the grade shown on the plans. An ethylene-glycidyl-acrylate (EGA) terpolymer with a maximum of 0.3 percent polyphosphoric acid by weight of asphalt binder, shall be added to the base asphalt binder to achieve the specified performance grade. Asphalt modification at hot-mix asphalt plants will not be allowed. The modified asphalt binder shall be smooth, homogeneous, and be according to the requirements shown in the following table for the grade shown on the plans.

Ethylene-Glycidyl-Acrylate (EGA) Modified Asphalt Binders				
Test	Asphalt Grade EGA PG 70-22 EGA PG 70-28	Asphalt Grade EGA PG 76-22 EGA PG 76-28		
Separation of Polymer Illinois Test Procedure, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions.	4 (2) max.	4 (2) max.		
TEST ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)				
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.		

#### **EMBANKMENT II**

Effective: March 1, 2011 Revised: November 1, 2013

<u>Description</u>. This work shall be according to Section 205 of the Standard Specifications except for the following.

<u>Material</u>. Reclaimed asphalt shall not be used within the ground water table or as a fill if ground water is present. The RAP used shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications". Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

#### CONSTRUCTION REQUIREMENTS

<u>Samples</u>. Embankment material shall be sampled and tested before use. The contractor shall identify embankment sources, and provide equipment as the Engineer requires, for the collection of samples from those sources. Samples will be furnished to the Geotechnical Engineer a minimum of three weeks prior to use in order that laboratory tests for compaction can be performed. Embankment material placement cannot begin until tests are completed.

<u>Placing Material</u>. In addition to Article 202.03, broken concrete, reclaimed asphalt with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities shall be placed in 6 inches (150 mm) lifts and disked with the underlying lift until a uniform homogenous material is formed. This process also applies to the overlaying lifts. The disk must have a minimum blade diameter of 24 inches (600 mm).

When embankments are to be constructed on hillsides or existing slopes that are steeper than 3H:1V, steps shall be keyed into the existing slope by stepping and benching as shown in the plans or as directed by the Engineer.

<u>Compaction</u>. Soils classification for moisture content control will be determined by the Soils Inspector using visual field examination techniques and the IDH Textural Classification Chart.

When tested for density in place each lift shall have a maximum moisture content as follows.

- a) A maximum of 110 percent of the optimum moisture for all forms of clay soils.
- b) A maximum of 105 percent of the optimum moisture for all forms of clay loam soils.

Stability. The requirement for embankment stability in article 205.04 will be measured with a Dynamic Cone Penetrometer (DCP) according to the test method in the IDOT Geotechnical Manual. The penetration rate must be equal or less than 1.5 inches (38 mm) per blow.

<u>Basis of Payment.</u> This work will not be paid separately but will be considered as included in the various items of excavation.

# BITUMINOUS PRIME COAT FOR HOT-MIX ASPHALT PAVEMENT (FULL DEPTH) (D-1)

Effective: May 1, 2007 Revised: February 11, 2014

Revise the second paragraph of Article 407.12 of the Standard Specifications to read:

"Prime Coat will be paid for at the contract unit price per pound for BITUMINOUS MATERIALS (PRIME COAT)."

#### FINE AGGREGATE FOR HOT-MIX ASPHALT (HMA) (D-1)

Effective: May 1, 2007 Revised: January 1, 2012

Revise Article 1003.03 (c) of the Standard Specifications to read:

"(c) Gradation. The fine aggregate gradation for all HMA shall be FA1, FA 2, FA 20, FA 21 or FA 22. When Reclaimed Asphalt Pavement (RAP) is incorporated in the HMA design, the use of FA 21 Gradation will not be permitted.

#### FRICTION SURFACE AGGREGATE (D1)

Effective: January 1, 2011 Revised: November 1, 2013

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

- "(4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.
  - a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).
  - b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase."

Revise Article 1004.03(a) of the Standard Specifications to read:

"1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA). The aggregate shall be according to Article 1004.01 and the following revisions.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed	
Class A	Seal or Cover	Allowed Alone or in Combination:	
		Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete	
HMA	Shoulders	Allowed Alone or in Combination:	
All Other		Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) 1/ Crushed Steel Slag 1/ Crushed Concrete	
HMA	C Surface	Allowed Alone or in Combination:	
High ESAL Low ESAL	IL-12.5,IL-9.5, or IL-9.5L	Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) 1/ Crushed Steel Slag 1/ Crushed Concrete	
НМА	D Surface	Allowed Alone or in Combination:	
High ESAL	IL-12.5 or IL-9.5	Crushed Gravel Carbonate Crushed Stone (other than Limestone) Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) 1/ Crushed Steel Slag 1/ Crushed Concrete	

Use	Mixture	Aggregates Allowed		
		Other Combinations Allowed:		
		<i>Up to</i>	With	
		25% Limestone	Dolomite	
5		50% Limestone	Any Mixture D aggregate other than Dolomite	
		75% Limestone	Crushed Slag (ACBF) <sup>1/</sup> or Crushed Sandstone	
НМА	F Surface	Allowed Alone or in (	Combination:	
High ESAL	IL-12.5 or IL-9.5	Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>1/</sup> Crushed Steel Slag <sup>1/</sup> No Limestone or no Crushed Gravel alone.		
		Other Combinations Allowed:		
		Up to	With	
		50% Crushed Gravel, or Dolomite	Crushed Sandstone, Crushed Slag (ACBF) <sup>1</sup> , Crushed Steel Slag <sup>1</sup> , or Crystalline Crushed Stone	
HMA High ESAL	SMA Ndesign 80 Surface	Crystalline Crushed S Crushed Sandstone Crushed Steel Slag	tone	

<sup>1/</sup> When either slag is used, the blend percentages listed shall be by volume.

Add the following to Article 1004.03 (b):

"When using Crushed Concrete, the quality shall be determined as follows. The Contractor shall obtain a representative sample from the stockpile, witnessed by the Engineer, at a frequency of 2500 tons (2300 metric tons). The sample shall be a minimum of 50 lb. (25 kg). The Contractor shall submit the sample to the District Office. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent by weight will be applied for acceptance. The stockpile shall be sealed until test results are complete and found to meet the specifications above."

#### GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)

Effective: June 26, 2006 Revised: January 1, 2013

Add the following to the end of article 1032.05 of the Standard Specifications:

"(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in

accordance with Illinois modified AASHTO T 27, a 50 g sample of the GTR shall conform to the following gradation requirements:

Sieve Size	Percent Passing
No. 16 (1.18 mm)	100
No. 30 (600 μm)	95 ± 5
No. 50 (300 μm)	> 20

Add the following to the end of Note 1. of article 1030.03 of the Standard Specifications:

"A dedicated storage tank for the Ground Tire Rubber (GTR) modified asphalt binder shall be provided. This tank must be capable of providing continuous mechanical mixing throughout by continuous agitation and recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of  $\pm$  0.40 percent."

Revise 1030.02(c) of the Standard Specifications to read:

Add the following note to 1030.02 of the Standard Specifications:

Note 3. When using reclaimed asphalt pavement and/or reclaimed asphalt shingles, the maximum asphalt binder replacement percentage shall be according to the most recent special provision for recycled materials.

#### **HEAT OF HYDRATION CONTROL FOR CONCRETE STRUCTURES (D-1)**

Effective: November 1, 2013

Article 1020.15 shall not apply.

#### **HOT MIX ASPHALT MIXTURE IL-4.75 (DIST 1)**

Effective: January 1, 2007 Revised: November 1, 2013

<u>Description</u>. This work shall consist of constructing Hot-Mix Asphalt (HMA) surface course or leveling binder with an IL-4.75 mixture. Work shall be according to Sections 406, 1030, 1031 and 1032 of the Standard Specifications except as modified herein.

#### Materials.

Revise Article 1030.02 (b), (c), (d) and (g) of the Standard Specifications to read:

(b) Fine aggregate (Note 1 and 5)

Note 5. The gradation for IL-4.75 shall be FA 1, FA 2, FA 20 or FA 22.

- (c) Reclaimed or recycled material. Only processed FRAP or RAS will be permitted in the IL-4.75 mixture. Refer to D1 version for Reclaimed Asphalt Pavement and Reclaimed Asphalt Shingles special provision.
- (d) Mineral Filler. Mineral filler shall conform to the requirements of Article 1011.01 of the Standard Specifications. Collected HMA baghouse dust may be used as Mineral Filler provided it meets the gradation outlined in Article 1011 of the Standard Specifications and a separate mix design is created.
- (g) Asphalt Binder (AB). The AB shall be either Elvaloy or SBS/SBR with a PG 76-22 value. The AB shall meet the requirements of Article 1032.05(b) of the Standard Specifications; however the elastic recovery of the AB shall be 80 minimum.

The AB shall be shipped, maintained, and stored at the mix plant according to the manufacturer's requirements. It shall be placed in an empty tank and not blended with other asphalt cements.

<u>Mixture Design</u>. The percentage of new natural sand shall not exceed 25% if FRAP or RAS is used. For designs without FRAP or RAS the sand fraction of the final blend shall be at least 50% manufacture stone sand.

<u>Mixture Production</u>. Plant modifications may be required to accommodate the addition of higher percentages of mineral filler as required by the JMF.

During production, mineral filler shall not be stored in the same silo as collected dust. This may require any previously collected bag house dust in a storage silo prior to production of the IL-4.75 mixture to be wasted. Only metered bag house dust may be returned back directly to the mix. Any additional minus No. 200 (75 µm) material needed to produce the IL-4.75 shall be mineral filler.

As an option, collected bag-house dust may be used in lieu of manufactured mineral filler, provided; 1) there is enough available for the production of the IL-4.75 mix for the entire project and 2) a mix design was prepared with collected bag-house dust.

The mixture shall be produced within the temperature range recommended by the asphalt cement producer; but not less than 325 °F (165 °C).

The amount of moisture remaining in the finished mixture (at silo discharge) shall be less than 0.3 percent based on the weight of the test sample after drying.

Mixtures contain steel slag sand or aggregate having absorptions  $\geq 2.5$  percent shall have a silo storage plus haul time of not less than 1.5 hours.

#### Placement.

Revise Article 406.06 (b) (2) a. to read as follows:

"a. The surface shall be dry for at least 12 hours, and clean, prior to placement of the mixture.

As an option, the contractor will be allowed to use a heated drier, at no additional cost to the Department, to expedite the drying of the pavement. No mix will be placed in areas of standing water or areas that show evidence of moisture or dampness. The use of a heated drier will be stopped if the pavement shows signs of damaged."

#### HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013 Revised: November 1, 2013

Revise Article 406.14(b) of the Standard Specifications to read.

"(b) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was not produced within 2.0 to 6.0 percent air voids or within the individual control limits of the JMF, the mixture and test strip will not be paid for and the mixture shall be removed at the Contractor's expense. An additional test strip and mixture will be paid for in full, if produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF."

Revise Article 406.14(c) of the Standard Specifications to read.

"(c) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF, the mixture shall be removed. Removal will be paid in accordance to Article 109.04 of the Standard Specifications. This initial mixture and test strip will be paid for at the contract unit prices. The additional mixture will be paid for at the contract unit price, and any additional test strips will be paid for at one half the unit price of each test strip."

#### 1) Design Composition and Volumetric Requirements

Revise the following table in Article 1030.01 of the Standard Specifications to read.

	IL-25.0	binder; IL	-19.0 bi	nder;	
High ESAL	IL-12.5	surface;	IL-9.5	surface;	IL-4.75,
	SMA				

Revise the following table in Article 1030.04(a)(1):

"(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) 17														
Sieve Size	IL-25	.0 mm	IL-19	.0 mm	IL-12	.5 mm	IL-9.	5 mm	IL-4.7	5 mm		A 4/ .5 mm		A 4/ 5 mm
	Min	max	min	max	min	max	min	max	min	max	min	max	min	max
1 1/2 in (37.5 mm)		100											·	
1 in. (25 mm)	90	100		100										
3/4 in. (19 mm)		90	82	100		100						100	,	
1/2 in. (12.5 mm)	45	75	50	85	90	100		100		100	80	100		100
3/8 in. (9.5 mm)						89	90	100		100		65	90	100
#4 (4.75 mm)	24	42 <sup>2/</sup>	24	50 <sup>2/</sup>	28	65	32	69	90	100	20	30	36	50
#8 (2.36 mm)	16	31	20	36	28	48 3/	32	52 <sup>3/</sup>	70	90	16	24 5/	16	32
#16 (1,18 mm)	10	22	10	25	10	32	10	32	50	65				
#30 (600 μm)											12	16	12	18
#50 (300 μm)	4	12	4	12	4	15	4	15	15	30				
#100 (150 μm)	3	9	3	9	3	10	3	10	10	18				
#200 (75 μm)	3	6	3	6	4	6	4	6	7	90	7.0	9.0 %	7.5	9.5 %
Ratio Dust/Asphalt Binder		1.0		1.0		1.0		1.0		1.0		1.5		1.5

- 1/ Based on percent of total aggregate weight.
- 2/ The mixture composition shall not exceed 40 percent passing the #4 (4.75 mm) sieve for binder courses with Ndesign ≥ 90.
- 3/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign  $\geq 90$ .
- 4/ The maximum percent passing the 20  $\mu$ m sieve shall be  $\leq$  3 percent.

- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the #8 (2.36mm) sieve shall not be adjusted above 24 percent.
- 6/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer."

Delete Article 1030.04(a)(4) of the Standard Specifications.

Revise Article 1030.04(b)(1) of the Standard Specifications to read.

"(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix, and shall conform to the following requirements.

	VOLUMETRIC REQUIREMENTS High ESAL						
	Voids in the Mineral Aggregate  (VMA),  with Asp  minimum  Binde						
Ndesign	IL-25.0	IL-19.0	IL-12.5	IL-9.5	IL- 4.75 <sup>1/</sup>	(VFA), %	
50 70 90 105	12.0	13.0	14.0	15.0	18.5	65 – 78 <sup>2/</sup> 65 - 75	

- 1/ Maximum Draindown for IL-4.75 shall be 0.3%
- 2/ VFA for IL-4.75 shall be 72-85%"

Delete Article 1030.04(b) (4) of the Standard Specifications.

Revise table in Article 1030.04(b)(5) as follows:

"(5) SMA Mixtures.

	Volumetric Requirements					
	SMA	A <sup>1/</sup>				
Ndesign	Design Air Voids	Voids in the	Voids Filled			
	Target %	Mineral Aggregate	with Asphalt			
	(VMA), % min. (VFA), %					
		172/				
80 4/	3.5	16 <sup>3/</sup>	75 - 83			

- 1/ Maximum Draindown shall be 0.3%.
- 2/ Applies when specific gravity of coarse aggregate is  $\geq 2.760$ .
- 3/ Applies when specific gravity of coarse aggregate is < 2.760.
- 4/ For surface course, coarse aggregate shall be Class B Quality; the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone.\*

For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone.\*

\*Blending of different types of aggregate will not be permitted.

#### 2) Design Verification and Production

<u>Description</u>. The following states the requirements for Hamburg Wheel and Tensile Strength testing for High ESAL, IL-4.75, and Stone Matrix Asphalt (SMA) hot-mix asphalt (HMA) mixes during mix design verification and production.

When the options of Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement are used by the Contractor, the Hamburg Wheel and tensile strength requirements in this special provision will be superseded by the special provisions for Warm Mix Asphalt and/or by the District special provision for Reclaimed Asphalt Pavement and Reclaimed Asphalt Shingles as applicable.

Mix Design Testing. Add the following to Article 1030.04 of the Standard Specifications:

"(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department's verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification meeting the following requirements:

(1) Hamburg Wheel Test criteria.

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.

For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

(2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 415 kPa (60 psi) for non-polymer modified performance graded (PG) asphalt binder and 550 kPa (80 psi) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 1380 kPa (200 psi)."

#### Production Testing.

Revise first paragraph of Article 1030.06(a) to read:

"(a) High ESAL and IL-4.75 Mixtures. For each contract, a 300 ton (275 metric tons) test strip, except for IL -4.75 it will be 400 ton (363 metric ton), will be required at the beginning of HMA production for each mixture with a quantity of 3000 tons (2750 metric tons) or more according to the Manual of Test Procedures for Materials "Hot Mix Asphalt Test Strip Procedures"."

Delete second paragraph of Article 1030.06 (a).

Revise first sentence in fourth paragraph of Article 1030.06 (a) to read:

"Before constructing the test strip, target values shall be determined by applying gradation correction factors to the JMF when applicable."

Mixture sampled to represent the test strip shall include additional material sufficient for the Department to conduct Hamburg Wheel testing according to Illinois Modified AASHTO T324 (approximately 60 lb (27 kg) total).

Add the following to Article 1030.06 of the Standard Specifications:

(c) Hamburg Wheel Test. All HMA mixtures shall be sampled within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day's production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant

produced mixture demonstrates conformance prior to start of mix production for a contract.

The Department may conduct additional Hamburg Wheel Tests on production material as determined by the Engineer. If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria"

The Contractor shall immediately cease production upon notification by the Engineer of failing Hamburg Wheel test. All prior produced material may be paved out provided all other mixture criteria are being met. No additional mixture shall be produced until the Engineer receives passing Hamburg Wheel tests.

<u>Basis of Payment</u>. Revise the seventh paragraph of Article 406.14 of the Standard Specifications to read:

"For all mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive."

### **HOT-MIX ASPHALT – PRIME COAT (D-1)**

Effective: February 19, 2013

Revised: April 1, 2014

Revise Note 1 of Article 406.02 of the Standard Specifications to read:

"Note 1. The bituminous material used for prime coat shall be one of the types listed in the following table.

When emulsified asphalts are used, any dilution with water shall be performed by the emulsion producer. The emulsified asphalt shall be thoroughly agitated within 24 hours of application and show no separation of water and emulsion.

Application	Bituminous Material Types
Prime Coat on Brick, Concrete, or	SS-1, SS-1h, SS-1hP, SS-1vh, CSS-1, CSS-
HMA Bases	1h, CSS-1hP, HFE-90, RC-70
Prime Coat on Aggregate Bases	MC-30, PEP"

Add the following to Article 406.03 of the Standard Specifications:

"(i) Regenerative Air Vacuum Sweeper......1101.19"

Revise Article 406.05(b) of the Standard Specifications to read:

- "(b) Prime Coat. The bituminous material shall be prepared according to Article 403.05 and applied according to Article 403.10. The use of RC-70 shall be limited to air temperatures less than 60 °F (15 °C)."
  - (1) Brick, Concrete or HMA Bases. The base shall be cleaned of all dust, debris and any substance that will prevent the prime coat from adhering to the base. Cleaning shall be accomplished by sweeping to remove all large particles and air blasting to remove dust. As an alternate to air blasting, vacuum sweeping may be used to accomplish the dust removal. Vacuum sweeping shall be accomplished with a regenerative air vacuum sweeper. The base shall be free of standing water at the time of application. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface as specified in the following table.

Type of Surface to be Primed	Residual Asphalt Rate				
	lb/sq ft (kg/sq m)				
Milled HMA, Aged Non-Milled HMA, Milled	0.05 (0.244)				
Concrete, Non-Milled Concrete & Tined Concrete					
Fog Coat between HMA Lifts, IL-4.75 & Brick	0.025 (0.122)				

The bituminous material for the prime coat shall be placed one lane at a time. The primed lane shall remain closed until the prime coat is fully cured and does not pickup under traffic. When placing prime coat through an intersection where it is not possible to keep the lane closed, the prime coat may be covered immediately following its application with fine aggregate mechanically spread at a uniform rate of 2 to 4 lb/sq yd (1 to 2 kg/sq m).

(2) Aggregate Bases. The prime coat shall be applied uniformly and at a rate that will provide a residual asphalt rate on the prepared surface of 0.25 lb/sq ft  $\pm$  0.01 (1.21 kg/sq m  $\pm$  0.05).

The prime coat shall be permitted to cure until the penetration has been approved by the Engineer, but at no time shall the curing period be less than 24 hours for MC-30 or four hours for PEP. Pools of prime occurring in the depressions shall be broomed or squeegeed over the surrounding surface the same day the prime coat is applied.

The base shall be primed 1/2 width at a time. The prime coat on the second half/width shall not be applied until the prime coat on the first half/width has cured so that it will not pick up under traffic.

The residual asphalt binder rate will be verified a minimum of once per type of surface to be primed as specified herein for which at least 2,000 tons of HMA will be placed. The test will be according to the "Determination of Residual Asphalt in Prime and Tack Coat Materials" test procedure.

Prime coat shall be fully cured prior to placement of HMA to prevent pickup by haul trucks or paving equipment. If pickup occurs, paving shall cease in order to provide additional cure time.

Prime coat shall be placed no more than five days in advance of the placement of HMA. If after five days loss of prime coat is evident prior to covering with HMA, additional prime coat shall be placed as determined by the Engineer at no additional cost to the Department."

Revise the last sentence of the first paragraph of 406.13(b) to read:

"Water added to emulsified asphalt at the source as allowed in article 406.02 will not be included in the quantities measured for payment."

Revise the second paragraph of Article 406.13(b) of the Standard Specifications to read:

"Aggregate for covering prime coat will not be measured for payment."

Revise the first paragraph of Article 406.14 and the second paragraph of Article 407.12 of the Standard Specifications to read:

"Prime Coat will be paid for at the contract unit price per pound (kilogram) of residual asphalt applied for BITUMINOUS MATERIALS (PRIME COAT), POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT) or NON-TRACKING BITUMINOUS MATERIALS (PRIME COAT)."

Revise Article 407.06(b) of the Standard Specifications to read:

"A bituminous prime coat shall be applied between each lift of HMA according to Article 406.05(b)."

Revise Article 1032.02 of the Standard Specifications to read:

"1032.02 Measurement. Asphalt binders, emulsified asphalts, rapid curing liquid asphalt, medium curing liquid asphalts, slow curing liquid asphalts, asphalt fillers, and road oils will be measured by weight.

A weight ticket for each truck load shall be furnished to the inspector. The truck shall be weighed at a location approved by the Engineer. The ticket shall show the weight of the empty truck (the truck being weighed each time before it is loaded), the weight of the loaded truck, and the net weight of the bituminous material.

When an emulsion or cutback is used for prime coat, the percentage of asphalt residue of the actual certified product shall be shown on the producer's bill of lading or attached certificate of analysis. If the producer adds extra water to an emulsion at the request of the purchaser, the amount of water shall also be shown on the bill of lading.

Payment will not be made for bituminous materials in excess of 105 percent of the amount specified by the Engineer."

Add the following to the table in article 1032.04 of the Standard Specifications:

(/00 4 1	1.60 1.00	EO 0011
T"SS-1vh	160 - 180	1 70 – 80"
	100 100	

Add the following to Article 1032.06 of the Standard Specifications:

#### "(g) Non Tracking Emulsified Asphalt SS-1vh:

Requirements for SS-1vh						
Test		SPEC	AASHTO Test Method			
Saybolt Viscosity @ 25C,	SFS	20-200	T 72			
Storage Stability, 24hr.,	%	1 max.	T 59			
Residue by Evaporation,	%	50 min.	T 59			
Sieve Test,		0.3 max.	T 59			
Test	s on Residue	from Evapora	tion			
Penetration @25°C, 100g., 5	sec., dmm	20 max.	T 49			
Softening Point,	°C	65 min.	T 53			
Solubility,	%	97.5 min.	T 44			
Orig. DSR @ 82°C,	kPa	1.00 min.	T 315"			

Revise the last table of Article 1032.06 to read:

"Grade	Use
SS-1, SS-1h, CSS-1, CSS-1h, HFE-90, SS-1hP, CSS-1hP, SS- 1vh	Prime or fog seal
PEP	Bituminous surface treatment prime
RS-2, HFE-90, HFE-150, HFE- 300, CRSP, HFP, CRS-2, HFRS-2	Bituminous surface treatment
CSS-1h Latex Modified	Microsurfacing"

Add the following to Article 1101 of the Standard Specifications:

"1101.19 Regenerative Air Vacuum Sweeper. The regenerative air vacuum sweeper shall blast re-circulated, filtered air through a vacuum head having a minimum width of 6.0 feet at a minimum rate of 20,000 cubic feet per minute."

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RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)
Effective: November 1, 2012 Revise: November 1, 2013
Revise Section 1031 of the Standard Specifications to read:
"SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT

**SHINGLES** 

- 1031.01 **Description.** Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.
  - (a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting from cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.
  - (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Bureau of Materials and Physical Research Policy Memorandum "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve. RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
    - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
    - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

#### 1031.02 Stockpiles. RAP and RAS stockpiles shall be according to the following.

- (a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. "Non- Quality, FRAP -#4 or Type 2 RAS", etc...).
  - (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that

- 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the FRAP will be used in.
- (2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, Superpave (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 inch single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.
- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (4) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".
- RAP or FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, plant cleanout etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.
- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present.
  - However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of type 1 RAS with type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval. The Engineer's written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is

approved for use in the HMA mixture and accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be maintained by project contract number and kept for a minimum of three years.

# 1031.03 Testing. FRAP and RAS testing shall be according to the following.

- (a) FRAP Testing. When used in HMA, the FRAP shall be sampled and tested either during processing or after stockpiling. It shall also be sampled during HMA production.
  - (1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).
  - (2) Incoming Material. For testing as incoming material, washed extraction samples shall be run at a minimum frequency of one sample per 2000 tons (1800 metric tons) or once per week, whichever comes first.
  - (3) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

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

- (b) RAS Testing. RAS shall be sampled and tested during stockpiling according to Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources". The Contractor shall also sample as incoming material at the HMA plant.
  - (1) During Stockpiling. Washed extraction and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤1000 ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed.

Additional incoming RAS shall be in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

(2) Incoming Material. For testing as incoming material at the HMA plant, washed extraction shall be run at the minimum frequency of one sample per 250 tons (227 metric tons). A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). The incoming material test results shall meet the tolerances specified herein.

The Contractor shall obtain and make available all test results from start of the initial stockpile sampled and tested at the shingle processing facility in accordance with the facility's QC Plan.

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

# 1031.04 Evaluation of Tests. Evaluation of tests results shall be according to the following.

(a) Evaluation of FRAP Test Results. All test results shall be compiled to include asphalt binder content, gradation and, when applicable (for slag), G<sub>mm</sub>. A five test average of results from the original pile will be used in the mix designs. Individual extraction test results run thereafter, shall be compared to the average used for the mix design, and will be accepted if within the tolerances listed below.

Parameter	FRAP
No. 4 (4.75 mm)	±6%
No. 8 (2.36 mm)	± 5 %
No. 30 (600 μm)	± 5 %
No. 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.3 %
G <sub>mm</sub>	± 0.03 <sup>1/</sup>

1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity". If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the FRAP stockpile shall not be used in Hot-Mix Asphalt unless the FRAP representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

The Contractor shall maintain a representative moving average of five tests to be used for Hot-Mix Asphalt production.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)" or Illinois Modified AASHTO T-164-11, Test Method A.

(b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. A five test average of results from the original pile will be used in the mix designs. Individual test results run thereafter, when compared to the average used for the mix design, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 μm)	±4%
No. 200 (75 μm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the RAS shall not be used in Hot-Mix Asphalt unless the RAS representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

(c) Quality Assurance by the Engineer. The Engineer may witness the sampling and splitting conduct assurance tests on split samples taken by the Contractor for quality control testing a minimum of once a month.

The overall testing frequency will be performed over the entire range of Contractor samples for asphalt binder content and gradation. The Engineer may select any or all split samples for assurance testing. The test results will be made available to the Contractor as soon as they become available.

The Engineer will notify the Contractor of observed deficiencies.

Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits.

Test Parameter	Acceptable Limits of Precision		
% Passing:1/	FRAP	RAS	
1 / 2 in.	5.0%		
No. 4	5.0%		
No. 8	3.0%	4.0%	
No. 30	2.0%	3.0%	
No. 200	2.2%	2.5%	
Asphalt Binder Content	0.3%	1.0%	
G <sub>mm</sub>	0.030		

1/ Based on washed extraction.

In the event comparisons are outside the above acceptable limits of precision, the Engineer will immediately investigate.

(d) Acceptance by the Engineer. Acceptable of the material will be based on the validation of the Contractor's quality control by the assurance process.

# 1031.05 Quality Designation of Aggregate in RAP and FRAP.

- (a) RAP. The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
  - (1) RAP from Class I, Superpave/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
  - (2) RAP from Superpave/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
  - (3) RAP from Class I, Superpave/HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
  - (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.
- (b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum

tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of "B" quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

1031.06 Use of FRAP and/or RAS in HMA. The use of FRAP and/or RAS shall be a Contractor's option when constructing HMA in all contracts.

- (a) FRAP. The use of FRAP in HMA shall be as follows.
  - (1) Coarse Aggregate Size (after extraction). The coarse aggregate in all FRAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
  - (2) Steel Slag Stockpiles. FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.
  - (3) Use in HMA Surface Mixtures (High and Low ESAL). FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.
  - (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.
  - (5) Use in Shoulders and Subbase. FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, Restricted FRAP, conglomerate, or conglomerate DQ.
- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.

(c) FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with FRAP in HMA mixtures up to a maximum of 5.0% by weight of the total mix.

When FRAP, RAS or FRAP in conjunction with RAS is used, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

Max A	Asphalt	Binder	Rep	lacement	for	FRA:	Ρ,	with	RAS	Combination
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HMA Mixtures 1/2/4/	Maximum % ABR			
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified <sup>3/</sup>	
30L	50	40	30	
50	40	35	30	
70	40	30	30	
90	40	30	30	
4.75 mm N-50			40	
SMA N-80			30	

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.
- 2/ When the binder replacement exceeds 15 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent binder replacement using a virgin asphalt binder grade of PG64-22 will be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 percent, the required virgin asphalt binder grade shall be PG64-28.
- 3/ When the ABR for SMA or IL-4.75 is 15 percent or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.
- 4/ When FRAP or RAS is used alone, the maximum percent asphalt binder replacement designated on the table shall be reduced by 10%.

1031.07 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

- (a) FRAP and/or RAS. FRAP and /or RAS mix designs shall be submitted for verification. If additional FRAP or RAS stockpiles are tested and found to be within tolerance, as defined under "Evaluation of Tests" herein, and meet all requirements herein, the additional FRAP or RAS stockpiles may be used in the original design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.500 shall be used for mix design purposes.

1031.08 HMA Production. HMA production utilizing FRAP and/or RAS shall be as follows.

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

If during mix production, corrective actions fail to maintain FRAP, RAS or QC/QA test results within control tolerances or the requirements listed herein the Contractor shall cease production of the mixture containing FRAP or RAS and conduct an investigation that may require a new mix design.

- (a) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.
- (b) HMA Plant Requirements. HMA plants utilizing FRAP and/or RAS shall be capable of automatically recording and printing the following information.
  - (1) Dryer Drum Plants.
    - a. Date, month, year, and time to the nearest minute for each print.
    - b. HMA mix number assigned by the Department.
    - c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

- d. Accumulated dry weight of RAS and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)
- i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
- j. Accumulated mixture tonnage.
- k. Dust Removed (accumulated to the nearest 0.1 ton)

#### (2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- f. RAS and FRAP weight to the nearest pound (kilogram).
- g. Virgin asphalt binder weight to the nearest pound (kilogram).
- h. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

#### 1031.09 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of

RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply. RAP used to construct aggregate surface course and aggregate shoulders shall be according to the current Bureau of Materials and Physical Research's Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications"
- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded, FRAP, or single sized will not be accepted for use as Aggregate Surface Course and Aggregate Shoulders."

# **RECLAIMED WATER (D-1)**

Effective: December 1, 2013

<u>General</u>. This specification covers the blending, testing, storing, use of and requirements for reclaimed water in Portland cement concrete.

Material. Reclaimed water shall consist of wash out, runoff, and/or storm water that has been combined with water conforming to Article 1002.01. Reclaimed water meeting the quality requirements of this specification shall be evaluated for acceptance by the Department.

<u>Use.</u> Reclaimed water will only be allowed in Class PV and SI concrete mix designs at a maximum of 20.0% total by weight. Reclaimed water is prohibited in all other concrete class mix designs. This material will only be allowed in work without reinforcing steel only. Dowel bars and tie bars are not considered reinforcing steel.

Reclaimed water shall be weighed or metered separately from water conforming to Article 1002.01 and shall be detailed separately on batch sheets used to document concrete batch weights.

Quality. The reclaimed water shall be clean, clear, and free from sugar. Reclaimed water shall be combined at a 1:4 ratio with water conforming to Article 1002.01 and the combination shall be according to Article 1002.02 except for the following:

Water Intake. Reclaimed water shall enter a settling pond before being filtered to remove the necessary amount of solids to meet specifications in Article 1002.02. The intake of the pipeline shall be at a minimum height of 2 ft (600 m) above the bottom of the reclaimed water settling pond. A properly labeled tank shall be provided for storage of the reclaimed water. The tank is

to be separate from water which has been approved by the Illinois Department of Public Health for drinking or household use. The tank may be heated, however the maximum water temperature of the reclaimed water shall not exceed 150 °F (65 °C).

# Quality Control and Quality Assurance (QC/QA).

(a) Quality Control by Contractor. The Contractor shall provide evidence to assure conformance to the standards stated in Article 1002.02 (a) and (b). The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Inability to maintain the reclaimed water within specifications is cause for the Engineer to suspend the use of reclaimed water in concrete until adjustments have been made and the water is within the specifications.

Water samples will be taken on the same date and sampled as follows: three liters from the tank containing water that conforms to Art. 1002.01 and three liters from the filtered tank. Both samples must be submitted to the Department for testing every 4 months and when requested by the Engineer. A state representative must witness the sampling. The results from these samples shall serve as a check to the data provided by the contractor.

One Trial Batch per proposed mix design is required to verify minimum strengths can be achieved as defined in Article 1020.04 of the Standard Provision.

- (b) Quality Assurance by the Engineer. The Engineer will conduct independent assurance tests on split samples taken by the Contractor for quality control testing.
- (c) Documentation. The Contractor shall be responsible for documenting all test results. Records of testing shall be kept for a minimum of three years. The Contractor shall provide the Engineer full access to all documents.

# STATUS OF UTILITIES TO BE ADJUSTED

Effective: January 30, 1987 Revised: December 6, 2013

Utilities companies involved in this project have provided the following estimated durations:

Name of Utility	Туре	Location	Estimated Duration of Time for the Completion of Relocation or Adjustments
ComEd 25000 Governors Hwy. University Parkway. IL 60466 Scott Berprand	Electric	Univ. Parkway Sta 118+57 to Sta 152+38	Adjustments required Prior to May 1 <sup>st</sup> .
Nicor Gas 1844 W. Ferry Road. Naperville, IL 60563 Constance Lane (630) 388-3830	Natural Gas	Univ. Parkway Sta 118+57 to Sta 133	Adjustments Required Prior to May 1 <sup>st</sup> .  (NICOR Engr #S3233-A)
ATT 1000 Commerce Drive Oak Brook, IL Dave Phelps	Telephone	Univ. Parkway Sta 118+57 to Sta 152+38	No adjustments anticipated.
Aqua Illinois Inc 1000 S. Schuyler Avenue Park Forest, IL 60466 Joel Mingus (708) 534-6513	Water	Univ. Parkway Sta 126+61 to Sta 126+86	Adjustments part of this contract.
Comcast 688 Industrial Drive Elmhurst, IL 60126 Thomas Munar (630) 600-6316	Cable TV	No utilities in project limits.	No adjustments required.

BP-Amoco Pipeline Co. 150 W. Warrenville Rd. Naperville, IL 60583 Alice Johnson	Pipeline	Univ. Parkway	No adjustments anticipated.
Teppco 2727 North Loop West Houston,TX 77008-1044 Mike Boomsa (708) 534-6266	Pipeline	No utilities in project limits.	No adjustments required.
NORCO PIPELINE – BUCKEYE PARTNER 8600 w. 71 <sup>ST</sup> St. Bedford Park, IL 60501 Burt Allen (708) 259-1356	Pipeline	No conflicts.	No adjustments required.
ENBRIDGE PIPELINE Cushing Region ROW Office 2448 E 81st Street #4910 Tulsa, OK 74137 Benjamin N. Johnson (918) 493-1716	Pipeline	No utilities in project limits.	No adjustments required.
Paetec (McCleod USA) 900 Commerce Drive Suite. 203 Oak Borook, IL 60523 Paul Baumann (708) 774-5174	Communications	No conflicts anticipated.	No adjustments anticipated.
ZAYO (formerly 360 Net) 4024 Hounds Hill Dr. Florissant, MO 63034- 2042 Steve Hendel (314) 830-9928 (office) (314) 753-8213 (cell)	Communications	No utilities in project limits.	No adjustments required.
Level 3 Communications 9536 Johnson Street Crown Point, IN 46307 Jeremy Brouwer	Communications	No conflicts anticipated.	No adjustments anticipated.

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

In accordance with 605 ILCS 5/9-113 of the Illinois Compiled Statutes, utility companies have 90 days to complete the relocation of their facilities after receipt of written notice from the Department. The 90-day written notice will be sent to the utility companies after the following occurs:

- 1) Proposed right of way is clear for contract award.
- 2) Final plans have been sent to and received by the utility company.
- 3) Utility permit is received by the Department and the Department is ready to issue said permit.
- 4) If a permit has not been submitted, a 15 day letter is sent to the utility company notifying them they have 15 days to provide their permit application. After allowing 15 days for submission of the permit the 90 day notice is sent to the utility company.
- 5) Any time within the 90 day relocation period the utility company may request a waiver for additional time to complete their relocation. The Department has 10 days to review and respond to a waiver request.

# **EARTH EXCAVATION**

This item shall be completed in accordance with the applicable portions of Section 202 of the Standard Specifications with the following general additions. This work shall include removal of all earth material shown on the cross sections or as directed by the Engineer. Earth Excavation will also include all aggregate surfaces. Earth excavation will not include the excavation of topsoil, unsuitable materials and removal items for existing bituminous and concrete pavements, driveways, bike path, or curb and gutter.

For this project, it is the intention of this specification to pay for the handling of earthwork material only once, regardless of staging or Contractor's operations. The Contractor shall be responsible for his earthwork operations for excavating and stockpile excavated materials for re-handling at a later date. This applies to all excavated material to be used in embankments, shoulders or as topsoil re-spread.

Temporary earth stockpiles will not be allowed on the adjacent properties without the permission of the owner and approval of the Engineer. It will be the contractor's responsibility to acquire permission from the appropriate owner prior to stock piling any materials on those properties. The contractor will provide the Engineer with a written statement from the property owner stating said permission has been granted. This work will be considered part of the contract. As such, if the Contractor chooses to do this work as part of the close out or punch list work, contract days will continue to be counted until all stockpiles are removed and all disturbed areas are restored to at least to their original condition.

A shrinkage Factor of 15% was used for this Project.

Overhaul will not be paid for separately but shall be included in the unit price per cubic yard for EARTH EXCAVATION.

# REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS

This work shall conform to the applicable portions of Section 202 of the Standard Specifications and shall include the removal and satisfactory disposal of unsuitable soils as shown in the plan cross sections, and at locations as directed by the Engineer.

Unsuitable soil shall be excavated according to Article 202.03 of the Standard Specifications. The Contractor may choose to waste this material on-site within embankment areas at locations outside of a 1(H):1(V) side slope from the outside edge of the proposed outside paved shoulder.

Unstable or Unsuitable materials that have a soil classification that is acceptable for use in the type of embankment specified, but are considered unstable only because the insitu moisture content of the soil is either to high or to low, will not be considered as unstable or unsuitable material. If these soils are needed for use in the formation of the proposed embankments, the soil will be worked or conditioned by discing, tilling or adding a soil additive to bring the material to optimum moisture content. Moisture content and compaction requirements for embankments will be as specified in Section 205.05 of the Standard Specifications.

This work shall be measured and paid for at the contract unit price per cubic yard for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS.

# **EXPLORATION TRENCH, 52" DEPTH**

This work shall be performed according to section 213 of the Standard Specifications. Exploration Trench(s) shall be constructed at location(s) as directed by the Engineer.

The exploration holes will be completed at all locations where the proposed storm sewer or casing pipe cross an existing water main, petroleum line or other utility line where meeting clearance requirements are essential and adjustment to the proposed storm sewer may be necessary prior to starting installation to meet said clearance requirements. Other exploration trenches may be excavated at the locations noted on the plans or required by the Engineer.

The depth of the inspection hole shall be as necessary to uncover the existing utilities or other obstructions and of adequate width to allow investigation of the investigated item in the hole. In no case does the inspection hole need to be deeper than the proposed invert elevation of the proposed storm sewer or water main being installed plus the clearance requirement.

After a determination of the condition and/or location adequacy by the Engineer, and at the direction of the Engineer, the excavated material shall be used to backfill the trench. Any excess materials shall be disposed.

This work will be paid for at the contract unit price per foot for EXPLORATION TRENCH, 52" DEPTH, which will be payment in full for all required work as set forth above.

## **DRILL AND GROUT #8 TIE BARS**

## Description

This work shall consist of drilling and installing by means of chemical adhesive (non-shrink grout will not be allowed), epoxy coated deformed steel tie bars across the longitudinal construction joint to tie the proposed left turn lane pavement to the existing through lane or the proposed median/curb and gutter to the existing through lane pavement on Cicero Avenue

This item will not apply to epoxy coated tie bars used to tie proposed pavement to proposed curb and gutter and/or median.

## **Materials**

The tie bars will be No. 8 epoxy coated deformed steel tie bars. The tie bars shall meet the requirements of Article 1006.10 of the Standard Specifications.

The tie bars shall be 24 inches long on 24 inch center spacing along the longitudinal joint.

Non-Shrink grout will not be allowed.

#### Construction Requirements

The tie bars shall be installed and tested as specified in Section 420.10 (b) of the standard Specifications.

## **Basis of Payment**

This work shall be paid for at the contract unit price per each for DRILL AND GROUT #8 TIE BARS, which price shall include drilling, furnishing and installing the tie bars, chemical epoxy, testing and all other appurtenances, labor, equipment to complete the work as specified.

## AGGREGATE SURFACE COURSE, TYPE B

Driveway access must be provided at <u>all</u> times with the exception of forming, pouring and cure time for the various concrete items. At no time shall the access be interrupted for more than a total of four calendar days. This work shall consist of construction and maintenance of aggregate

surface course for temporary driveways and approaches only. Contractor will be required to maintain roadway access to all driveways and entrances. The cost of maintaining roadway access shall be incidental to the contract.

Aggregate surface shall be constructed in accordance with the applicable portions of Section 402 of the Standard Specifications except that the equipment required for the work will be as directed by the Engineer.

Maintenance shall consist of placing and compacting additional aggregate of the same type and gradation as the surface aggregate.

When the use of the temporary driveways and approaches is discontinued and with the approval of the Engineer, the aggregate placed for construction and maintenance shall be removed and utilized in the permanent construction or otherwise disposed of offsite. There will be no additional compensation for removal of surplus aggregate materials not used in the project.

Driveway and entrance excavation shall be measured and paid for in Item 20200100.

If the aggregate material is not removed from the driveway or approaches and is utilized as the final driveway and entrance aggregate base course, it will be paid for only once. The final aggregate base course will be measured and paid for under Item No. 35101600 and this amount shall be deducted from the total tonnage of aggregate material paid for under this item. The amount of material (tonnage) to be deducted will be as follows:

(<u>Final measured area of driveway base course - sq. ft.</u>) x (0.33 ft) x 1.8 tons/ cu.yd 27 cu.ft./ cu.yd

This work will be paid for at the contract unit price per ton for AGGREGATE FOR TEMPORARY ACCESS, which price shall include all costs of furnishing, placing, removing and disposing of aggregate used in the construction of the temporary driveways and approaches.

Aggregate for driveway maintenance, which include furnishing and placing of additional aggregate to maintain a smooth surface on the temporary driveways will not be measured for payment but will be included in the price of aggregate for temporary access.

## SUBBASE GRANULAR MATERIAL, TYPE B

This work shall be performed in accordance with Section 311 of the Standard Specifications except that the material gradation shall be CA-6.

## COMBINATION CONCRETE GUTTER, CURB AND MEDIAN

This work shall conform to the appropriate articles of Section 606 of the Standard Specifications with the following additions.

Transverse joints in the concrete curb and gutter and monolithic median shall be spaced on 10 foot spacing by saw cutting unless otherwise approved by the Engineer. Joints in curb will be sawed no later than 12 hours of the initial placing of the concrete. When temperatures exceed the seasonal average, the joints will need to be sawed within a period of time to assure that no random cracking will occur. If random cracks occur, the curb and getter shall be removed and replaced from joint to joint at the Contractor's expense.

All sawed or tooled contraction joints in the curb and gutter and median shall be sealed within 48 hours after they were sawed or tooled. When the joint sealer is applied by a "caulking gun" operation, the joint sealer shall be applied in such a manner to ensure that the joint sealer penetrates the joint a minimum of one-half (1/2) inch. On joints not meeting this requirement, the sealer will be removed from the joint and the joint will be re-sealed at the Contractors expense. If curb work is done when the outdoor temperatures fall below the recommended application temperature of the joint sealer, a hot poured sealer will be required as specified in Section 420.14(a.). Heating of the joint or the polysulfide sealer to apply the sealer will not be allowed. There will be no additional compensation for meeting this requirement.

Depressed curb at handicap ramps shall conform to IDOT Standard 424001. Particular attention should be paid to the construction of the ramp profile. The ramps will be inspected. Curbs not constructed to these slope requirements will be removed and reconstructed at the Contractor expense.

The thickness of the new gutter flag shall match the total thickness of the bituminous or concrete pavement it is adjacent to: University Parkway = 12.5 inches, Cicero Avenue = 11 inches. This work will not be paid for separately on the basis of pavement thickness.

All curb and gutter damaged by the Contractor's or Subcontractor's operations shall be corrected. When the damaged area exceeds 1 inch in diameter the curb will be removed and replaced from joint to joint. All damaged areas smaller than 1 inch will be corrected by filling these areas with an epoxy concrete mixture approved by the Engineer. These areas will then be brushed with a mortar and water mixture to restore the texture and look of the original curb and gutter. This corrective work shall be at the Contractor's expense.

## **TEMPORARY PAVEMENT**

This item is intended to be used for the construction of temporary pavement widening for staged traffic, as replacement pavement for removed raised medians, driveway and street cross-overs, temporary driveway fillets and temporary storm sewer trench patches at the locations shown on the plans or as directed by the Engineer.

The Temporary Pavement, at the option of the contractor, shall be either 200mm (8") P.C. Concrete Base Course or 200mm (8") Hot-Mix Asphalt Base Course, with 50mm (2") Hot-Mix Asphalt Surface Course, Mix D, N50. The Temporary Pavement shall be constructed in accordance with Sections 353, 354, 355, 356 and 358 of the Standard Specifications and the details in the plans except as herein specified.

No extra compensation will be given for the construction of the Temporary Pavement in the winter months with P.C. Concrete Base Course.

#### Basis of Payment

This work will be paid for at the contract unit price per square yard for TEMPORARY PAVEMENT which price shall include payment in full for all materials, labor and equipment necessary to perform the work as here in specified.

Removal of the temporary pavement shall be paid for separately at the contract unit price per square yard for TEMPORARY PAVEMENT REMOVAL. This price shall include payment in full for removal, hauling and disposal of the temporary pavement materials, labor and equipment necessary to perform the work as here in specified.

# **TEMPORARY PAVEMENT MARKINGS**

This work shall consist of furnishing, installing maintaining, and removing all temporary pavement markings in construction zones in accordance with the plan detail sheets, traffic control standards, the Standard Specifications and these special provisions.

Temporary pavement markings shall be required on paved, primed and milled surfaces. Temporary pavement markings which may be used on this project are:

Temporary Paint Pavement Marking - (Section 703) Pavement Marking Tape, Type III - (Section 703)

#### Method of Measurement

All temporary pavement markings will be measured in lineal feet complete in place for the line width specified in the plans. The removal of temporary pavement marking, in construction zones, shall be in accordance with section 703 of the Standard Specifications, except that this work will <u>not</u> be measured for payment, but shall be considered incidental to temporary pavement markings.

# Basis of Payment

This work will be paid for at the contract unit price per square foot of applied line for TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS or TEMPORARY

PAVEMENT MARKING of the width and type of material specified. This price shall be full compensation for cleaning and preparing the pavement surface, and for all the materials, labor, tools equipment, and incidentals necessary to install, maintain and remove the markings as specified.

Temporary pavement markings showing excessive deterioration or damage for any reason, as determined by the Engineer within the duration of the construction phase, shall be replaced at the Contractor's expense.

## **INLET AND PIPE PROTECTION**

# **Description**

This work shall conform to the applicable portions of Section 280 of the Standard Specifications except as modified below.

Inlet protection in turf areas shall consist of placing a 6' x 6' sod area around each inlet. The sod perimeter shall be wrapped with erosion control fencing. Filter fabric shall be placed in all inlets. The fabric shall overlay the frame by a minimum of 2" and shall conform with materials specified for fabric fence.

## Maintenance

Filter fabric placed under the inlet grate in turf inlets shall be cleaned or replaced when the filter fabric is 25% covered. The filter fabric shall remain in place until the turf areas have developed a minimum of 80% coverage or as directed by the Engineer.

#### FLUSH INLET BOX, SPECIAL

## Description

This item will consist of providing a flush inlet box at the locations shown in the plans. The flush inlet box will meet the applicable requirements of Section 542 of the Standard specifications and dimensions and details shown in the construction plan details for flush inlet box.

#### Basis of Payment

This work shall be paid for at the contract unit price per each for FLUSH INLET BOX FOR MEDIAN, STANDARD 542546, SPECIAL, regardless of the pipe diameter or structure height. This price shall include all material, labor, tools, equipment and incidentals necessary to complete this item of work.

## STORM SEWERS OR CULVERTS TO BE CLEANED

## Description

This item shall consist of removal of debris sediment from existing storm sewer or culverts to reestablish their drainage function.

## Construction Methods

The storm sewer or culvert shall be traced to confirm the outfall location on the plans and then cleaned to remove all debris and rock and reestablish its hydraulic characteristics. The storm sewer or culvert shall be cleaned by means of a high pressure washer (sprayer). Excess material removed from the pipes shall be "vacuumed" or removed from the site.

#### Method of Measurement

The storm sewers or culverts to be cleaned shall be measured by the lineal footage along centerline, regardless of the size of the storm sewer or culvert.

# Basis of Payment

This work shall be paid for at the contract unit price per lineal foot of STORM SEWERS TO BE CLEANED, 12", regardless of the size. These prices shall include all material, labor, tools, equipment and incidentals necessary to complete this item of work.

## PIPE UNDERDRAINS, 4" (SPECIAL)

The pipe underdrain shall be perforated corrugated polyethylene (PE) tubing and shall be fitted with a factory applied fabric sock for encasing the perforated corrugated pipe underdrain. The fabric sock may be either a knitted, woven or non-woven fabric meeting the requirements of Section 1080.01 of the Standard Specifications. The fabric envelope will not be required.

## Basis of Payment

This work shall be paid for at the contract unit price per lineal foot of PIPE UNDERDRAINS, 4" (SPECIAL). This price shall include the underdrain, sock, connection and fittings and all other materials, labor, tools, equipment and incidentals necessary to complete this item of work.

# FIELD TILE REPLACEMENT

#### Description

The Contractor shall exercise care to protect all field tiles from damage and to carefully watch trenches to locate all field tiles which are cut by the construction activities. Any field tiles cut by the construction activities shall be replaced as detailed described herein and as detailed on the plans. All field tile which crosses the proposed improvement trench shall be replaced and shall qualify for payment under this item. Field tiles that parallel the proposed improvement trenches and are more than three feet from the centerline of the trench shall be protected or restored by the Contractor at his own expense. Field tiles that parallel the proposed improvement trenches and are less than three feet from the centerline of the trench shall be replaced by the Contractor (if damaged) and shall qualify for payment under this item. However, if field tiles are encountered which are within three feet of the centerline of the proposed improvement trench, the engineer shall have the right to adjust the alignment of the proposed improvement so that the field tile is beyond three feet from the centerline of the trench.

Where the location of field tiles are known, they are shown on the plans, but is anticipated that other field or drain tiles exist which are not shown on the plans.

#### **Materials**

Replacement field tile shall be in accordance with section 611 of the Standard Specifications.

Bedding material below the replacement pipe shall meet the requirements specified under Section 209 of the Standard Specifications.

#### Construction Methods

After the proposed improvement is installed, the Contractor shall install and compact gravel cradle from the bottom of the trench to the top of the field tile replacement. In the event of a direct grade conflict between the proposed improvement and the field tile, the engineer shall direct adjustment of the grade of the proposed improvement. The Contractor shall excavate for replacement of the field tile to one foot beyond the edge of the trench on each side. Replacement pipe shall be cut to the required length and the existing field tile pipe shall be cut to allow butting of the pipes together. The replacement pipe shall be set and fastened to the existing field tile with an elastomeric coupling and two stainless steel bands at each joint. Gravel cradle shall be extended to the centerline of the replacement pipe and then the remainder of the trench shall be backfilled as shown on the plans.

## Method of Measurement

Field tile replacement shall be measured in accordance with article 611.06.

## Basis of Payment

No additional payments will be allowed for field tile repairs and/or replacements, including all necessary materials and backfill. All costs shall be included in the cost the item being installed during trenching.

#### **SLOPE INLET BOX – 30"**

## Description

This item shall be constructed in accordance with the details and notes shown in the construction plans. The contractor has the option of a pre-cast structure or a cast-in-place structure or a combination of the two.

#### Materials

Structure shall be designed in accordance with Section 504 of the Standard Specifications for Road and Bridges. Concrete shall be Class SI for cast-in-place structures and Class PC for precast structures.

#### Design and Certification

Shop drawings and design calculations shall be submitted to the Engineer. The shop drawing and design calculations shall be signed and sealed by a licensed Structural Engineer registered in the State of Illinois.

#### Basis of Payment

This item will be paid for, regardless of structure type, at the contract unit price per each for INLET BOX, SPECIAL, of the diameter specified on construction plans, which price shall include all items as detailed in the plans including pre-cast sections, cast-in-place portions, porous granular bedding material and excavation.

## **DUCTILE IRON WATER MAIN**

Pipe material shall be cement-lined, bituminous coated, ductile iron Class 52 (AWWA C150) with push-on joints (AWWA C111). Bedding shall be the same as specified for trench backfill. The water main shall be placed at a depth shown on the plans.

Push on joints: Shall meet ANSI A21.4/AWWA C-104.

Joint Restraint:

## Locking Gaskets

Description – Restraint shall be a boltless, integral restraining system and shall be rated for 350 psi in accordance with the performance requirements of ANSI/AWWA C111/A21.11. The pressure rating for restraints shall be based on a 2:1 safety factor or up to 350 psi depending on the class of the pipe used.

#### Mechanical Joint

Description - Restraint devices shall consist of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of ANSI/AWWA C110/A21.10. The devices shall have a working pressure rating of 350 psi for 3-16 inch and 250 psi for 18-48 inch. Ratings are for water pressure and must include a minimum safety factor of 2 to 1 in all sizes.

Material - Gland body, wedges and wedge actuating components shall be cast from grade 65-45-12 ductile iron material in accordance with ASTM A536. Ductile iron gripping wedges shall be heat treated within a range of 370 to 470 BHN.

Installation: Canvas strap shall be used to lower pipe into trench to protect polyethylene encasement.

# <u>Pressure Testing and Disinfecting - New Installations</u>

The pressure and leakage tests for all water main will be conducted at a pressure of 150 psi in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois" and the following:

- 1. The Contractor shall perform the pressure and leak tests on the proposed water main prior to connecting to the existing water main.
- 2. Aqua Illinois and the Engineer shall be present at all pressure testing.
- 3. Test pressure shall be held at 150 psi for four hours minimum with an allowable leakage factor as specified by the "Standard Specifications for Water and Sewer Main Construction in Illinois".
- 4. Pressure shall be released immediately after a passed test.

All proposed water main shall be chlorinated in accordance with the "Standard Specifications for Water and Sewer Main Construction in Illinois" and the following:

- 1. Chlorination shall be made by the use of chlorine gas only
- 2. The chlorine gas shall be injected into the main at intervals of no more than 1,000 feet.

- 3. A free chlorine residual of at least 50 ppm and no more than 400 ppm must be reached throughout the entire length and branch lines of the water main.
- 4. After the super-chlorinated water has sat in the main for 24 hours, a chlorine residual test shall be taken to ensure the residual has not dropped by over half.
- 5. If the chlorine level is acceptable, the main should be flushed to allow system water in to replace super-chlorinated water.
- 6. At this time, a water sample will be taken by the Contractor or his representative and given to Aqua Illinois for testing.
- 7. The Contractor's sample must pass for the water main to be accepted.

## Pressure Testing and Disinfecting – Adjustment Installations

With the approval of Aqua Illinois, the hydrostatic test will not be required on the proposed water main pipe.

The entire length of water main will be "swabbed" with a solution of 16% NaOC<sub>3</sub> and 14% NaOcl. The pipe will be flushed as directed by Aqua Illinois immediately prior to placing in service. Contractor will not be allowed to flush the system onto any unfinished pavement subgrade or aggregate base. The Contractor shall provide sufficient hose to discharge water to the storm system or the nearest drainage ditch.

All temporary water shutdowns shall be done in accordance with the following procedures.

- 1. The Contractor shall inform Aqua Illinois of any water shutdowns at least 48 hours in advance.
- 2. Aqua Illinois will determine what residences will be affected by the shutdown and supply to the Contractor shut-off notice handouts and areas to be notified.
- 3. The Contractor shall be responsible for distributing handouts to affected residences.
- 4. The turning of any valve other than those installed by the Contractor and not yet been accepted by Aqua Illinois, shall be supervised by Aqua Illinois personnel.

The installation of the proposed water main shall be paid for at the contract unit price per foot for DUCTILE IRON WATER MAIN, of the size specified. Measurement shall be the actual installed length.

# WATERMAIN FITTINGS

The Contractor shall furnish and install ductile iron fittings to connect water main pipe as shown on the plans, described in this Special Provision and in accordance with the following sections of the "Standard Specifications for Water and Sewer Main Construction in Illinois", latest edition:

#### DIVISION IV WATER DISTRIBUTION

Section 40 Pipe for Water mains and Service Connections Section 41 Pipe Installation for Water mains

Fittings shall be cement lined, tar coated cast iron mechanical rubber gasket joints rated 250 psi per AWWA C-110/ANSI 21.20.

A metal harness of tie rods, retainer glands or clamps of adequate strength to prevent movement shall be used to anchor all fittings against movement. Steel rods or clamps shall be stainless steel. All fittings which deflect the flow 11-1/14 degrees or greater shall have a thrust block. Thrust blocks shall be poured concrete (Class SI) of the dimensions shown on the drawings and in accordance with the provisions of the Standard Specifications for Water and Sewer Main Construction in Illinois. Thrust blocking will be completed prior to filling/testing new water main. A cure time of 72 hours will be required.

Measurement of fittings shall be based on the fitting weight without glands, bolts and accessories as listed in AWWA Specification C110-82. The weight of the standard body fitting shall be used for measurement purposes whether the standard body or short body fittings are installed. If the Contractor opts to use retainer glands, the retainer glands will also be measured for payment.

Payment for iron fittings shall be at the contract unit price per pound for DUCTILE IRON WATERMAIN FITTINGS which shall include all materials, labor and equipment to connect the fittings to the main pipe and shall include all work and materials associated with construction of the thrust block. The use of tie rods and/or friction clamps will not be measured for payment, but shall be considered INCLUDED in the cost of the water main. Retainer glands will be measured for payment under this item.

## POLYETHYLENE ENCASEMENT

Polyethylene Encasement shall be installed for all buried water main piping, fittings and valves as shown on the plans. The Engineer shall have the right to delete polyethylene wrap where conditions warrant.

All water main shall be encased in a loose 8-millimeter thick polyethylene tube in accordance with ANSI/AWWA C-105/A-21.5, Method A.

The Contractor shall follow the installation guideline as set forth with AWWA Specification C-105.

# Method of Measurement

Measurement shall be for the actual length of Polyethylene Encasement measured along the center of the water main pipe with no deduction for fittings and/or valves.

#### Basis of Payment

Payment for Polyethylene Encasement shall be made at the contract unit price per lineal foot for POLYETHYLENE ENCASEMENT, <u>regardless</u> of the size specified. Payment shall be full compensation for all materials, labor, equipment and other appurtenant items to complete this item as specified.

## FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX

This work shall be in accordance with Section 564 of the Standard Specifications and Section 45 of the "Standard Specifications for Water and Sewer Main Construction in Illinois" with the following addition.

The fire hydrant shall be a breakaway type conforming to AWWA C502 with 6" inlet and auxiliary valve and two 2-1/2" nozzles with a 4" steamer, threads to be national standard. The centerline of the steamer connection shall be set 24" above finished grade. Fire hydrants shall be painted to a color specified by the Aqua Illinois.

Fire hydrant shall have the following features:

- 1. Dry top, factory lubricated assembly. Oil level checked by removing weather cap and oil filler plug in housing.
- 2. Upper operating stem bronze encased for O-ring seal surface contact.
- 3. Nozzles -- Interchangeable, threaded in place and retained by stainless steel nozzle locks.
- 4. Nozzle caps attached to upper barrel with individual non-kinking chains.
- 5. Housing and lower barrel flanges concealed type for improved appearance.
- 6. Safety flange -- Breaks cleanly upon impact, yet strong enough for normal handling, shipping, and use. Permits full 360 degree rotation of upper barrel to position nozzles in any desired direction. Extension sections or upper barrel with different nozzle size or arrangement can easily be added. Full size unnotched steel bolts used to retain safety flange and connect the upper and lower barrels.
- 7. Stem coupling -- Stainless steel, connects the upper and lower stems and is retained with stainless steel clevis and cotter pins. When traffic damage occurs, the portion of the coupling below the lower clevis pin is pulled free allowing coupling to remain attached to the upper stem. Lower stem retains bottom clevis and cotter pin with no loose parts to fall into hydrant barrel. Upper end of lower stem is located below lower

- barrel flange surface to prevent it from being held open by vehicle wheel after traffic damage.
- 8. Lower barrel -- Heavy wall sections where flange joins the barrel section for added strength.
- 9. Shoe -- Has lugs for strapping anchors on Mechanical Joint, D-150 and Slip-On Joint ends. Bottom has a support pad and side opposite inlet has a backing support pad.
- 10. Seat ring -- Bronze ring threads into bronze drain ring, which has two drain holes to provide an all bronze drain way.
- 11. Double drain valves (with replaceable plastic drain valve facings) operate automatically to force flush the drain way each time the hydrant is opened or closed. No toggles, springs, or adjustable mechanisms are required and the drain valve facings can be replaced when seat ring and main valve assembly is removed.
- 12. Main valve -- Molded rubber, reversible, compression type, closes with inlet pressure and remains closed during any above ground repairs or changes to upper barrel or bonnet assemblies.
- 13. 4.14 Main valve opening -- Controlled by lug in bottom of shoe. Stop in bonnet also available.
- 14. Main valve and seat ring -- Removable from ground flange or weather cap area with seat removal wrench.
- 15. Lower stem end threads -- Covered with an epoxy coated iron cap nut and sealed with rubber washer to protect them from corrosion. The cap nut is retained with a stainless steel lock washer.
- 16. Shoe and upper valve plate design -- Permits maximum flow by minimizing friction loss
- 17. Shoe interior, lower valve plate and cap nut -- Epoxy coated to resist corrosion.

#### Fire hydrant shall have the following materials:

- Bonnet, nozzle caps, barrels, safety flange, drain ring housing, lower valve plate, cap nut and shoe (Flanged, 8" Mechanical Joint and Slip-On) -- Cast Iron, ASTM A-126, Grade B.
- 2. Shoe -- Ductile Iron, ASTM A-536, Grade 65-45-12.
- 3. 4" and 6" Mechanical Joint Shoe -- Ductile Iron, ASTM A-536, Grade 65-45-12.
- 4. D-150 Mechanical Joint Shoe -- Ductile Iron, ASTM A-536, Grade 65-45-12.
- 5. Operating nut, hold down nut, nozzles, upper valve plate, seat ring and drain ring -- Bronze, in compliance with AWWA Standard C502.
- 6. Oil filter plug -- Brass, ASTM B-16, half hard.
- 7. O-ring seals -- Buna N, ASTM D2000 3CH720.
- 8. Weather seal -- EPDM, ASTM D2000 2AA910.
- 9. Anti-friction washer -- Thermoplastic polymer with high resistance to dynamic and static wear.
- 10. No lead allowed.

The auxiliary valve and valve box shall meet Aqua Illinois standards.

This work will be paid for at the contract unit price per each for FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX, which shall include payment in full for all labor, equipment, fire hydrant, valve box, hydrant and box risers as necessary to raise to finish grade, fittings, thrust blocking, retainer glands or tie rods, backfill and other materials necessary for a complete installation.

# REMOVE AND RELOCATE WATER MAIN

## Description

Remove and relocate shall consist of removing and disposing of a section of the existing water main, fittings, service connections and/or gate valves that is in conflict with the proposed storm sewer or other proposed improvement and horizontally and/or vertically adjusting the water main around the conflict as the locations shown in the plans using new water main of the size and type specified in the plans, fittings, service connections and gate valves. The work shall conform to the applicable portions of Section 561 of the Standard Specifications, Section 41 & 42 of the Standard Specifications for Water and Sewer Main Construction in Illinois, and the National Plumbing Code and these special provisions. All work shall be coordinated with Aqua Illinois. The contact for Aqua Illinois is as follows:

Cindy Munger P.O. Box 788 Park Forest, Illinois 60466 1-708-534-6513

#### Materials

Pipe material for water main will be ductile iron pipe, class 52 of the size specified. Pipe material shall be cement-mortar lined, bituminous coated, with push on type joints, conforming to ANSI specification A-21.4 (AWWA C-104).

All water main pipe and fittings shall be encased in an 8 millimeter thick polyethylene tube in accordance with ANSI/AWWA C-105/A-21.5, Method A.

Fittings for water main pipe shall be cement lined, tar coated cast iron with mechanical joints rated 250 psi per AWWA C110/ANSI 21.10.

Thrust blocking will be required on all bends. The thrust blocks will Class SI Concrete per the Standard Specifications. Retaining glands may be used with the approval of Aqua Illinois.

Bedding and backfill materials will meet the requirements for IDOT FA-6 gradation.

# Construction Requirements

Each conflict resolution adjustment shall comprise removal of the existing interfering water main and replacing the section, as shown on the typical detail, to provide clearance of 18" between the bottom of the storm sewer and the top of the replacement 16 inch water main. A 20 foot length of pipe shall be centered on the conflict storm sewer and provided with 45° fittings and pipe on each end for transition to the existing water main. The location and elevation of the existing water main shall be precisely confirmed and define the removal and replacement section in advance.

All joints shall be restrained including existing main joints within 5 feet of the removed section.

Removal and replacement will require relieving pressure on the main between appropriate isolation valves as indicated on the schedule. Valve closure shall be by Aqua Illinois only. Advance written notification of effected water users will be coordinated with Aqua Illinois.

Shut off of the segment to be removed and replaced will not be permitted before 9:00 a.m. and service restored by 4:00 p.m. including disinfection of the restored pieces and flushing of the shut-off area, also coordinated with Aqua Illinois.

# Hydrostatic Tests

With the approval of the Engineer and Aqua Illinois, the hydrostatic test will not be required on the proposed water main pipe.

## Disinfection of Water Main

The entire length of water main will be "swabbed" with a solution of 16% NaOC<sub>3</sub> and 14% NaOcl. The pipe will be flushed as directed by Aqua Illinois immediately prior to placing in service. Contractor will not be allowed to flush the system onto any unfinished pavement subgrade or aggregate base. The Contractor shall provide sufficient hose to discharge water to the storm system or the nearest drainage ditch.

## Trench Backfill

Trench backfill shall be placed where all existing water main is removed. Trench backfill for the proposed water main shall only be placed where the water main is located under pavement structures. Trench backfill shall be in accordance with Section 208 of the Standard Specifications.

#### Basis of Payment

The work for remove and replace water main will be paid at the contract unit price per foot for REMOVE AND RELOCATE WATER MAIN 16", of the diameter specified, which price shall include excavation, removal and disposal of the existing pipe and appurtenances, providing new

pipe, fittings, polyethylene wrap, joint materials, thrust blocking service connections, gate valves, trench backfill, the hydrostatic tests, disinfecting and flushing of the water main.

Reinstallation of all service connections will not be measured separately for payment, but shall be considered included to appropriate water main item.

Trench backfill for water main work will not be measured separately for payment, but shall be included in the unit price for removing and replacing the water main.

## STEEL CASINGS (TRENCHED)

This work shall consist of placing casing pipe to provide a sealed carrier pipe for storm sewer beneath the roadway or to meet the separation requirements for storm sewers and water mains.

#### Materials

At the locations shown on the drawings, water main shall be installed in a steel casing pipe. The steel casing pipe shall be bituminous coated and shall be of leak proof construction, capable of withstanding the anticipated loadings. The steel casing pipe shall have a minimum yield strength of 35,000 psi and shall meet the requirements of ASTM A139, Grade B. Ring deflection shall not exceed 2% of the nominal diameter. The steel casing pipe shall be delivered to the jobsite with beveled ends to facilitate field welding. All field welding of steel casing pipe shall be done in accordance with AWWA C206-82, "Field Welding of Steel Water Pipe." The minimum wall thickness of the steel casing pipe shall be as follows:

Steel Casing Diameter	Minimum Wall Thickness			
30"	0.469"			

Casing pipe diameter shall be such that there is a minimum of 6" clearance between the largest diameter of the water main being installed and the minimum inside diameter of the casing pipe including welds.

#### Casing Chocks

When water main pipe is installed within a casing pipe, the water main pipe shall be fitted with at least three casing chocks per pipe length. The casing chocks shall be made of corrosion resistant materials and shall have a friction coefficient of 0.12. The casing chocks shall be Power Seal Pipeline Products Corporation Model 4810 Powerchock, Pipeline Seal and Insulator, Inc. (PSI) Model S, Cascade Waterworks Manufacturing Company Model CCS.

The contractor will have the option of using casing chocks or wooden skids and straps when placing concrete storm sewer pipe within casing pipe. There will be no additional compensation for supplying the casing chocks.

# Casing End Seals

On all casing pipes where water main has been installed, manufactured casing end seals will be required. The casing end seals shall be Cascade Waterworks Manufacturing Company Model CCES, Pipeline Seal and Insulator, Inc. (PSI) Model C or W, Canusa Seal Kit Model CSK. All other casing pipes will be sealed by "bricking" and placement of non-shrink gout.

# Construction Operations - Boring and Jacking

- 1. At the locations shown on the drawings, steel casing pipe shall be installed by boring (auguring) and jacking or by tunneling and jacking. Casing pipe shall be so constructed as to prevent leakage of any substance from the casing throughout its length. Casing shall be installed so as to prevent the formation of a waterway under the pavement, and with an even bearing throughout its length, and shall slope to one end.
- 2. Boring and jacking shall consist of pushing the casing pipe with a boring auger rotating within the pipe to remove the spoil. When augers, or similar devices, are used for pipe emplacements, the front of the pipe shall be provided with mechanical arrangements or devices that twill positively prevent the auger and cutting head from leading the pipe so that there will be no unsupported excavation ahead of the pipe. The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. The over-cut by the cutting head shall not exceed more than one-half inch. The face of the cutting head shall be arranged to provide reasonable obstruction to the free flow of soft or poor material. The use of water or other liquids to facilitate casing emplacement and spoil removal is prohibited.
- 3. Plans and descriptions of arrangement to be used shall be submitted to the Engineer for review. Sections of steel casing pipe shall be butt welded, full circumference in conformance with AWWA C-206.
- 4. If any obstruction is encountered during installation to stop the forward action of the pipe, and it becomes evident that it is impossible to advance the pipe, operations will cease and the Engineer shall be notified at once. Contractor shall continue jacking operations on a regular basis to prevent cohesive freezing of the casing pipe.
- 5. If water is encountered, pumps of sufficient capacity to handle the flow shall be maintained at the site and shall be in constantly attended operation on a 24-hour basis until their operation can be safely halted. When dewatering, close observation shall be maintained to detect any settlement or displacement of the embankment.

- 6. All operations shall be conducted so as not to interfere with, interrupt, or endanger the operation of traffic or trains, nor damage, destroy or endanger the integrity of roadways. Operations will be subject to highway personnel inspection at any and all times.
- 7. Contractor shall maintain jacking and receiving pits in a dry and stable, neat and workmanlike manner. The bottom of the pit shall be lined with aggregate and rails for jacking machines to be carefully set to the proper line and grade. Contractor shall provide sheeting or shoring for the jacking and receiving pits or other acceptable methods to protect against caving or sloughing. The pits shall be secured by temporary fencing and barricades to prevent unauthorized or accidental entry. The Contractor's equipment shall not be placed or stored in a location which would obstruct or otherwise interfere with the adjacent roadway operations. Prior to commencement of the work the Contractor shall secure field verification of all utility clearances.
- 8. After the casing pipe has been properly installed, the Contractor shall install the carrying pipe within the casing in strict accordance with the manufacturer's recommendations. Chocks shall be attached to the carrying pipe to facilitate installation and adequate pipe bearing support. Adequate measures shall be taken to prevent structural damage to the pipe. The carrying pipe shall be installed so as to be electrically isolated from the casing pipe. Prior to pressure testing, the void between the carrying pipe and the casing shall be filled with sand or cellular foam concrete form the entire length of casing. Material shall be pumped or tremmied. Any water used in the operation shall be pumped away in a manner which will prevent erosion. After satisfactory pressure and leakage testing, the ends of the steel casing pipe shall be sealed with concrete.

## Method of Measurement

Steel casing shall be measured for payment along the centerline in place.

## Basis of Payment

Casing pipe shall be paid for at the contract unit price per foot for STEEL CASINGS 30".

The price shall include the cost of all materials, casing pipe, fittings, joint materials, blocking, skids or chocks, sand, bulkheads, end seals, dewatering, and all work and equipment necessary to make a completed and finished installation.

## SELECT GRANULAR BACKFILL, SPECIAL

This item shall consist of furnishing, transporting, placing and compacting select granular backfill material in water main trenches which occur beneath proposed or existing pavement,

curb and gutter, sidewalk, gravel driveways and all other locations shown on the drawing and specified in these Special Provisions.

The material used for select granular backfill shall be aggregate meeting the requirements for IDOT gradation FA-6 of the Standard Specifications.

All trenches in the locations described above shall be backfilled with selected granular backfill to a point not less than two (2) feet from the outside edges of existing and proposed pavement and one (1) foot from the outside edges of existing and proposed sidewalk.

Select granular backfill shall be placed from the spring line of the water main to the bottom of the pavement surface course. In the case of gravel driveways, the select granular backfill material shall extend to finished grade.

After backfilling is completed all trenches shall be compacted by means of jetting and water soaking in accordance with Section 20-2.20B of the Standard Specifications for Water and Sewer Main Construction in Illinois.

Select granular backfill shall be measured on a cubic yard basis. The quantity shall be computed based on the trench width (as detailed on the drawings) and the length and depth for which the select granular backfill is required along the water main pipe. Bedding and haunching (to the center of the pipe) will not be measured for payment.

Select granular backfill required around vaults, valve boxes, fire hydrants and other appurtenances will <u>not</u> be measured for payment under this special provision.

Payment for select granular backfill shall be made at the contract unit price bid per cubic yard for SELECT GRANULAR BACKFILL, SPECIAL. Payment shall be full compensation for all materials, labor, equipment and incidentals to place and compact the material as shown on the plans and as specified.

#### **USE OF FIRE HYDRANTS**

If the Contractor desires to use water from hydrants, he shall contact Aqua Illinois's water department and request a water meter. All water drawn from the Aqua Illinois water supply shall be metered, and drawn only from those hydrants provided for use by the Aqua Illinois. A \$750 deposit is required for the meter plus a deposit to cover projected water usage. Contact Aqua Illinois water department at 708-534-6513 with any questions. The contractor is responsible for the cost of water used. Cost of the use of fire hydrants will not be paid for separately but shall be INCLUDED in the cost of MOBILIZATION.

#### SANITARY MANHOLE MODIFICATIONS

This work shall consist of vertically adjusting, upward or downward, sanitary manholes. The work shall consist of removing the existing frame and lid, and may further require removing the cone, flat top and barrel sections to bring the structure to the proposed finished elevation.

Where an adjustment requires the removal of an existing barrel section(s), saw cutting and partial removal of the barrel section will not be allowed. The barrel section will be replaced with a new barrel section(s) of the appropriate height, in combination with the cone or flat top, frame and lid to bring the structure to the proposed finished grade.

It will be the contractor's responsibility to investigate the diameter of the existing manhole, the composition of barrel sections, joint type of the barrel sections, adjustment (masonry rings), top structure, and frame and lid of the existing structure to ascertain the correct combination of new manhole components to bring the structure to the proposed finished grade.

Classification as to adjustment or reconstruction shall be as specified in Article 602.03 of the Standard Specifications.

The work shall be in conformance with Section 602 of the Standard Specifications insofar as applicable and the following provisions.

#### Materials

- 1. All adjustment or reconstructs shall include a new frame and lid. Sanitary manhole covers shall be heavy duty, top flange type with machined bearing surfaces and rubber gasket seal between the lid and frame, must have two concealed pick holes and have the word "SANITARY" stamped in the cover. The manhole cover and frame shall be per Aqua Illinois Water Company standards.
- 2. All manhole barrel sections joints between manhole sections are to be tongue and groove. Barrel sections, cone or flat tops shall be precast concrete conforming to ASTM 478.

- 3. The areas between the adjusting rings and the manhole frames must NOT be tuck pointed with mortar unless the structures are located in paved areas. Mortar will be required between adjusting rings and frames when the structures are located in paved areas.
- 4. All new barrel sections will have manhole steps. The manhole steps shall be plastic, with steel bar reinforcement, per IDOT standard detail.
- 5. The manhole barrel sections shall be installed with butyl rubber joint sealant conforming to ASTM C-990.
- 6. All pinholes must be mortared with a brush finish to provide a watertight seal.
- 7. All manhole structures shall be free of any type of infiltration (water leaking into the structure).
- 8. All manholes shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.
- 9. An exterior rubber gasket boot shall be used to cover the sanitary manhole adjustment rings.

# Frame and Lid Adjustment

The total length of the manhole structure shall be such that not more than 6" of adjusting rings are necessary to set the frame and grate to the required finished elevation. All joints between the last manhole section and the frame are to be of watertight construction.

#### **Exterior Treatment**

The exterior of all proposed manholes shall be waterproofed with a bitumastic material as approved by Aqua Illinois.

## Basis of Payment

This work will be paid for at the contract unit price per each for SANITARY MANHOLES TO BE ADJUSTED or SANITARY MANHOLES TO BE RECONSTRUCTED, regardless of the diameter, which price shall include removal and disposal of appurtenant structure components, provide a new frame and lid, barrel sections, tops, plastic steps and all excavation, water proofing, joint sealer, granular backfill and other work as necessary to complete this item of work.

## **SAW CUTS**

#### Description

This work shall consist of sawing existing pavements, shoulders, sidewalks, driveways and curb and gutters to facilitate construction of butt joints, patches or new adjacent pavements and appurtenances. The saw cut will be full depth of the existing pavement, shoulders, sidewalks, driveways, and curb and gutter structure or at a depth that when the pavement or structure is removed, a clean, neat edge will result with no spalling of the remaining pavement or structure. Saw cutting shall be performed at all locations where pavement, shoulders, sidewalks, driveways, curb and gutters and other appurtenant structures are removed and/or will be replaced.

# Construction Requirements

The saw cut shall be accomplished with a "pavement saw". Vermeer type trenchers will not be allowed for final saw cut at the limits of construction.

# Basis of Payment

Longitudinal saw cutting required to remove the median and left turn lane pavement on Cicero Avenue, trenches shoulders, sidewalks, driveways, curb and gutters and other appurtenant structures will not be paid for separately but shall be included in the cost of related removal items, of which price shall include all equipment, labor and materials necessary to complete the work required.

# REMOVAL OF EXISTING STRUCTURES

# Description

This work shall consist of the removal and satisfactory disposal of existing drainage structures identified on the plans as headwalls, culverts and pipe culverts. The scope of this work shall also include saw cutting, removal and disposal of miscellaneous items appurtenant to the headwalls, culverts or culvert pipes, including but not limit to reinforcing steels, footings, toe blocks, base material, end sections, grating, etc.

# Construction Requirements

The removal of the existing headwalls, culverts and culvert pipes shall be performed in accordance with the applicable provisions of Section 501 of the Standard Specifications. In areas where the removed structure is under the proposed roadway or driveway pavement structure or other proposed structures (i.e. sidewalks, curbs and gutters, etc.), the trench shall be backfilled as specified under Article 208.03 of the Standard Specifications.

## Method of Measurement

Removal of existing headwalls, regardless of size, will be measured in units of each for each headwall designated for removal in the plans. Existing culverts and culvert pipes designated in the plans to be removed will be measured in place in feet of existing culvert or culvert pipe, regardless of size or type of materials, to be removed.

## Basis of Payment

Removal of concrete headwalls will be paid for at the contract unit price each for CONCRETE HEADWALL REMOVAL. Removal of culverts and culvert pipes will be paid for at the contract unit price per foot for PIPE CULVERT REMOVAL, regardless of size.

Trench backfill shall be measured separately for payment under Section 208 of the Standard Specifications.

# REMOVAL OF EXISTING FLARED END SECTIONS

# Description of Work

This work shall consist of the removal and satisfactory disposal of existing precast concrete end sections or metal end sections identified on the plans.

#### Construction Requirements

The removal of the existing end sections shall be performed in accordance with the applicable provisions of Section 501 of the Standard Specifications.

# Method of Measurement

Removal of existing end sections, regardless of material or size, will be measured in units of each end section removed.

## Basis of Payment

Removal of concrete or metal end sections will be paid for at the contract unit price each for REMOVE EXISTING FLARED END SECTION. The scope of this work shall also include removal and disposal of miscellaneous items including but not limit to, footings, toe block, grating and base materials.

#### FIRE HYDRANTS TO BE ADJUSTED

This item shall be done in accordance with the applicable portions of the Standard Specifications. This work shall be for the vertical adjustment (up or down) of the existing fire hydrant and valve and valve box.

This item shall consist of inserting new barrel sections, operating rods, horizontal extension pipe, backfill, valve box extensions, blocking, thrust blocks and aggregate base and backfill.

This work will be paid for at the contract unit price per each for FIRE HYDRANTS TO BE ADJUSTED which shall include payment in full for all labor, equipment, and material necessary to complete the adjustment of the fire hydrants, the auxiliary valve and valve box.

# FIRE HYDRANTS TO BE MOVED

## **Description**

This work shall be done in accordance with Section 564 of the Standard Specifications and shall consist of moving existing hydrants, valves and valve boxes to the locations and elevations shown on the plans or as directed by the Engineer.

At all fire hydrant locations, if an auxiliary valve and box are not present they shall be installed by the Contractor at the time of moving the fire hydrant. The new valve and box will be paid for per Section 109.04.

To minimize the inconvenience to affected residents, 48 hours prior to shutting the existing main down, the Engineer, the Village Engineer and all users that will be affected shall be notified in writing. The Contractor shall cooperate with the Village of University Park and Aqua Illinois personnel to locate valves necessary to isolate the work areas. All valves to be operated by Aqua Illinois personnel.

This shall be paid for at the contract unit price per each for FIRE HYDRANTS TO BE MOVED, which price shall be payment in full for all labor and materials including select granular bedding, thrust blocking, backfill, additional piping materials, valves (standard non-pressure connection) required to complete the installation and adjusting the barrel and valve box length so as to provide 18 to 24 inches between pump nozzle and ground.

## **REMOVE SIGN COMPLETE**

## Description of Work

This work shall consist of removing the existing post and sign panel or street name sign assembly, disassembling the sign or assembly from the post and delivering the sign to the Publics Work Director of the Village of University Park. Signs currently attached to utility or street light poles shall be removed, the bands taken off and the signs or assemblies delivered to the Village of University Park or The Illinois Department of Transportation. Existing signs shall not be removed until the new sign is installed or unless the installation of the new sign will immediately follow the removal of the existing sign. Existing signs and posts to be reused within the project limits shall be done so in accordance with the plans and as specified by the Village.

# **Basis of Payment**

This work shall be paid for at the contract unit price, each, for REMOVE SIGN COMPLETE, which price will include, removal and disposal of post and hardware, salvaging the sign panel and all labor, equipment necessary to complete this item of work. Each location of a sign counts as 1 removal regardless of how many signs are located on the post, utility pole or street light pole.

# **FENCE REMOVAL**

#### Description

The Contractor shall remove, without regard to the type and size of the existing fence, rails, post, foundations, miscellaneous hardware, and gates at the locations shown on the plans. The fence materials, fence post, foundations, and miscellaneous materials shall become the property of the Contractor and shall be disposed of offsite. No additional compensation shall be made for this disposal. The resulting void from the removal of the post or foundation holes shall be backfilled with compacted (hand tamped as a minimum) course aggregate material (CA-6, CA-10 or CA-12) capped with four (4) inches of topsoil graded to match existing ground grades. Any ruts resulting from these operations shall be filled with topsoil and graded smooth. No additional compensation shall be made for the materials and for filling of foundation holes or ruts.

# **Basis of Payment**

Fence removal shall be paid for at the contract lineal price per foot, without regard to the type and size of the existing fence as FENCE REMOVAL, which price shall be full compensation for removing and disposing of the existing fence, post and hardware, including backfill, all labor, equipment, tools and other incidentals necessary to complete this work.

This item will not include fence designated on the plans to be removed and re-erected.

# MAILBOX REMOVAL AND RELOCATION

Description: This work shall consist of removing and relocating an existing mail box.

General: This work shall consist of removing and relocating an existing mail box to the proposed location shown on the plans. The new location of the mail box shall be approved by the Engineer.

The relocated mailbox shall be installed on a new 4" x 4" square or 4½" diameter round treated wood post. The new post shall be embedded no more than 24" into the ground. The resulting hole shall be backfilled with a suitable excavated material, approved by the Engineer.

The existing post shall be removed and disposed of according to the requirements of Article 202.03 of the "Standard Specifications". The hole for the existing post shall be backfilled and the area restored.

#### Method of Measurement

This work will be measured for payment as each mailbox to be relocated.

## Basis of Payment

This work will be paid for at the contract unit price per each for MAILBOX REMOVAL AND RELOCATION. The unit price shall include all equipment, materials and labor required to relocate the mailbox and to restore the existing location. No additional compensation will be allowed for any temporary relocation or for the removal and disposal of the existing post.

#### MAILBOX REMOVAL AND REPLACEMENT

Description: This work shall consist of removing, relocating, and replacing an existing an existing mail box.

General: This work shall consist of removing and relocating an existing mail box to the proposed location shown on the plans. Due to the current condition of the existing mailbox, it shall be replaced by the Contractor. The new location and type of mail box shall be approved by the Engineer.

The relocated and replaced mailbox shall be installed on a new 4" x 4" square or 4½" diameter round treated wood post. The new post shall be embedded no more than 24" into the ground. The resulting hole shall be backfilled with a suitable excavated material, approved by the Engineer.

The existing post shall be removed and disposed of according to the requirements of Article 202.03 of the "Standard Specifications". The hole for the existing post shall be backfilled and the area restored.

## Method of Measurement

This work will be measured for payment as each mailbox to be relocated and replaced.

# Basis of Payment

This work will be paid for at the contract unit price per each for MAILBOX REMOVAL AND REPLACEMENT. The unit price shall include all equipment, materials and labor required to relocate and replace the mailbox and to restore the existing location. No additional compensation will be allowed for any temporary relocation or for the removal and disposal of the existing post.

# PAVEMENT REMOVAL

This work shall be in accordance with the applicable portions of section 440 of the Standard Specifications. This item is intended for the removal of the existing permanent concrete pavements. This item will include the removal of concrete driveways.

It shall be the responsibility of the Contractor to verify the thickness of the existing concrete and driveway pavements to be removed, and the extent to which it is reinforced. No additional compensation will be allowed because of variations from the assumed thickness shown on the plans, or for variations in the amount of reinforcement.

No additional compensation will be allowed for any additional excavation below the driveway pavement being removed whether it is due to the Contractor's operations or required by the plans or the Engineer, nor for any material required to bring the subbase to the proper grade.

This work will be paid for at the contract unit price per square yard for PAVEMENT REMOVAL, regardless of the thickness of the existing pavement structure, reinforcement, which price shall include payment in full for all materials, labor and equipment necessary to complete the work, as herein specified.

## **PAVEMENT MARKING REMOVAL**

Within the project limits, the permanent pavement marking removal shall be accomplished by grinding, water or sand blasting, or by obliteration (blackout). The method of removal within the project limits will be at the contractor's option.

Outside of the project limits, where ever possible, temporary pavement marking tape will be placed directly over the top of the existing permanent pavement markings so as to avoid removal of the existing markings. Existing pavement markings that cannot be covered by the temporary pavement marking tape shall be removed. Outside of the project limits, the existing permanent pavement marking removal shall be accomplished by water or sand blasting or by obliteration (blackout). Unless otherwise approved by the Engineer, grinding will <u>not</u> be permitted.

At the discretion of the Engineer, if the existing permanent pavement markings become discolored or deteriorated as a result of removing the temporary marking tape, the existing markings shall be repainted. The cost of the paint markings shall be paid for as PAINT PAVEMENT MARKINGS for the size specified.

# SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING

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

Cleaning of the inlet filter shall consist of inspecting and cleaning (includes removal and proper disposal of debris and silt that has accumulated in the filter fabric bag) by vacuuming, removing and dumping or any other method approved by the Engineer.

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

Basis of Payment: The work will be paid for at the contract unit price each for INLET AND PIPE PROTECTION, which price shall include all costs for labor, materials, equipment and incidentals necessary to perform the work.

## **MOWING AND GENERAL MAINTENANCE OF TURF AREAS**

This item of work shall include protecting permanently landscaped areas against traffic or other use. Surface otherwise gullied, rutted or otherwise damaged once the seed or sod has been placed shall be repaired by regarding, adding topsoil and re-sodding or re-seeding the damaged area. In addition, the contractor shall mow, water as directed, and otherwise maintain permanently landscaped areas in a satisfactory condition until the final inspection and the project is considered complete.

Mowing will be required to maintain a grass height of not more than five (5) inches.

Mowing and general maintenance of turf areas will not be measured separately for payment, but shall be included in the various items for seeding and sodding.

# **PRESERVATION OF TREES AND SHRUBS**

The Contractor shall remove only those trees and shrubs so designated by the Engineer, or those which directly interfere with the safety or quality of construction practices after approval by the Engineer. The Contractor shall exercise extreme care when working near existing trees and shrubs to avoid damaging those not scheduled for removal, and shall replace any damaged plants at his own expense.

# **COMPOST PLACEMENT 4"**

# <u>Description</u>

This work shall consist of incorporating compost within the root zone to improve soil quality and plant growth. This specification applies to the turf areas including Seeding Class 4 and Seeding Class 4 & 5B.

#### Materials

Compost shall be as well decomposted, stable, weed free organic matter source. It shall be derived from agricultural, food, or industrial residuals; biosolids (treated sewage sludge); yard trimmings, or source-separated or mixed solid waste. The product shall contain no substances toxic to plants, will possess no objectionable odors and shall not resemble the raw material from which it was derived.

## **Product Parameters**

PARAMETERS	REPORTED AS (Units of Measurement)	GENERAL RANGE	
pH <sup>2</sup>	pH units	5.0 – 8.5	
Soluble Salt Concentration <sup>2</sup>	ds/m (mmhos/cm)	Maximum 10	
(electrical conductivity)			
Moisture Content	% wet weight basis	30 - 60	
Organic Matter Content	% dry weight basis	30 - 65	
Particle Size	% passing a selected mesh size, dry weight basis	98% pass through <sup>3</sup> / <sub>4</sub> " screen or smaller	
Stability <sup>3</sup>			
Carbon Dioxide			
Evolution Rate	mg CO2-C per g OM per day	<8	
Maturity <sup>3</sup> (Bioassay)			
Seed Emergence and	% relative to positive control	Minimum 80%	
Seedling Vigor	% relative to positive control	Minimum 80%	
Physical Contaminants (inerts)	% dry weight basis	<1	
Chemical Contaminants <sup>4</sup>	mg/kg (ppm)	Meet or exceed US EPA Class A standard, 40 CFR §503.13, Tables 1 and 3 levels	
Biological Contaminants <sup>5</sup> Select Pathogens Fecal Coliform Bacteria, or Salmonella	MPN per gram per dry weight MPN per 4 grams per dry weight	Meet or exceed US EPA Class A standard, 40 CFR §503.32(a) levels	

# Construction requirements

Compost should be uniformly applied over the entire area at an average depth of 4 inches and incorporate using a rotary tiller or other appropriate equipment. Pre-plant fertilizer and pH adjusting agents (e.g., lime and sulfur) may be applied for incorporation, as necessary. Rake surface soil smooth prior to seeding. The soil surface shall be reasonably free from large clods, roots, stones greater than 2 inches, and other materials which will interfere with planting and subsequent site maintenance. Water thoroughly after seeding.

Topdress newly seeded turf areas with a ¼ inch layer of fine compost, then water to protect against hot, dry weather or drying winds.

## Basis of Payment

This work will be paid for at the contract unit price per square yard for COMPOST FURNISH AND PLACE, 4". Payment for Compost Placement 4" shall include the cost of all minor grading, debris removal and disposal, smoothing, finishing, labor, materials, tools and equipment required to complete the work as specified herein and to the satisfaction of the Engineer.

# ESTABLISHING AND REFERENCING LAND SECTION MARKERS

#### Description

This work shall consist of removing the existing monument, regardless of material and furnishing, placing and documenting a permanent section marker at the locations shown on the plans.

#### Construction Requirements

The land section marker will be placed under the direction of a Registered Land Surveyor of the State of Illinois. All work shall be coordinated with the Engineer.

The land section marker shall consist of a brass disc (tablet) set in a mechanically core drilled hole in the finished pavement (see detail in plans). The cored drilled hole shall be filled with Class SI concrete meeting the requirements of Section 1020 of the Standard Specifications. A minimum of three tie points at a distance no greater than eighteen inches from the center of the hole will be required to set the brass disc after the concrete has been placed. Excess or spilled concrete shall be completely removed from the finished pavement immediately after the disc has been set. The section marker shall be protected from traffic by barricades or other traffic control devices approved by the Engineer for a minimum of 48 hours.

The concrete shall be vibrated or hand rodded prior to placing the disc in the concrete. Care should be taken so as not to over vibrate and segregate the concrete mixture.

After the permanent land section markers are established, monument records shall be prepared for each point and the records shall be filed at the County Recorder's office and a copy provided the Engineer, and the IDOT District Chief of Surveys. The monuments shall be recorded by a Registered Land Surveyor of the State of Illinois.

## **Basis of Payment**

The work of removing the existing monument and furnishing and installing markers will be paid for at the contract unit price each for ESTABLISHING AND REFERENCING LAND SECTION MARKERS, which price shall include furnishing the disc, concrete, core drilling the pavement, labor, tools, equipment and incidentals required to complete the work as specified.

Establishing tie points, record documents and recording said documents, supervision by a registered Land Surveyor and all collateral work necessary to establish the permanent section markers, will not be paid for separately, but shall be considered incidental to setting the permanent section marker as specified.

### **PROPERTY MARKERS**

# **Description**

This work shall consist of furnishing and placing property markers at the locations shown on the plans.

# Construction Requirements

The property markers will consist of a 3/4 inch diameter pipe, 36" in length, will be set at the location shown on the plans. The property pin will be placed under the direction of a Registered Land Surveyor of the State of Illinois. Monument records will not be required for property pins.

# **Basis of Payment**

The work of furnishing and installing property markers will be paid for at the contract unit price each for PROPERTY MARKERS, which price shall include furnishing the pipe, labor, tools, equipment and incidentals required to complete the work as specified.

Supervision by a registered Land Surveyor and all collateral work necessary to establish the property pin, will not be paid for separately, but shall be considered included in the unit price for setting the property pin as specified.

## **CONSTRUCTION LAYOUT**

The Contractor will be required to furnish and place construction layout stakes for all items or work in this project. The Resident Engineer will locate and reference the centerline of survey and all intersecting points and will establish benchmarks along the line of the improvement outside the construction limits. Locating and referencing the centerline of survey shall consist of locating and referencing control points such as point of curvature, points of tangent, and sufficient points on tangent to provide a line of sight. Control points set by the Resident Engineer shall be identified in the field to the Contractor, and the field notes shall be kept in the office of the Resident Engineer.

The Contractor shall provide field sources directed by a registered land surveyor or engineer, and set all additional stakes for this project which are needed to establish offset stakes, reference points, slope stakes, pavement and grade, stakes for culverts, structural work, sewers and drainage structures, paved gutters, structural walls, monuments, fence, right-of-way lines,

construction limits, lighting and signage items, pavement markings, landscape limits and any other horizontal or vertical controls, including supplementary control points and benchmarks necessary to secure a correct layout of <u>all</u> the project work. Grading slope stakes shall be set at sufficient intervals (not to exceed 50 feet) to accurately outline the slopes. The Contractor shall set stakes for line and grade through curved sections of the proposed pavement at station intervals not to exceed 25 feet to assure conformance to plan line and grade. The Contractor shall set stakes for straight or tangent line sections (non-curved) of the proposed pavement at station intervals not to exceed 50 feet. Staking of right-of-way lines, if applicable, shall consist of placing tall stakes, properly identified and readily discernible, at points of change in width of direction of the right-of-way and at points along the line so that at least two of the stakes can be seen distinctly from any point of the line. Right-of-way lines shall be staked at locations where construction is to be performed prior to beginning construction. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a pay item in the contract, or to determine the property line between properties.

The Contractor shall be responsible for having the finished work substantially conform to the lines, grades, elevations and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Resident Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and benchmarks, and shall have them reset at his expense when any are damaged, lost, displaced or removed. The Contractor shall use a registered surveyor or engineer and competent personnel and suitable equipment for the layout work required.

#### Responsibility of the Resident Engineer

- 1. The Resident Engineer will locate and reference the baselines as shown on the plans. Locating and referencing the centerline of survey will consist of locating and referencing the control points of the centerline such as PC's, PT's, and as many POT's as are necessary to provide a line of sight.
- 2. Benchmarks will be established along the project outside of construction lines and not exceeding 300-foot intervals horizontally and 20 feet vertically.
- 3. Stakes set for A. and B. above shall be identified in the field to the Contractor and the field notes kept in the Resident Engineer's office for references by him.
- 4. The Resident Engineer will check clearances both horizontal and vertical at all grade separations, if applicable.
- 5. The Resident Engineer will make random checks of the Contractor's staking to determine if the work is in substantial conformance with the plans. Where the Contractor's work will tie into the work that is being or will be done by others, checks will be made to determine if the work is in conformance with the proposed overall grade and horizontal alignment.

- 6. The Resident Engineer will set all stakes for utility adjustments and for building fences, if necessary, along the right-of-way line by parties other than the Contractor.
- 7. Immediately after the Contractor has staked the drainage structures, the Resident Engineer will check the staking, either visually or by instrument, to determine if the structures fit the waterways in horizontal alignment and vertical elevation. If it is necessary to redesign the drainage structure, the Resident Engineer will furnish a revised design and re-stake the structure.
- 8. The Resident Engineer will make all measurements and take all cross sections from which the various pay items are to be measured, such as cross sections for all borrow pits and channel changes, additional measurements needed to determine the amount of earthwork and all measurements on which the depth of subbase, bases or pavements are to be verified.
- 9. Where the Contractor, in setting construction stakes, discovers discrepancies, the Resident Engineer will check to determine their nature and make whatever revisions are necessary in the plans, including the re-cross sectioning of the area involved, and all additional re-staking necessary.
- 10. The Resident Engineer will accept responsibility for the accuracy of specific stakes that are covered by random instrument checks and recorded, provided no displacement occurs.
- 11. It is not the responsibility of the Resident Engineer to check the correctness of the Contractor's stakes, except as provided herein; however, any errors that are apparent shall be immediately called to the Contractor's attention, and he shall be required to make the necessary correction before the stakes are used for construction purposes.
- 12. All measurements necessary to determine the final quantities will be made by the Engineer independently of the Contractor's station stakes and any benchmarks established by the Contractor.
- 13. If requested by the Contractor, the Resident Engineer will furnish a schedule showing the pavement profile grade elevations at intervals of 25 feet. The request for pavement profile grade elevations must be made 72 hours in advance of the staking operation.

# Responsibility of the Contractor

1. The Contractor shall provide field sources directed by a registered land surveyor or engineer, and set all additional stakes for this project which are needed to establish offset stakes, reference points, slope stakes, pavement and grade stakes, stakes for culverts, structural work, sewers and drainage structures, paved gutters, structural walls, monuments, fence, right-of-way lines, construction limits, pavement markings, lighting

and signage items, landscape limits and any other horizontal or vertical control work, including supplementary control points and benchmarks necessary to secure a correct layout of the <u>all</u> project related work.

- 2. If the Contractor chooses to do layout by coordinates, the Contractor shall be responsible for calculating and establishing all necessary coordinates. Other than what has been established in the plans, it is not the Engineer's responsibility to provide coordinates for the project layout or work.
- 3. The Contractor will set all other stakes necessary to establish limits and elevations of the work and shall define right-of-way for the project, if applicable.
- 4. The right-of-way shall be considered to be defined when stakes readily discernible, have been placed at points of change in width or direction of the right-of-way line and at points along the line so that at least two such right-of-way stakes can be seen from any point on the line.
- 5. The Contractor will not be required to set additional stakes to locate a utility line or to determine the property line between properties.
- 6. Field notes shall be kept in standard survey field notebooks and these books shall become the property of the City at the completion of the project.
- 7. It is not considered the responsibility of the Contractor to make a detailed check of the accuracy of the plans; however, it is expected that the Contractor will advise the Resident Engineer promptly of known errors in the plans.
- 8. The Contractor shall reset the existing control points shown on the plans and establish ties for the reset points.
- 9. The ties established shall meet the approval of the Resident Engineer.
- 10. The Contractor will be restricted to PK nails or iron pipes for monumentation.
- 11. The control points to be reset are PI's, PC's, PT's and POT's.
- 12. The Contractor will be required to measure and document his own quantities. Any surveys required to document these quantities shall be the responsibility of the Contractor. If there is a disagreement between the Engineer's and Contractor's measured quantity that requires survey work, the Contractor will be responsible for his own surveys to provide documentation and satisfy himself that his measured quantity is accurate. The Engineer will be responsible for his own checking and documentation.

The item will be paid for at the contract lump sum price for CONSTRUCTION LAYOUT, which price shall be payment in full for all services, materials, labor, equipment, tools and incidentals to complete this item.

# **TEMPORARY FENCE**

This item shall be done in accordance with Article 201.05 (a) of the Standard Specifications with the following additions.

The fence shall be plastic and colored orange.

This item has been included to provide security of the construction site during both operation and non-operation hours. An estimated quantity of 2,000 linear feet has been provided within this contract for use in securing the site. At the time of construction, fencing shall be installed at all locations requiring security shown on the plans and additional fencing as determined necessary and directed by the Engineer.

No extra compensation shall be allowed due to a reduction in quantity. The Contractor shall have sufficient quantity of fencing on site at all times as well as the means to install such fencing at the end of each working day as directed by the Engineer. Fencing installation at designated locations will only be paid for once. Any fencing requiring removal and reinstallation due to the Contractor's operations or vandalism shall be done his own cost.

If the temporary fencing conflicts with the completion of the landscaping operations, the fence may be removed with the permission of the Engineer. Removal of the temporary fencing is part of this item.

This work will be paid for at the Contract unit price per linear foot of TEMPORARY CONSTRUCTION FENCE, which will be payment in full for supplying fencing and post, miscellaneous materials to install, maintaining and removing the fencing and all other required work to complete the work as set forth above.

## **DUST CONTROL WATERING**

Effective: August 1, 2011

## Description

This work shall consist of furnishing and applying water to control dust and air-borne dirt generated by construction activities.

## General

This work shall be performed according to Article 107.36 of the "Standard Specifications" and the following:

Revise Article 107.36 of the "Standard Specifications" as follows:

Replace sub-paragraph (d) of under the third paragraph with the following:

(d) Dust shall be controlled by the uniform application of sprinkled water and shall be applied only when directed and in a manner approved by the Engineer. All equipment used for this work shall meet with the Engineer's approval and shall be equipped with adequate measuring devices for determining the exact amount of water discharged. All water used shall be properly documented by ticket or other approved means.

The Contractor is reminded of the provisions of Article 107.18 of the "Special Provisions" regarding the procurement of water from fire hydrants.

#### Method of Measurement

This work will be measured in units of gallons of water applied. One unit is equivalent to 1,000 gallons of water applied.

#### Basis of Payment

This work will be paid for at the contract unit price per unit for DUST CONTROL WATERING. The unit price shall include all equipment, materials and labor required to control dust.

# **VANDALISM**

Any work (finished concrete, asphalt, etc.) which has been vandalized, will be REPLACED, not repaired, by the contractor at their expense. It is recommended by the Village of University Park that the contractor finish a normal day's concrete pour by 2:00 p.m. to allow the concrete to set up before the crew leaves the job.

## REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

This work shall be according to Article 669 of the Standard Specifications and the following:

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is pre-qualified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel or waste oil in accordance with all Federal, State or local regulatory requirements and shall be provided to the

Engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

<u>General</u>. This Special Provision will likely require the Contractor to subcontract for the execution of certain activities.

All contaminated materials shall be managed as non-special waste. This work shall include monitoring and potential sampling, analytical testing and management of a material contaminated by regulated substances.

- A) The Environmental Firm shall continuously monitor for worker protection and the Contractor shall manage any excavated soils within the construction limits of this project as fill. Although the soil concentrations exceed a residential property's Tier 1 soil remediation objective for the ingestion exposure pathway, they can be utilized within the construction limits as fill because the roadway is not considered a residential property. All storm sewer excavated soils can be placed back into the excavated trench as backfill unless trench backfill is specified. If the soils cannot be utilized within the construction limits as fill then they must be managed off-site as a non-special waste.
- B) The following location can be managed within the construction limits as fill.

Station 141+10 to Station 142+40+40 0 to 60 feet RT (Raceco, Site 938B03, 450 South Cicero Avenue) – non-special waste. Contaminants of concern sampling parameters: Arsenic and Lead.

# **VALVES BOX TO BE REMOVED**

# **Description**

This work shall consist of removing existing water valves and boxes and associated items for connection of new water main. This work shall be done in accordance with Section 561 of the Standard Specifications and the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

To minimize the inconvenience to affected residents, 48 hours prior to shutting the existing main down, the Engineer, the Village Engineer and all users that will be affected shall be notified in writing. The Contractor shall cooperate with the Village of University Park and Aqua Illinois personnel to locate valves necessary to isolate the work areas. All valves to be operated by Aqua Illinois personnel.

In addition, prior to exposing plug and water valve, the water main shall be de-pressurized to minimize the possibly of separated joints when thrust restraint is removed.

Valve and valve box shall be given to Aqua Illinois personnel. If Aqua Illinois does not want the removed equipment, it shall be disposed of by the contractor.

The work shall be paid for at the contract unit price per each for VALVE BOXES TO BE REMOVE, which price shall be payment in full for all labor and materials for a clean removal.

## **TEMPORARY INFORMATION SIGNING**

This work shall consist of furnishing, installing, maintaining, relocating during construction and removal of non-standard temporary information and guide signs at the locations designated on the plans and as directed by the Engineer. Signs shall in accordance with Division 700 of the Standard Specifications.

The Contractor shall verify the sign and dimensions prior to fabrication.

### Method of Measurement

Signs will be measured in square feet for sign panels that are fabricated and placed. Relocated signing will not be measured for repayment regardless of the relocations required for the various stages of construction. The installation, relocation and removal of the required sign supports, mounting hardware and brackets shall be included in the cost of the sign.

#### Basis of Payment

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

#### TRAFFIC SIGNAL SPECIFICATIONS

Effective: May 22, 2002 Revised: January 1, 2012

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

#### **SECTION 720 SIGNING**

# MAST ARM SIGN PANELS

Add the following to Article 720.02 of the Standard Specifications:

Signs attached to poles or posts (such as mast arm signs) shall have mounting brackets and sign channels which are equal to and completely interchangeable with those used by the District Sign Shops. Signfix Aluminum Channel Framing System is currently recommended, but other brands of mounting hardware are acceptable based upon the Department's approval.

# **DIVISION 800 ELECTRICAL**

## **SUBMITTALS**

Revise Article 801.05 of the Standard Specifications to read:

All material approval requests shall be submitted in accordance with the District's current Electrical Product Data and Documentation Submittal Guidelines. General requirements include:

- Material approval requests shall be made at the preconstruction meeting, including major traffic signal items listed in the table in Article 801.05. Material or equipment which is similar or identical shall be the product of the same manufacturer, unless necessary for system continuity. Traffic signal materials and equipment shall bear the U.L. label whenever such labeling is available.
- 2. Product data and shop drawings shall be assembled by pay item and separated from of other pay item submittals. Only the top sheet of each pay item submittal will be stamped by the Department with the review status, except shop drawings for mast arm pole assemblies and the like will be stamped with the review status on each sheet.
- 3. Partial or incomplete submittals will be returned without review.
- 4. Certain non-standard mast arm poles and structures will require additional review from IDOT's Central Office. Examples include ornamental/decorative and non-standard length mast arm pole assemblies. The Contractor shall account for the additional review time in his schedule.
- 5. The contract number or permit number, project location/limits and corresponding pay code number must be on each sheet of correspondence,, catalog cuts and mast arm poles and assemblies drawings.
- 6. Where certifications and/or warranties are specified, the information submitted for approval shall include certifications and warranties. Certifications involving inspections, and/or tests of material shall be complete with all test data, dates, and times.
- 7. After the Engineer reviews the submittals for conformance with the design concept of the project, the Engineer will stamp the drawings indicating their

- status as 'Approved', 'Approved-As-Noted', 'Disapproved', or 'Incomplete'. Since the Engineer's review is for conformance with the design concept only, it is the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, layout drawings, or other documents by the Department's approval thereof. The Contractor must still be in full compliance with contract and specification requirements.
- 8. All submitted items reviewed and marked 'APPROVED AS NOTED', 'DISAPPROVED', or 'INCOMPLETE' are to be resubmitted in their entirety, unless otherwise indicated within the submittal comments, with a disposition of previous comments to verify contract compliance at no additional cost to the contract.
- 9. Exceptions to and deviations from the requirements of the Contract Documents will not be allowed. It is the Contractor's responsibility to note any deviations from Contract requirements at the time of submittal and to make any requests for deviations in writing to the Engineer. In general, substitutions will not be acceptable. Requests for substitutions must demonstrate that the proposed substitution is superior to the material or equipment required by the Contract Documents. No exceptions, deviations or substitutions will be permitted without the approval of the Engineer.

# **INSPECTION OF ELECTRICAL SYSTEMS.**

Add the following to Article 801.10 of the Standard Specifications:

(c) All cabinets including temporary traffic signal cabinets shall be assembled by an approved equipment supplier in District One. The Department reserves the right to request any controller and cabinet to be tested at the equipment supplier facilities prior to field installation, at no extra cost to this contract.

## MAINTENANCE AND RESPONSIBILITY.

Revise Article 801.11 of the Standard Specifications to read:

a. Existing traffic signal installations and/or any electrical facilities at all or various locations may be altered or reconstructed totally or partially as part of the work on this Contract. The Contractor is hereby advised that all traffic control equipment, presently installed at these locations, may be the property of the State of Illinois, Department of Transportation, Division of Highways, County, Private Developer, or the Municipality in which they are located. Once the Contractor has begun any work on any portion of the project, all traffic signals within the limits of this contract or those which have the item "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of

Existing Flashing Beacon Installation," shall become the full responsibility of the Contractor. Automatic Traffic Enforcement equipment is not owned by the State and the Contractor shall not be responsible for maintaining it during construction. The Contractor shall supply the Engineer, Area Traffic Signal Maintenance and Operations Engineer, IDOT ComCenter and the Department's Electrical Maintenance Contractor with two 24-hour emergency contact names and telephone numbers.

- b. When the project has a pay item for "Maintenance of Existing Traffic Signal Installation," "Temporary Traffic Signal Installation(s)" and/or "Maintenance of Existing Flashing Beacon Installation," the Contractor must notify both the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, of their intent to begin any physical construction work on the Contract or any portion thereof. notification must be made a minimum of seven (7) working days prior to the start of construction to allow sufficient time for inspection of the existing traffic signal installation(s) and transfer of maintenance to the Contractor. If work is started prior to an inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection. The Contractor will become responsible for repairing or replacing all equipment that is not operating properly or is damaged at no cost to the owner of the traffic signal. Final repairs or replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted.
- c. Contracts such as pavement grinding or patching which result in the destruction of traffic signal loops do not require maintenance transfer, but require a notification of intent to work and an inspection. A minimum of seven (7) working days prior to the loop removal, the Contractor shall notify the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 and the Department's Electrical Maintenance Contractor, at which time arrangements will be made to adjust the traffic controller timing to compensate for the absence of detection. Damaged Automatic Traffic Enforcement equipment, including cameras, detectors, or other peripheral equipment, shall be replaced by others, per Permit agreement, at no cost to the contract. See additional requirements in these specifications under Inductive Loop Detector.
- d. The Contractor is advised that the existing and/or temporary traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shutdown the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.

- e. The Contractor shall be fully responsible for the safe and efficient operation of the traffic signals. Any inquiry, complaint or request by the Department, the Department's Electrical Maintenance Contractor or the public, shall be investigated and repairs begun within one hour. Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from the cost of the Contract. The District's Electrical Maintenance Contractor may inspect any signalizing device on the Department's highway system at any time without notification.
- f. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.

## DAMAGE TO TRAFFIC SIGNAL SYSTEM.

Add the following to Article 801.12(b) of the Standard Specifications to read:

Any traffic signal control equipment damaged or not operating properly from any cause whatsoever shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed.

Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause whatsoever, shall be the responsibility of the municipality or the Automatic Traffic Enforcement company per Permit agreement.

# TRAFFIC SIGNAL INSPECTION (TURN-ON).

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

It is the intent to have all electric work completed and equipment field tested by the vendor prior to the Department's "turn-on" field inspection. If in the event the Engineer determines work is not complete and the inspection will require more than two (2) hours to complete, the inspection shall be canceled and the Contractor will be required to reschedule at another date. The maintenance of the traffic signals will not be accepted until all punch list work is corrected and re-inspected.

When the road is open to traffic, except as otherwise provided in Section 850 of the Standard Specifications, the Contractor may request a turn-on and inspection of the completed traffic signal installation at each separate location. This request must be made to the Area Traffic Signal Maintenance and Operations Engineer at (847) 705-4424 a minimum of seven (7) working days prior to the time of the requested inspection. The Department will not grant a field inspection until notification is provided from the Contractor that the equipment has been field tested and the intersection is operating according to Contract requirements. The Department's facsimile number is (847) 705-4089. The Contractor must invite local fire department personnel to the turn-on when Emergency Vehicle Preemption (EVP) is included in the project. When the contract includes the item RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, OPTIMIZE TRAFFIC SIGNAL SYSTEM, or TEMPORARY TRAFFIC SIGNAL TIMINGS, the Contractor must notify the SCAT Consultant of the turn-on/detour implementation schedule, as well as stage changes and phase changes during construction.

The Contractor must have all traffic signal work completed and the electrical service installation connected by the utility company prior to requesting an inspection and turn-on of the traffic signal installation. The Contractor shall be responsible to provide a police officer to direct traffic at the time of testing.

The Contractor shall provide a representative from the control equipment vendor's office to attend the traffic signal inspection for both permanent and temporary traffic signal turn-ons. Upon demonstration that the signals are operating and all work is completed in accordance with the Contract and to the satisfaction of the Engineer, the Engineer will then allow the signals to be placed in continuous operation. The Agency that is responsible for the maintenance of each traffic signal installation will assume the maintenance upon successful completion of this inspection.

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

- 1. One set of signal plans of record with field revisions marked in red ink.
- 2. Written notification from the Contractor and the equipment vendor of satisfactory field testing.
- 3. A knowledgeable representative of the controller equipment supplier shall be required at the traffic signal turn-on. The representative shall be knowledgeable of the cabinet design and controller functions.
- 4. A copy of the approved material letter.
- 5. One (1) copy of the operation and service manuals of the signal controller and associated control equipment.

- 6. Five (5) copies 11" x 17" (280 mm X 430 mm) of the cabinet wiring diagrams.
- 7. The controller manufacturer shall supply a printed form, not to exceed 11" x 17" (280 mm X 430 mm) for recording the traffic signal controller's timings; backup timings; coordination splits, offsets, and cycles; TBC Time of Day, Week and Year Programs; Traffic Responsive Program, Detector Phase Assignment, Type and Detector Switching; and any other functions programmable from the keyboard. The form shall include a location, date, manufacturer's name, controller model and software version. The form shall be approved by the Engineer and a minimum of three (3) copies must be furnished at each turn-on. The manufacturer must provide all programming information used within the controller at the time of turn-on.
- 8. All manufacturer and contractor warrantees and guarantees required by Article 801.14.

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

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

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

All cost of work and materials required to comply with the above requirements shall be included in the pay item bid prices, under which the subject materials and signal equipment are paid, and no additional compensation will be allowed. Materials and signal equipment not complying with the above requirements shall be subject to removal and disposal at the Contractor's expense.

# **RECORD DRAWINGS**

The requirements listed for Electrical Installation shall apply for Traffic Signal Installations in Article 801.16. Revise the 2<sup>nd</sup> paragraph of Article 801.16 of the Standard Specifications to read:

a. "When the work is complete, and seven days before the request for a final inspection, the full-size set of contract drawings. Stamped "RECORD DRAWINGS", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's supervising Engineer or electrician. The record drawings shall be submitted in PDF format on CDROM as well as hardcopy for review and approval.

- b. In addition to the record drawings, copies of the final catalog cuts which have been Approved or Approved as Noted shall be submitted in PDF format along with the record drawings. The PDF files shall clearly indicate the pay item either by filename or PDF Table of Contents referencing the respective pay item number for multi-item PDF files. Specific part or model numbers of items which have been selected shall be clearly visible."
- c. Additional requirements are listed in the District's Electrical Product Data and Documentation Guidelines.

Add the following to Article 801.16 of the Standard Specifications:

"In addition to the specified record drawings, the Contactor shall record GPS coordinates of the following traffic signal components being installed, modified or being affected in other ways by this contract:

- All Mast Arm Poles and Posts
- Handholes
- Conduit roadway crossings
- Controller Cabinets
- Communication Cabinets
- Electric Service Disconnect locations
- CCTV Camera installations
- Fiber Optic Splice Locations

Datum to be used shall be North American 1983.

Data shall be provided electronically and in print form. The electronic format shall be compatible with MS Excel. Latitude and Longitude shall be in decimal degrees with a minimum of 6 decimal places. Each coordinate shall have the following information:

- 1. Description of item
- 2. Designation or approximate station if the item is undesignated
- 3. Latitude
- 4. Longitude

Examples:

Description	Designation	Latitude	Longitude
Mast Arm Pole Assembly (dual,	MP (SW, NW, SE or NE corner)		
combo, etc)		41.580493	-87.793378
FO mainline splice handhole	HHL-ST31	41.558532	-87.792571
Handhole	НН	41.765532	-87.543571
Electric Service	Elec Srv	41.602248	-87.794053
Conduit crossing	SB IL83 to EB I290 ramp SIDE A	41.584593	-87.793378
PTZ Camera	PTZ	41.584600	-87.793432
Signal Post	Post	41.558532	-87.792571
Controller Cabinet	CC	41.651848	-87.762053
Master Controller Cabinet	MCC	41.580493	-87.793378
Communication Cabinet	ComC	41.558532	-87.789771
Fiber splice connection	Toll Plaza34	41.606928	-87.794053

Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 100 feet. Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified.

Accuracy. Data collected is to be mapping grade. A handheld mapping grade GPS device shall be used for the data collection. The receiver shall support differential correction and data shall have a minimum 5 meter accuracy after post processing.

GPS receivers integrated into cellular communication devices, recreational and automotive GPS devices are not acceptable.

The GPS shall be the product of an established major GPS manufacturer having been in the business for a minimum of 6 years."

Delete the last sentence of the 3<sup>rd</sup> paragraph of Article 801.16.

#### LOCATING UNDERGROUND FACILITIES.

Revise Section 803 to the Standard Specifications to read:

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

The exact location of all utilities shall be field verified by the Contractor before the installation of any components of the traffic signal system. For locations of utilities, locally owned equipment, and leased enforcement camera system facilities, the local Counties or Municipalities may need to be contacted: in the City of Chicago contact Digger at (312) 744-7000 and for all other locations contact J.U.L.I.E. at 1-800-892-0123 or 811.

# RESTORATION OF WORK AREA.

Add the following article to Section 801 of the Standard Specifications:

801.17 Restoration of work area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

## **ELECTRIC SERVICE INSTALLATION.**

Revise Section 805 of the Standard Specifications to read:

#### Description.

This work shall consist of all materials and labor required to install, modify, or extend the electric service installation. All installations shall meet the requirements of the details in the "District One Standard Traffic Signal Design Details" and applicable portions of the Specifications.

#### General.

The electric service installation shall be the electric service disconnecting means and it shall be identified as suitable for use as service equipment.

The electric utility contact information is noted on the plans and represents the current information at the time of contract preparation. The Contractor must request in writing for service and/or service modification within 10 days of contract award and must follow-up with the electric utility to assure all necessary documents and payment are received by the utility. The Contractor shall forward copies of all correspondence between the contractor and utility company to the Engineer and Area Traffic Signal Maintenance and Operations Engineer. The service agreement and sketch shall be submitted for signature to the IDOT's Traffic Operations Programs Engineer.

#### Materials.

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

#### b. Enclosures.

- 1. Pole Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 4X, unfinished single door design, fabricated from minimum 0.080-inch (2.03 mm) thick Type 5052 H-32 aluminum. Seams shall be continuous welded and ground smooth. Stainless steel screws and clamps shall secure the cover and assure a watertight seal. The cover shall be removable by pulling the continuous stainless steel hinge pin. The cabinet shall have an oil-resistant gasket and a lock kit shall be provided with an internal O-ring in the locking mechanism assuring a watertight and dust-tight seal. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 14-inches (350 mm) high, 9-inches (225 mm) wide and 8-inches (200 mm) in depth is required. The cabinet shall be channel mounted to a wooden utility pole using assemblies recommended by the manufacturer.
- 2. Ground Mounted Cabinet. The cabinet shall be UL 50, NEMA Type 3R unfinished single door design with back panel. The cabinet shall be fabricated from Type 5052 H-32 aluminum with the frame and door 0.125-inch (3.175 mm) thick, the top 0.250-inch (6.350 mm) thick and the bottom 0.500-inch (12.70 mm) thick. Seams shall be continuous welded and ground smooth. The door and door opening shall be double flanged. The door shall be approximately 80% of the front surface, with a full length tamperproof stainless steel .075-inch (1.91 mm) thick hinge bolted to the cabinet with stainless steel carriage bolts and nylocks nuts. The locking mechanism shall be slam-latch type with a keyhole cover. The cabinet shall be sized to adequately house all required components with extra space for arrangement and termination of wiring. A minimum size of 40-inches (1000 mm) high, 16-inches (400 mm) wide and 15-inches (375 mm) in depth is required. The cabinet shall be mounted upon a square Type A concrete foundation as indicated on the plans. The foundation is paid for separately.
- c. Surge Protector. Overvoltage protection, with LED indicator, shall be provided for the 120 volt load circuit by the means MOV and thermal fusing technology. The response time shall be <5n seconds and operate within a range of -40C to +85C. The surge protector shall be UL 1449 Listed.
- d. Circuit Breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles. 120 volt circuit breakers shall have an interrupting rating of not less than 65,000 rms symmetrical amperes. Unless otherwise indicated, the main disconnect circuit

breaker for the traffic signal controller shall be rated 60 amperes, 120 V and the auxiliary circuit breakers shall be rated 10 amperes, 120 V.

- e. Fuses, Fuseholders and Power Indicating Light. Fuses shall be small-dimensional cylindrical fuses of the dual element time-delay type. The fuses shall be rated for 600 V AC and shall have a UL listed interrupting rating of not less than 10,000 rms symmetrical amperes at rated voltage. The power indicating light shall be LED type with a green colored lens and shall be energized when electric utility power is present.
- f. Ground and Neutral Bus Bars. A single copper ground and neutral bus bar, mounted on the equipment panel shall be provided. Ground and neutral conductors shall be separated on the bus bar. Compression lugs, plus 2 spare lugs, shall be sized to accommodate the cables with the heads of the connector screws painted green for ground connections and white for neutral connections.
- g. Utility Services Connection. The Contractor shall notify the Utility Company marketing representative a minimum of 30 working days prior to the anticipated date of hook-up. This 30 day advance notification will begin only after the Utility Company marketing representative has received service charge payments from the Contractor. Prior to contacting the Utility Company marketing representative for service connection, the service installation controller cabinet and cable must be installed for inspection by the Utility Company.
- h. Ground Rod. Ground rods shall be copper-clad steel, a minimum of 10 feet (3.0m) in length, and 3/4 inch (20mm) in diameter. Ground rod resistance measurements to ground shall be 25 ohms or less. If necessary additional rods shall be installed to meet resistance requirements at no additional cost to the contract.

#### Installation

- a. General. The Contractor shall confirm the orientation of the traffic service installation and its door side with the engineer, prior to installation. All conduit entrances into the service installation shall be sealed with a pliable waterproof material.
- b. Pole Mounted. Brackets designed for pole mounting shall be used. All mounting hardware shall be stainless steel. Mounting height shall be as noted on the plans or as directed by the Engineer.
- c. Ground Mounted. The service installation shall be mounted plumb and level on the foundation and fastened to the anchor bolts with hot-dipped galvanized or stainless steel nuts and washers. The space between the bottom of the enclosure and the top of the foundation shall be caulked at the base with silicone.

#### Basis of Payment.

The service installation shall be paid for at the contract unit price each for SERVICE INSTALLATION of the type specified which shall be payment in full for furnishing and installing the service installation complete. The CONCRETE FOUNDATION, TYPE A, which includes the ground rod, shall be paid for separately. SERVICE INSTALLATION, POLE MOUNTED shall include the 3/4 inch (20mm) grounding conduit, ground rod, and pole mount assembly. Any charges by the utility companies shall be approved by the engineer and paid for as an addition to the contract according to Article 109.05 of the Standard Specifications.

# **GROUNDING OF TRAFFIC SIGNAL SYSTEMS.**

Revise Section 806 of the Standard Specifications to read:

#### General.

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

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

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

- a) The grounded conductor (neutral conductor) shall be white color coded. This conductor shall be bonded to the equipment grounding conductor only at the Electric Service Installation. All power cables shall include one neutral conductor of the same size.
- b) The equipment grounding conductor shall be green color coded. The following is in addition to Article 801.04 of the Standard Specifications.
  - 1) Equipment grounding conductors shall be bonded to the grounded conductor (neutral conductor) only at the Electric Service Installation. The equipment grounding conductor is paid for separately and shall be continuous. The Earth shall not be used as the equipment grounding conductor.
  - 2) Equipment grounding conductors shall be bonded, using a Listed grounding connector, to all traffic signal mast arm poles, traffic signal posts, pedestrian posts, pull boxes, handhole frames and covers, conduits, and other metallic enclosures throughout the traffic signal wiring system, except where noted herein. Bonding shall be made with a splice and pigtail connection, using a sized compression type copper sleeve, sealant tape, and heat-shrinkable cap. A Listed electrical joint compound shall be applied to all conductors' terminations,

connector threads and contact points. Conduit grounding bushings shall be installed at all conduit terminations.

- 3) All metallic and non-metallic raceways containing traffic signal circuit runs shall have a continuous equipment grounding conductor, except raceways containing only detector loop lead-in circuits, circuits under 50 volts and/or fiber optic cable will not be required to include an equipment grounding conductor.
- 4. Individual conductor splices in handholes shall be soldered and sealed with heat shrink. When necessary to maintain effective equipment grounding, a full cable heat shrink shall be provided over individual conductor heat shrinks.
- c) The grounding electrode conductor shall be similar to the equipment grounding conductor in color coding (green) and size. The grounding electrode conductor is used to connect the ground rod to the equipment grounding conductor and is bonded to ground rods via exothermic welding, listed pressure connectors, listed clamps or other approved listed means.

# GROUNDING EXISTING HANDHOLE FRAME AND COVER.

# Description.

This work shall consist of all materials and labor required to bond the equipment grounding conductor to the existing handhole frame and handhole cover. All installations shall meet the requirements of the details in the "District One Standard Traffic Signal Design Details," and applicable portions of the Standard Specifications and these specifications.

The equipment grounding conductor shall be bonded to the handhole frame and to the handhole cover. Two (2) ½-inch diameter x 1 ¼-inch long hex-head stainless steel bolts, spaced 1.75-inches apart center-to-center shall be fully welded to the frame and to the cover to accommodate a heavy duty Listed grounding compression terminal (Burndy type YGHA or approved equal). The grounding compression terminal shall be secured to the bolts with stainless steel split-lock washers and nylon-insert locknuts.

Welding preparation for the stainless steel bolt hex-head to the frame and to the cover shall include thoroughly cleaning the contact and weldment area of all rust, dirt and contaminates. The Contractor shall assure a solid strong weld. The welds shall be smooth and thoroughly cleaned of flux and spatter. The grounding installation shall not affect the proper seating of the cover when closed.

The grounding cable shall be paid for separately.

## Method of Measurement.

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

#### Basis of Payment.

This work shall be paid for at the contract unit price each for GROUNDING EXISTING HANDHOLE FRAME AND COVER which shall be payment in full for grounding the handhole complete.

# **COILABLE NON-METALLIC CONDUIT**

# Description.

This work shall consist of furnishing and installing empty coilable non-metallic conduit (CNC) for detector loop raceways.

#### General.

The CNC installation shall be in accordance with Sections 810 and 811 of the Standard Specifications except for the following:

Add the following to Article 810.03 of the Standard Specifications:

CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways to the handholes.

Add the following to Article 811.03 of the Standard Specifications:

On temporary traffic signal installations with detector loops, CNC meeting the requirements of NEC Article 353 shall be used for detector loop raceways from the saw-cut to 10 feet (3m) up the wood pole, unless otherwise shown on the plans

## Basis of Payment.

All installations of CNC for loop detection shall be included in the contract and not paid for separately.

#### **HANDHOLES**

Add the following to Section 814 of the Standard Specifications:

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

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

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

All conduits shall enter the handhole at a depth of 30 inches (760mm) except for the conduits for detector loops when the handhole is less than 5 feet (1.52 m) from the detector loop. All conduit ends should be sealed with a waterproof sealant to prevent the entrance of contaminants into the handhole.

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

#### **GROUNDING CABLE**

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

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

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

The traffic signal grounding conductor shall be bonded, using a Listed grounding connector (Burndy type KC/K2C, as applicable, or approved equal), to all proposed and existing traffic signal mast arm poles and traffic/pedestrian signal posts, including push button posts. The grounding conductor shall be bonded to all proposed and existing pull boxes, handhole frames and covers and other metallic enclosures throughout the traffic signal wiring system and noted herein and detailed on the plans. The grounding conductor shall be bonded to conduit terminations using rated grounding bushings. Bonding to existing handhole frames and covers shall be paid for separately.

Add the following to Article 817.05 of the Standard Specifications:

#### Basis of Payment.

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

# **RAILROAD INTERCONNECT CABLE**

The cable shall meet the requirements of Section 873 of the Standard Specifications, except for the following:

Add to Article 873.02 of the Standard Specifications:

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

Add the following to Article 873.05 of the Standard Specifications:

# Basis of Payment.

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

# FIBER OPTIC TRACER CABLE

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

Add the following to Article 817.03 of the Standard Specifications:

In order to trace the fiber optic cable after installation, the tracer cable shall be installed in the same conduit as the fiber optic cable in locations shown on the plans. The tracer cable shall be continuous, extended into the controller cabinet and terminated on a barrier type terminal strip mounted on the side wall of the controller cabinet. The barrier type terminal strip and tracer cable shall be clearly marked and identified. All tracer cable splices shall be kept to a minimum and shall incorporate maximum lengths of cable supplied by the manufacturer. The tracer cable will be allowed to be spliced at handholes only. The tracer cable splice shall use a Western Union Splice soldered with resin core flux and shall be soldered using a soldering iron. Blow torches or other devices which oxidize copper cable shall not be allowed for soldering operations. All exposed surfaces of the solder shall be smooth. The splice shall be covered with a black shrink tube meeting UL 224 guidelines, Type V and rated 600v, minimum length 4 inches (100 mm) and with a minimum 1 inch (25 mm) coverage over the XLP insulation, underwater grade.

Add the following to Article 817.05 of the Standard Specifications:

#### Basis of Payment.

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

# MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

Revise Articles 850.02 and 850.03 of the Standard Specifications to read:

#### Procedure.

The energy charges for the operation of the traffic signal installation shall be paid for by others. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the Contract or any portion thereof.

The Contractor shall have electricians with IMSA Level II certification on staff to provide signal maintenance.

This item shall include maintenance of all traffic signal equipment at the intersection, including emergency vehicle pre-emption equipment, master controllers, uninterruptible power supply (UPS and batteries), telephone service installations, communication cables, conduits to adjacent intersections, and other traffic signal equipment, but shall not include Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, or peripheral equipment, not owned by the State.

# Maintenance.

The maintenance shall be according to MAINTENANCE AND RESPONSIBILITY in Division 800 of these specifications and the following:.

The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs.

The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation on flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. When the signals operate in flash, the Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

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

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

The Contractor shall respond to all emergency calls from the Department or others within one hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work required. The State's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.

# TRAFFIC ACTUATED CONTROLLER.

Add the following to Article 857.02 of the Standard Specifications:

Controllers shall be NTCIP compliant NEMA TS2 Type 1, Econolite ASC/3S-1000 or Eagle/Siemens M50 unless specified otherwise on the plans or elsewhere on these specifications. Only controllers supplied by one of the District One approved closed loop equipment manufacturers will be allowed. The controller shall be the most recent model and software version supplied by the manufacturer at the time of the approval and include the standard data key. The traffic signal controller shall provide features to inhibit simultaneous display of a circular yellow ball and a yellow arrow display. Individual load switches shall be provided for each vehicle, pedestrian, and right turn over lap phase. The controller shall prevent phases from being skipped during program changes and after all preemption events.

Add the following to Article 857.03 of the Standard Specifications:

The Contractor shall arrange to install a standard voice-grade dial-up telephone line to the RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET as called for on the traffic signal installation plans. If the traffic signal installation is part of a traffic signal system, a telephone line is usually not required, unless a telephone line is called for on the traffic signal plans. The Contractor shall follow the requirements for the telephone service installation as contained in the current District One Traffic Signal Special Provisions under Master Controller.

# MASTER CONTROLLER.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

# UNINTERRUPTIBLE POWER SUPPLY.

Add the following to Article 862.01 of the Standard Specifications:

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

Add the following to Article 862.02 of the Standard Specifications:

Materials shall be according to Article 1074.04 as modified in UNINTERRUPTIBLE POWER SUPPLY in Division 1000 of these specifications.

Add the following to Article 862.03 of the Standard Specifications:

The UPS shall additionally include, but not be limited to, a battery cabinet. The UPS shall provide reliable emergency power to the traffic signals in the event of a power failure or interruption.

Revise Article 862.04 of the Standard Specifications to read:

# Installation.

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

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

At locations where UPS is installed and Emergency Vehicle Priority System is in use, any existing incandescent confirmation beacons shall be replaced with LED lamps in accordance with the District One Emergency Vehicle Priority System specification at no additional cost to the contract. A concrete apron 67 in. x 50 in. x 5 in. (1702mm x 1270mm x 130mm) shall be provided on the side of the existing Type D Foundation, where the UPS cabinet is located. The concrete apron shall follow the District 1 Standard Traffic Signal Design Detail, Type D for Ground Mounted Controller Cabinet and UPS Battery Cabinet. The concrete apron shall follow Articles 424 and 202 of the Standard Specifications.

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the UPS.

Revise Article 862.05 of the Standard Specifications to read:

#### Basis of Payment.

This work will be paid for at the contract unit price per each for UNINTERRUPTIBLE POWER SUPPLY SPECIAL. Replacement of Emergency Vehicle Priority System confirmation beacons and any required modifications to the traffic signal controller shall be included in the cost of the UNINTERRUPTIBLE POWER SUPPLY SPECIAL item. The concrete apron and earth excavation required shall be included in the cast of the UNINTERRUPTIBLE POWER SUPPLY SPECIAL item.

#### FIBER OPTIC CABLE.

Add the following to Article 871.01 of the Standard Specifications:

The Fiber Optic cable shall be installed in conduit or as specified on the plans.

Add the following to Article 872.02 of the Standard Specifications:

The control cabinet distribution enclosure shall be CSC FTWO12KST-W/O 12 Port Fiber Wall Enclosure or an approved equivalent. The fiber optic cable shall provide six fibers per tube for the amount of fibers called for in the Fiber Optic Cable pay item in the Contract. Fiber Optic cable may be gel filled or have an approved water blocking tape.

Add the following to Article 871.04 of the Standard Specifications:

A minimum of six multimode fibers from each cable shall be terminated with approved mechanical connectors at the distribution enclosure. Fibers not being used shall be labeled "spare." Fibers not attached to the distribution enclosure shall be capped and sealed. A minimum of 13.0 feet (4m) of extra cable length shall be provided for controller cabinets. The controller cabinet extra cable length shall be stored as directed by the Engineer.

Add the following to Article 871.06 of the Standard Specifications:

The distribution enclosure and all connectors will be included in the cost of the fiber optic cable.

# MAST ARM ASSEMBLY AND POLE.

Revise Article 877.01 of the Standard Specifications to read:

#### Description.

This work shall consist of furnishing and installing a steel mast arm assembly and pole and a galvanized steel or extruded aluminum shroud for protection of the base plate.

Revise Article 877.03 of the Standard Specifications:

Mast arm assembly and pole shall be as follows.

- (a) Steel Mast Arm Assembly and Pole and Steel Combination Mast Arm Assembly and Pole. The steel mast arm assembly and pole and steel combination mast arm assembly and pole shall consist of a traffic signal mast arm, a luminaire mast arm or davit (for combination pole only), a pole, and a base, together with anchor rods and other appurtenances. The configuration of the mast arm assembly, pole, and base shall be according to the details shown on the plans.
  - (1) Loading. The mast arm assembly and pole, and combination mast arm assembly and pole shall be designed for the loading shown on the Highway Standards or elsewhere on the plans, whichever is greater. The design shall be according to AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals"

1994 Edition for 80 mph (130 km/hr) wind velocity. However, the arm-to-pole connection for tapered signal and luminaire arms shall be according to the "ring plate" detail as shown in Figure 11-1(f) of the 2002 Interim, to the AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals" 2001 4th Edition.

- (1) Structural Steel Grade. The mast arm and pole shall be fabricated according to ASTM A 595, Grade A or B, ASTM A 572 Grade 55, or ASTM A 1011 Grade 55 HSLAS Class 2. The base and flange plates shall be of structural steel according to AASHTO M 270 Grade 50 (M 270M Grade 345). Luminaire arms and trussed arms 15 ft (4.5 m) or less shall be fabricated from one steel pipe or tube size according to ASTM A 53 Grade B or ASTM A 500 Grade B or C. All mast arm assemblies, poles, and bases shall be galvanized according to AASHTO M 111.
- (2) Fabrication. The design and fabrication of the mast arm assembly, pole, and base shall be according to the requirements of the Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals published by AASHTO. The mast arm and pole may be of single length or sectional design. If section design is used, the overlap shall be at least 150 percent of the maximum diameter of the overlapping section and shall be assembled in the factory.

The manufacturer will be allowed to slot the base plate in which other bolt circles may fit, providing that these slots do not offset the integrity of the pole. Circumferential welds of tapered arms and poles to base plates shall be full penetration welds.

- (4) Shop Drawing Approval. The Contractor shall submit detailed drawings showing design materials, thickness of sections, weld sizes, and anchor rods to the Engineer for approval prior to fabrication. These drawings shall be at least 11 x 17 in. (275 x 425 mm) in size and of adequate quality for microfilming. All product data and shop drawings shall be submitted in electronic form on CD-ROM
- (b) Anchor Rods. The anchor rods shall be ASTM F 1554 Grade 105, coated by the hot-dip galvanizing process according to AASHTO M 232, and shall be threaded a minimum of 7 1/2 in. (185 mm) at one end and have a bend at the other end. The first 12 in. (300 mm) at the threaded end shall be galvanized. Two nuts, one lock washer, and one flat washer shall be furnished with each anchor rod. All nuts and washers shall be galvanized.
- (c) The galvanized steel or extruded aluminum shroud shall have dimensions similar to those detailed in the "District One Standard Traffic Signal Design Details." The shroud shall be installed such that it allow air to circulate throughout the mast arm but not allow infestation of insects or other animals, and such that it is not hazardous to probing fingers and feet.

Add the following to Article 877.04 of the Standard Specifications:

The shroud shall not be paid for separately but shall be included in the cost of the mast arm assembly and pole.

# **CONCRETE FOUNDATIONS**

Add the following to Article 878.03 of the Standard Specifications:

All anchor bolts shall be according to Article 1006.09, with all anchor bolts hot dipped galvanized a minimum of 12 in. (300 mm) from the threaded end.

Concrete Foundations, Type "A" for Traffic Signal Posts shall provide anchor bolts with the bolt pattern specified within the "District One Standard Traffic Signal Design Details." All Type "A" foundations shall be a minimum depth of 48 inches (1220 mm).

Concrete Foundations, Type "C" for Traffic Signal Cabinets with Uninterruptible Power Supply (UPS) cabinet installations shall be a minimum of 72 inches (1830 mm) long and 31 inches (790 mm) wide. All Type "C" foundations shall be a minimum depth of 48 inches (1220 mm). The concrete apron in front of the Type IV or V cabinet shall be 36 in. x 48 in. x 5 in. (915 mm X 1220 mm X 130 mm). The concrete apron in front of the UPS cabinet shall be 36 in. x 67 in. x 5 in. (915 mm X 1700 mm X 130 mm). Anchor bolts shall provide bolt spacing as required by the manufacturer.

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

Concrete Foundations, Type "E" for Mast Arm and Combination Mast Arm Poles shall meet the current requirements listed in the Highway Standards.

Foundations used for Combination Mast Arm Poles shall provide an extra 2-1/2 inch (65 mm) raceway.

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

# <u>LIGHT EMITTING DIODE (LED) SIGNAL HEAD AND OPTICALLY PROGRAMMED LED SIGNAL HEAD</u>

Add the following to the first paragraph of Article 880.04 of the Standard Specifications:

# Basis of Payment.

The price shall include furnishing the equipment described above, all mounting hardware and installing them in satisfactory operating condition.

# LIGHT EMITING DIODE (LED), SIGNAL HEAD, RETROFIT

#### Description.

This work shall consist of retrofitting an existing polycarbonate traffic signal head with a traffic signal module, pedestrian signal module, and pedestrian countdown signal module, with light emitting diodes (LEDs) as specified in the plans.

#### Materials.

Materials shall be according to LIGHT EMITTING DIODE (LED) AND OPTICALLY PROGRAMMED LED SIGNAL HEAD, AND LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD in Divisions 880, 881 and 1000 of these specifications.

Add the following to Article 880.04 of the Standard Specifications:

# Basis of Payment.

This item shall be paid for at the contract unit price each for SIGNAL HEAD, LED, RETROFIT, or PEDESTRIAN SIGNAL HEAD, LED, RETROFIT, for the type and number of polycarbonate signal heads, faces, and sections specified, which price shall be payment in full for furnishing the equipment described above including LED modules, all mounting hardware, and installing them in satisfactory operating condition. The type specified will indicate the number of faces and the method of mounting.

# LIGHT EMITTING DIODE (LED) PEDESTRIAN SIGNAL HEAD

Add the following to the third paragraph of Article 881.03 of the Standard Specifications:

No mixing of different types of pedestrian traffic signals or displays will be permitted.

Add the following to Article 881.03 of the Standard Specifications:

- (a) Pedestrian Countdown Signal Heads.
  - (1) Pedestrian Countdown Signal Heads shall not be installed at signalized intersections where traffic signals and railroad warning devices are interconnected.
  - (2) Pedestrian Countdown Signal Heads shall be 16 inch (406mm) x 18 inch (457mm), for single units with the housings glossy black polycarbonate. Connecting hardware and mounting brackets shall be polycarbonate (black). A corrosion resistant anti-seize

lubricant shall be applied to all metallic mounting bracket joints, and shall be visible to the inspector at the signal turn-on.

(3) Each pedestrian signal LED module shall be fully MUTCD compliant and shall consist of double overlay message combining full LED symbols of an Upraised Hand and a Walking Person. "Egg Crate" type sun shields are not permitted. Numerals shall measure 9 inches (229mm) in height and easily identified from a distance of 120 feet (36.6m).

Add the following to Article 881.04 of the Standard Specifications:

#### Basis of Payment.

The price shall include furnishing the equipment described above, all mounting hardwire and installing them in satisfactory operating condition.

#### DETECTOR LOOP

Revise Section 886 of the Standard Specifications to read:

# Description.

This work shall consist of furnishing and installing a detector loop in the pavement.

#### Procedure.

A minimum of seven (7) working days prior to the Contractor cutting loops, the Contractor shall have the proposed loop locations marked and contact the Area Traffic Signal Maintenance and Operations Engineer (847) 705-4424 to inspect and approve the layout. When preformed detector loops are installed, the Contractor shall have them inspected and approved prior to the pouring of the Portland cement concrete surface, using the same notification process as above.

#### Installation.

Loop detectors shall be installed according to the requirements of the "District One Standard Traffic Signal Design Details." Saw-cuts (homeruns on preformed detector loops) from the loop to the edge of pavement shall be made perpendicular to the edge of pavement when possible in order to minimize the length of the saw-cut (homerun on preformed detector loops) unless directed otherwise by the Engineer or as shown on the plan.

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

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

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

- (a) Type I. All loops installed in new asphalt pavement shall be installed in the binder course and not in the surface course. The edge of pavement, curb and handhole shall be cut with a 1/4 inch (6.3 mm) deep x 4 inches (100 mm) saw cut to mark location of each loop lead-in.
- (b) Loop sealant shall be a two-component thixotropic chemically cured polyurethane either Chemque Q-Seal 295, Percol Elastic Cement AC Grade or an approved equal. The sealant shall be installed 1/8 inch (3 mm) below the pavement surface, if installed above the surface the overlap shall be removed immediately.
- (c) Detector loop measurements shall include the saw cut and the length of the loop lead-in to the edge of pavement. The lead-in wire, including all necessary connections for proper operations, from the edge of pavement to the handhole, shall be included in the price of the detector loop. Unit duct, trench and backfill, and drilling of pavement or handholes shall be included in detector loop quantities.
- (d) Preformed. This work shall consist of furnishing and installing a rubberized or crosslinked polyethylene heat resistant preformed traffic signal loop in accordance with the Standard Specifications, except for the following:
- (e) Preformed detector loops shall be installed in new pavement constructed of Portland cement concrete using mounting chairs or tied to re-bar or the preformed detector loops may be placed in the sub-base. Loop lead-ins shall be extended to a temporary protective enclosure near the proposed handhole location. The protective enclosure shall provide sufficient protection from other construction activities and may be buried for additional protection.
- (f) Handholes shall be placed next to the shoulder or back of curb when preformed detector loops enter the handhole. Non-metallic coilable duct, included in this pay item, shall be used to protect the preformed lead-ins from back of curb to the handhole.
- (g) Preformed detector loops shall be factory assembled with ends capped and sealed against moisture and other contaminants. Homeruns and interconnects shall be pre-wired and shall be an integral part of the loop assembly. The loop configurations and homerun lengths shall be assembled for the specific application. The loop and homerun shall be constructed using 11/16 inch (17.2 mm) outside diameter (minimum), 3/8 inch (9.5 mm) inside diameter (minimum) Class A oil resistant synthetic cord reinforced hydraulic hose with 250 psi (1,720 kPa) internal pressure rating or a similarly sized XLPE cable jacket. Hose for the loop and homerun assembly shall be one continuous piece. No joints or splices shall be allowed in the hose except where necessary to connect homeruns or interconnects to the loops. This will provide maximum wire protection and loop system strength. Hose tee connections shall be heavy duty high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking. For XLPE jacketed preformed loops, all splice connections shall be soldered, sealed, and tested before being sealed in a high impact glass

impregnated plastic splice enclosure. The wire used shall be #16 THWN stranded copper. The number of turns in the loop shall be application specific. Homerun wire pairs shall be twisted a minimum of four turns per foot. No wire splices will be allowed in the preformed loop assembly. The loop and homeruns shall be filled and sealed with a flexible sealant to insure complete moisture blockage and further protect the wire. The preformed loops shall be constructed to allow a minimum of 6.5 feet of extra cable in the handhole.

#### Method of Measurement.

This work will be measured for payment in feet (meters) in place. Type I detector loop will be measured along the sawed slot in the pavement containing the loop and lead-in, rather than the actual length of the wire. Preformed detector loops will be measured along the detector loop and lead-in embedded in the pavement, rather than the actual length of the wire.

#### Basis of Payment.

This work shall be paid for at the contract unit price per foot (meter) for DETECTOR LOOP, TYPE I or PREFORMED DETECTOR LOOP as specified in the plans, which price shall be payment in full for furnishing and installing the detector loop and all related connections for proper operation.

# EMERGENCY VEHICLE PRIORITY SYSTEM.

Revise Section 887 of the Standard Specifications to read:

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

All new installations shall be equipped with Confirmation Beacons as shown on the "District One Standard Traffic Signal Design Details." The Confirmation Beacon shall consist of a 6 watt Par 38 LED flood lamp with a 30 degree light spread, maximum 6 watt energy consumption at 120V, and a 2,000 hour warranty for each direction of pre-emption. The lamp shall have an adjustable mount with a weatherproof enclosure for cable splicing. All hardware shall be cast aluminum or stainless steel. Holes drilled into signal poles, mast arms, or posts shall require rubber grommets. In order to maintain uniformity between communities, the confirmation beacons shall indicate when the control equipment receives the pre-emption signal. The pre-emption movement shall be signalized by a flashing indication at the rate specified by Section 4L.01 of the "Manual on Uniform Traffic Control Devices," and other applicable sections of future editions. The stopped pre-empted movements shall be signalized by a continuous indication.

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

This item shall include any required modifications to an existing traffic signal controller as a result of the addition of the EMERGENCY VEHICLE PRIORITY SYSTEM.

# Basis of Payment.

The work shall be paid for at the contract unit price each for furnishing and installing LIGHT DETECTOR and LIGHT DETECTOR AMPLIFIER. Furnishing and installing the confirmation beacon shall be included in the cost of the Light Detector. Any required modifications to the traffic signal controller shall be included in the cost of the LIGHT DETECTOR AMPLIFIER. The preemption detector amplifier shall be paid for on a basis of (1) one each per intersection controller and shall provide operation for all movements required in the pre-emption phase sequence.

# TEMPORARY TRAFFIC SIGNAL INSTALLATION.

Revise Section 890 of the Standard Specifications to read:

#### Description.

This work shall consist of furnishing, installing, maintaining, and removing a temporary traffic signal installation as shown on the plans, including but not limited to temporary signal heads, emergency vehicle priority systems, interconnect, vehicle detectors, uninterruptible power supply, and signing. Temporary traffic signal controllers and cabinets interconnected to railroad traffic control devices shall be new. When temporary traffic signals will be operating within a county or local agency Traffic Management System, the equipment must be NTCIP compliant and compatible with the current operating requirements of the Traffic Management System.

#### General.

Only an approved equipment vendor will be allowed to assemble the temporary traffic signal cabinet. Also, an approved equipment vendor shall assemble and test a temporary railroad traffic signal cabinet. (Refer to the "Inspection of Controller and Cabinet" specification). A representative of the approved control equipment vendor shall be present at the temporary traffic signal turn-on inspection.

# Construction Requirements.

# (a) Controllers.

1. Only controllers supplied by one of the District approved closed loop equipment manufacturers will be approved for use at temporary signal locations. All controllers used for temporary traffic signals shall be fully actuated NEMA microprocessor based with RS232 data entry ports compatible with existing monitoring software approved by IDOT District 1, installed in NEMA TS2 cabinets with 8 phase back panels, capable of supplying 255 seconds of cycle length and individual phase length settings up to 99 seconds. On projects with one lane open and two way traffic flow, such as bridge deck repairs, the

temporary signal controller shall be capable of providing an adjustable all red clearance setting of up to 30 seconds in length. All controllers used for temporary traffic signals shall meet or exceed the requirements of Section 857 of the Standard Specifications with regards to internal time base coordination and preemption. All railroad interconnected temporary controllers and cabinets shall be new and shall satisfy the requirements of Article 857.02 of the Standard Specifications as modified herein.

- 2. Only control equipment, including controller cabinet and peripheral equipment, supplied by one of the District approved closed loop equipment manufacturers will be approved for use at temporary traffic signal locations. All control equipment for the temporary traffic signal(s) shall be furnished by the Contractor unless otherwise stated in the plans. On projects with multiple temporary traffic signal installations, all controllers shall be the same manufacturer brand and model number with current software installed.
- (b) Cabinets. All temporary traffic signal cabinets shall have a closed bottom made of aluminum alloy. The bottom shall be sealed along the entire perimeter of the cabinet base to ensure a water, dust and insect-proof seal. The bottom shall provide a minimum of two (2) 4 inch (100 mm) diameter holes to run the electric cables through. The 4 inch (100 mm) diameter holes shall have a bushing installed to protect the electric cables and shall be sealed after the electric cables are installed.
- (c) Grounding. Grounding shall be provided for the temporary traffic signal cabinet meeting or exceeding the applicable portions of the National Electrical Code, Section 806 of the Standard Specifications and shall meet the requirements of the District 1 Traffic Signal Specifications for "Grounding of Traffic Signal Systems."
- (d) Traffic Signal Heads. All traffic signal sections and pedestrian signal sections shall be 12 inches (300 mm). Traffic signal sections shall be LED with expandable view, unless otherwise approved by the Engineer. Pedestrian signal heads shall be Light Emitting Diode (LED) Pedestrian Countdown Signal Heads except when a temporary traffic signal is installed at an intersection interconnected with a railroad grade crossing. When a temporary traffic signal is installed at an intersection interconnected with a railroad grade crossing, Light Emitting Diode (LED) Pedestrian Signal Heads shall be furnished. The temporary traffic signal heads shall be placed as indicated on the temporary traffic signal plan or as directed by the Engineer. The Contractor shall furnish enough extra cable length to relocate heads to any position on the span wire or at locations illustrated on the plans for construction staging. The temporary traffic signal shall remain in operation during all signal head relocations. Each temporary traffic signal head shall have its own cable from the controller cabinet to the signal head.

# (e) Interconnect.

- 1. Temporary traffic signal interconnect shall be provided using fiber optic cable or wireless interconnect technology as specified in the plans. The Contractor may request, in writing, to substitute the fiber optic temporary interconnect indicated in the contract documents with a wireless interconnect. The Contractor must provide assurances that the radio device will operate properly at all times and during all construction staging. If approved for use by the Engineer, the Contractor shall submit marked-up traffic signal plans indicating locations of radios and antennas and installation details. If wireless interconnect is used, and in the opinion of the engineer, it is not viable, or if it fails during testing or operations, the Contractor shall be responsible for installing all necessary poles, fiber optic cable, and other infrastructure for providing temporary fiber optic interconnect at no cost to the contract.
- 2. The existing system interconnect and phone lines are to be maintained as part of the Temporary Traffic Signal Installation specified for on the plan. The interconnect shall be installed into the temporary controller cabinet as per the notes or details on the plans. All labor and equipment required to install and maintain the existing interconnect as part of the Temporary Traffic Signal Installation. When shown in the plans, temporary traffic signal interconnect equipment shall be furnished and installed. The temporary traffic signal interconnect shall maintain interconnect communications throughout the entire signal system for the duration of the project.
- 3. Temporary wireless interconnect, complete. The radio interconnect system shall be compatible with Eagle or Econolite controller closed loop systems. This item shall include all temporary wireless interconnect components, complete, at the adjacent existing traffic signal(s) to provide a completely operational closed loop system. This item shall include all materials, labor and testing to provide the completely operational closed loop system as shown on the plans. The radio interconnect system shall include the following components:
  - a. Rack or Shelf Mounted RS-232 Frequency Hopping Spread Spectrum (FHSS) Radio
  - b. Software for Radio Configuration (Configure Frequency and Hopping Patterns)
  - c. Antennas (Omni Directional or Yagi Directional)
  - d. Antenna Cables, LMR400, Low Loss. Max. 100-ft from controller cabinet to antenna
  - e. Brackets, Mounting Hardware, and Accessories Required for Installation
  - f. RS232 Data Cable for Connection from the radio to the local or master controller

g. All other components required for a fully functional radio interconnect system

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

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

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

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

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

- (f) Emergency Vehicle Pre-Emption. All emergency vehicle preemption equipment (light detectors, light detector amplifiers, confirmation beacons, etc.) as shown on the temporary traffic signal plans shall be provided by the Contractor. It shall be the Contractor's responsibility to contact the municipality or fire district to verify the brand of emergency vehicle preemption equipment to be installed prior to the contract bidding. The equipment must be completely compatible with all components of the equipment currently in use by the Agency. All light operated systems shall operate at a uniform rate of 14.035 hz ±0.002, or as otherwise required by the Engineer, and provide compatible operation with other light systems currently being operated in the District. All labor and material required to install and maintain the Emergency Vehicle Preemption installation shall be included in the item Temporary Traffic Signal Installation.
- (g) Vehicle Detection. All temporary traffic signal installations shall have vehicular detection installed as shown on the plans or as directed by the Engineer. Pedestrian push buttons shall be provided for all pedestrian signal heads/phases as shown on the plans or as directed by the Engineer. All approaches shall have vehicular detection provided by vehicle detection system as shown on the plans or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection system shall be approved by IDOT prior to Contractor furnishing and installing. The Contractor shall install, wire, and adjust the alignment of the microwave vehicle sensor or video vehicle detection system in accordance to the manufacturer's recommendations and requirements. The Contractor shall be responsible for adjusting the alignment of the

microwave vehicle sensor or video vehicle detection system for all construction staging changes and for maintaining proper alignment throughout the project. A representative of the approved control equipment vendor shall be present and assist the contractor in setting up and maintaining the microwave vehicle sensor or video vehicle detection system. An in-cabinet video monitor shall be provided with all video vehicle detection systems and shall be included in the item Temporary Traffic Signal Installation.

- (h) Uninterruptible Power Supply. All temporary traffic signal installations shall have Uninterruptible Power Supply (UPS). The UPS cabinet shall be mounted to the temporary traffic signal cabinet and meet the requirements of Uninterruptible Power Supply in Divisions 800 and 1000 of these specifications.
- (i) Signs. All existing street name and intersection regulatory signs shall be removed from existing poles and relocated to the temporary signal span wire. If new mast arm assembly and pole(s) and posts are specified for the permanent signals, the signs shall be relocated to the new equipment at no extra cost. Any intersection regulatory signs that are required for the temporary traffic signal shall be provided as shown on the plans or as directed by the Engineer. Relocation, removing, bagging and installing the regulatory signs for the various construction stages shall be provided as shown on the plans or as directed by the Engineer.
- (j) Energy Charges. The electrical utility energy charges for the operation of the temporary traffic signal installation shall be paid for by others if the installation replaces an existing signal. Otherwise charges shall be paid for under 109.05 of the Standard Specifications.
- (k) Maintenance. Maintenance shall meet the requirements of the Standard Specifications and MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION in Division 800 of these specifications. Maintenance of temporary signals and of the existing signals shall be included in the cost of the TEMPORARY TRAFFIC SIGNAL INSTALLATION pay item. When temporary traffic signals are to be installed at locations where existing signals are presently operating, the Contractor shall be fully responsible for the maintenance of the existing signal installation as soon as he begins any physical work on the Contract or any portion thereof. In addition, a minimum of seven (7) days prior to assuming maintenance of the existing traffic signal installation(s) under this Contract, the Contractor shall request that the Resident Engineer contact the Bureau of Traffic Operations (847) 705-4424 for an inspection of the installation(s).
- (l) Temporary Traffic Signals for Bridge Projects. Temporary Traffic Signals for bridge projects shall follow the State Standards, Standard Specifications, District One Traffic Signal Specifications and any plans for Bridge Temporary Traffic Signals included in the plans. The installation shall meet the Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION

specification. In addition all electric cable shall be aerially suspended, at a minimum height of 18 feet (5.5m) on temporary wood poles (Class 5 or better) of 45 feet (13.7 m) minimum height. The signal heads shall be span wire mounted or bracket mounted to the wood pole or as directed by the Engineer. The Controller cabinet shall be mounted to the wood pole as shown in the plans, or as directed by the Engineer. Microwave vehicle sensors or video vehicle detection system may be used in place of detector loops as approved by the Engineer.

# (m) Temporary Portable Traffic Signal for Bridge Projects.

- 1. Unless otherwise directed by the Engineer, temporary portable traffic signals shall be restricted to use on roadways of less than 8000 ADT that have limited access to electric utility service, shall not be installed on projects where the estimated need exceeds ten (10) weeks, and shall not be in operation during the period of November through March. The Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract if the bridge project or Engineer requires temporary traffic signals to remain in operation into any part of period of November through March. If, in the opinion of the engineer, the reliability and safety of the temporary portable traffic signal installation, the Contractor shall replace the temporary portable traffic signals with temporary span wire traffic signals noted herein at no cost to the contract.
- 2. The controller and LED signal displays shall meet the Standard Specifications and all other requirements in this TEMPORARY TRAFFIC SIGNAL INSTALLATION specification.
- 3. Work shall be according to Article 701.18(b) of the Standard Specifications except as noted herein.

#### 4. General.

- a. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of 12 days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.
- b. All signal heads located over the travel lane shall be mounted at a minimum height of 17 feet (5m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 feet (2.5m) from

the bottom of the signal back plate to the top of the adjacent travel lane surface.

- c. The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.
- d. As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with microwave sensors or other approved methods of vehicle detection and traffic actuation.
- e. All portable traffic signal units shall be interconnected using hardwire communication cable. Radio communication equipment may be used only with the approval of the Engineer. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.
- f. The temporary portable bridge traffic signal system shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV and other applicable portions of the currently adopted version of the Manual on Uniform Traffic Control Devices (MUTCD) and the Illinois MUTCD. The signal system shall be designed to continuously operate over an ambient temperature range between -30 °F (-34 °C) and 120 °F (48 °C). When not being utilized to inform and direct traffic, portable signals shall be treated as nonoperating equipment according to Article 701.11.
- g. Basis of Payment. This work will be paid for according to Article 701.20(c).

# Basis of Payment.

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

# REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

Add the following to Article 895.05 of the Standard Specifications:

The traffic signal equipment which is to be removed and is to become the property of the Contractor shall be disposed of outside the right-of-way at the Contractor's expense.

All equipment to be returned to the State shall be delivered by the Contractor to the State's Traffic Signal Maintenance Contractor's main facility. The Contractor shall contact the State's Electrical Maintenance Contractor to schedule an appointment to deliver the equipment. No equipment will be accepted without a prior appointment. All equipment shall be delivered within 30 days of removing it from the traffic signal installation. The Contractor shall provide 5 copies of a list of equipment that is to remain the property of the State, including model and serial numbers, where applicable. The Contractor shall also provide a copy of the Contract plan or special provision showing the quantities and type of equipment. Controllers and peripheral equipment from the same location shall be boxed together (equipment from different locations may not be mixed) and all boxes and controller cabinets shall be clearly marked or labeled with the location from which they were removed. If equipment is not returned with these requirements, it will be rejected by the State's Electrical Maintenance Contractor. The Contractor shall be responsible for the condition of the traffic signal equipment from the time Contractor takes maintenance of the signal installation until the acceptance of a receipt drawn by the State's Electrical Maintenance Contractor indicating the items have been returned in good condition.

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

Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of these Specifications at no cost to the contract.

#### TRAFFIC SIGNAL PAINTING

#### Description.

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

# Surface Preparation.

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

#### Painted Finish.

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

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

Painting of traffic signal heads, pedestrian signal heads and controller cabinets is not included in this pay item.

Any damage to the finish after leaving the manufacturer's facility shall be repaired to the satisfaction of the Engineer using a method recommended by the manufacturer and approved by the Engineer. If while at the manufacturer's facility the finish is damaged, the finish shall be reapplied at no cost to the contract.

#### Warranty.

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

#### Packaging.

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

#### Basis of Payment.

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

# **ILLUMINATED STREET NAME SIGN**

#### Description.

This work shall consist of furnishing and installing a LED internally illuminated street name sign.

#### Materials.

Materials shall be in accordance with ILLUMINATED STREET NAME SIGN in Division 1000 of these specifications.

#### Installation.

The sign can be mounted on most steel mast arm poles. Mounting on aluminum mast arm pole requires supporting structural calculations. Some older or special designed steel mast arm poles may require structural evaluation to assure that construction of the mast arm pole is adequate for the proposed additional loading. Structural calculations and other supporting documentation as determined by the Engineer shall be provided by the contractor for review by the Department.

The sign shall be located on a steel traffic signal mast arm no further than 8-feet from the center of the pole to the center of the sign at a height of between 16 to 18-feet above traveled pavement. Mounting hardware shall be Pelco model SE-5015, or approved equal, utilizing stainless steel components.

Signs shall be installed such that they are not energized when traffic signals are powered by an alternate energy source such as a generator or uninterruptible power supply (UPS). The signs shall be connected to the generator or UPS bypass circuitry.

#### Basis of Payment.

This work will be paid for at the contract unit price each for ILLUMINATED STREET NAME SIGN, of the length specified which shall be payment in full for furnishing and installing the LED internally illuminated street sign, complete with circuitry and mounting hardware including photo cell, circuit breaker, fusing, relay, connections and cabling as shown on the plans for proper operation and installation.

# RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM

#### Description.

This work shall consist of re-optimizing a closed loop traffic signal system according to the following Levels of work.

LEVEL I applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system. The purpose of this work is to integrate the improvements to the subject intersection into the signal system while minimizing the impacts to the existing system operation. This type of work would be commonly associated with the addition of signal phases, pedestrian phases, or improvements that do not affect the capacity at an intersection.

LEVEL II applies when improvements are made to an existing signalized intersection within an existing closed loop traffic signal system and detailed analysis of the intersection operation is desired by the engineer, or when a new signalized or existing signalized intersection is being added to an existing system, but optimization of the entire system is not required. The purpose

of this work is to optimize the subject intersection, while integrating it into the existing signal system with limited impact to the system operations. This item also includes an evaluation of the overall system operation, including the traffic responsive program.

For the purposes of re-optimization work, an intersection shall include all traffic movements operated by the subject controller and cabinet.

After the signal improvements are completed, the signal shall be re-optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

# (a) LEVEL I Re-Optimization

- 1. The following tasks are associated with LEVEL I Re-Optimization.
  - a. Appropriate signal timings shall be developed for the subject intersection and existing timings shall be utilized for the rest of the intersections in the system.
  - b. Proposed signal timing plan for the new or modified intersection(s) shall be forwarded to IDOT for review prior to implementation.
  - c. Consultant shall conduct on-site implementation of the timings at the turn-on and make fine-tuning adjustments to the timings of the subject intersection in the field to alleviate observed adverse operating conditions and to enhance operations.
- 2. The following deliverables shall be provided for LEVEL I Re-Optimization.
  - a. Consultant shall furnish to IDOT a cover letter describing the extent of the reoptimization work performed.
  - b. Consultant shall furnish an updated intersection graphic display for the subject intersection to IDOT and to IDOT's Traffic Signal Maintenance Contractor.

# (b) LEVEL II Re-Optimization

- 1. In addition to the requirements described in the LEVEL I Re-Optimization above, the following tasks are associated with LEVEL II Re-Optimization.
  - a. Traffic counts shall be taken at the subject intersection after the traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit, multi-unit heavy vehicles, and transit buses.
  - b. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.
  - c. Traffic responsive program operation shall be evaluated to verify proper pattern selection and lack of oscillation and a report of the operation shall be provided to IDOT.
- 2. The following deliverables shall be provided for LEVEL II Re-Optimization.
  - a. Consultant shall furnish to IDOT one (1) copy of a technical memorandum for the optimized system. The technical memorandum shall include the following elements:
    - (1) Brief description of the project
    - (2) Printed copies of the analysis output from Synchro (or other appropriate, approved optimization software file)
    - (3) Printed copies of the traffic counts conducted at the subject intersection
  - b. Consultant shall furnish to IDOT two (2) CDs for the optimized system. The CDs shall include the following elements:
    - (1) Electronic copy of the technical memorandum in PDF format
    - (2) Revised Synchro files (or other appropriate, approved optimization software file) including the new signal and the rest of the signals in the closed loop system
    - (3) Traffic counts conducted at the subject intersection
    - (4) New or updated intersection graphic display file for the subject intersection
    - (5) The CD shall be labeled with the IDOT system number and master location, as well as the submittal date and the consultant logo. The CD case shall include a clearly readable label displaying the same information securely affixed to the side and front.

# Basis of Payment.

This work shall be paid for at the contract unit price each for RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL I or RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM – LEVEL II, which price shall be payment in full for performing all work described herein per intersection. Following completion of the timings and submittal of specified deliverables, 100 percent of the bid price will be paid. Each intersection will be paid for separately.

#### **OPTIMIZE TRAFFIC SIGNAL SYSTEM**

#### Description.

This work shall consist of optimizing a closed loop traffic signal system.

OPTIMIZE TRAFFIC SIGNAL SYSTEM applies when a new or existing closed loop traffic signal system is to be optimized and a formal Signal Coordination and Timing (SCAT) Report is to be prepared. The purpose of this work is to improve system performance by optimizing traffic signal timings, developing a time of day program and a traffic responsive program.

After the signal improvements are completed, the signal system shall be optimized as specified by an approved Consultant who has previous experience in optimizing Closed Loop Traffic Signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants. Traffic signal system optimization work, including fine-tuning adjustments of the optimized system, shall follow the requirements stated in the most recent IDOT District 1 SCAT Guidelines, except as note herein.

A listing of existing signal equipment, interconnect information, phasing data, and timing patterns may be obtained from the Department, if available and as appropriate. The existing SCAT Report is available for review at the District One office and if the Consultant provides blank computer disks, copies of computer simulation files for the existing optimized system and a timing database that includes intersection displays will be made for the Consultant. The Consultant shall confer with the Traffic Signal Engineer prior to optimizing the system to determine if any extraordinary conditions exist that would affect traffic flows in the vicinity of the system, in which case, the Consultant may be instructed to wait until the conditions return to normal or to follow specific instructions regarding the optimization.

- (a) The following tasks are associated with OPTIMIZE TRAFFIC SIGNAL SYSTEM.
  - 1. Appropriate signal timings and offsets shall be developed for each intersection and appropriate cycle lengths shall be developed for the closed loop signal system.
  - 2. Traffic counts shall be taken at all intersections after the permanent traffic signals are approved for operation by the Area Traffic Signal Operations Engineer. Manual turning movement counts shall be conducted from 6:30 a.m. to 9:30 a.m., 11:00 a.m. to 1:00 p.m., and 3:30 p.m. to 6:30 p.m. on a typical weekday from midday Monday to midday Friday. The turning movement counts shall identify cars, and single-unit and multi-unit heavy vehicles.
  - 3. As necessary, the intersections shall be re-addressed and all system detectors reassigned in the master controller according to the current standard of District One.
  - 4. A traffic responsive program shall be developed, which considers both volume and occupancy. A time-of-day program shall be developed for used as a back-up system.

- 5. Proposed signal timing plan for the new or modified intersection shall be forwarded to IDOT for review prior to implementation.
- 6. Consultant shall conduct on-site implementation of the timings and make fine-tuning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.
- 7. Speed and delay studies shall be conducted during each of the count periods along the system corridor in the field before and after implementation of the proposed timing plans for comparative evaluations. These studies should utilize specialized electronic timing and measuring devices.
- (b) The following deliverables shall be provided for OPTIMIZE TRAFFIC SIGNAL SYSTEM.
  - 1. Consultant shall furnish to IDOT one (1) copy of a SCAT Report for the optimized system. The SCAT Report shall include the following elements:

# Cover Page in color showing a System Map

#### **Figures**

- 1. System overview map showing system number, system schematic map with numbered system detectors, oversaturated movements, master location, system phone number, cycle lengths, and date of completion.
- 2. General location map in color showing signal system location in the metropolitan area.
- 3. Detail system location map in color showing cross street names and local controller addresses.
- 4. Controller sequence showing controller phase sequence diagrams.

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- 1. Project Overview
- 2. System and Location Description (Project specific)
- 3. Methodology
- 4. Data Collection
- 5. Data Analysis and Timing Plan Development
- 6. Implementation
  - a. Traffic Responsive Programming (Table of TRP vs. TOD Operation)
- 7. Evaluation
  - a. Speed and Delay runs

# Tab 2. Turning Movement Counts

1. Turning Movement Counts (Showing turning movement counts in the intersection diagram for each period, including truck percentage)

#### Tab 3. Synchro Analysis

- 1. AM: Time-Space diagram in color, followed by intersection Synchro report (Timing report) summarizing the implemented timings.
- 2. Midday: same as AM
- 3. PM: same as AM

# Tab 4: Speed, Delay Studies

- 1. Summary of before and after runs results in two (2) tables showing travel time and delay time.
- 2. Plot of the before and after runs diagram for each direction and time period.

#### Tab 5: Environmental Report

1. Environmental impact report including gas consumption, NO2, HCCO, improvements.

#### Tab 6: Electronic Files

- 1. Two (2) CDs for the optimized system. The CDs shall include the following elements:
  - a. Electronic copy of the SCAT Report in PDF format
  - b. Copies of the Synchro files for the optimized system
  - c. Traffic counts for the optimized system
  - d. New or updated intersection graphic display files for each of the system intersections and the system graphic display file including system detector locations and addresses.

#### Basis of Payment.

The work shall be paid for at the contract unit each for OPTIMIZE TRAFFIC SIGNAL SYSTEM, which price shall be payment in full for performing all work described herein for the entire traffic signal system. Following the completion of traffic counts, 25 percent of the bid price will be paid. Following the completion of the Synchro analysis, 25 percent of the bid price will be paid. Following the setup and fine tuning of the timings, the speed-delay study, and the

TRP programming, 25 percent of the bid price will be paid. The remaining 25 percent will be paid when the system is working to the satisfaction of the engineer and the report and CD have been submitted.

#### TEMPORARY TRAFFIC SIGNAL TIMINGS

# Description.

This work shall consist of developing and maintaining appropriate traffic signal timings for the specified intersection for the duration of the temporary signalized condition, as well as impact to existing traffic signal timings caused by detours or other temporary conditions.

All timings and adjustments necessary for this work shall be performed by an approved Consultant who has previous experience in optimizing Closed Loop Traffic signal Systems for District One of the Illinois Department of Transportation. The Contractor shall contact the Traffic Signal Engineer at (847) 705-4424 for a listing of approved Consultants.

The following tasks are associated with TEMPORARY TRAFFIC SIGNAL TIMINGS.

- (a) Consultant shall attend temporary traffic signal inspection (turn-on) and/or detour meeting and conduct on-site implementation of the traffic signal timings. Make fine-turning adjustments to the timings in the field to alleviate observed adverse operating conditions and to enhance operations.
- (b) Consultant shall provide monthly observation of traffic signal operations in the field.
- (c) Consultant shall provide on-site consultation and adjust timings as necessary for construction stage changes, temporary traffic signal phase changes, and any other conditions affecting timing and phasing, including lane closures, detours, and other construction activities.
- (d) Consultant shall make timing adjustments and prepare comment responses as directed by the Area Traffic Signal Operations Engineer.

# Basis of Payment.

The work shall be paid for at the contract unit price each for TEMPORARY TRAFFIC SIGNAL TIMINGS, which price shall be payment in full for performing all work described herein per intersection. When the temporary traffic signal installation is turned on and/or detour implemented, 50 percent of the bid price will be paid. The remaining 50 percent of the bid price will be paid following the removal of the temporary traffic signal installation and/or detour.

# MODIFYING EXISTING CONTROLLER CABINET

The work shall consist of modifying an existing controller cabinet as follows:

- (a) Uninterruptible Power Supply (UPS). The addition of uninterruptible power supply (UPS) to an existing controller cabinet could require the relocation of the existing controller cabinet items to allow for the installation of the uninterruptible power supply (UPS) components inside the existing controller cabinet as outlined under Sections 862 and 1074.04 of the Standard Specifications.
- (b) Light Emitting Diode (LED) Signal Heads, Light Emitting Diode (LED) Optically Programmed Signal Heads and Light Emitting Diode (LED) Pedestrian Signal Heads. The contractor shall verify that the existing load switches meet the requirements of Section 1074.03(5)(b)(2) of the Standard Specifications and the recommended load requirements of the light emitting diode (LED) signal heads that are being installed at the existing traffic signal. If any of the existing load switches do not meet these requirements, they shall be replaced, as directed by the Engineer.
- (c) Light Emitting Diode (LED), Signal Head, Retrofit. The contractor shall verify that the existing load switches meet the requirements of Section 1074.03(2) of the Standard Specifications and the recommended load requirements of light emitting diode (LED) traffic signal modules, pedestrian signal modules, and pedestrian countdown signal modules as specified in the plans. If any of the existing load switches do not meet these requirements, they shall be replaced, as directed by the Engineer.

#### Basis of Payment.

Modifying an existing controller cabinet will be paid for at the contract unit price per each for MODIFY EXISTING CONTROLLER CABINET. This shall include all material and labor required to complete the work as described above, the removal and disposal of all items removed from the controller cabinet, as directed by the Engineer. The equipment for the Uninterruptible Power Supply (UPS) and labor to install it in the existing controller cabinet shall be included in the pay item Uninterruptible Power Supply. Modifying an existing controller will be paid for at the contract unit price per each for MODIFY EXISTING CONTROLLER, per Sections 895.04 and 895.08 of the Standard Specifications.

# **DIVISION 1000 MATERIALS**

# PEDESTRIAN PUSH-BUTTON

Revise Article 1074.02(a) of the Standard Specifications to read:

The pedestrian push-button housing shall be constructed of aluminum alloy according to ASTM B 308 6061-T6 and powder coated yellow, unless otherwise noted on the plans. The housing shall be furnished with suitable mounting hardware.

Revise Article 1074-02(e) of the Standard Specifications to read:

Stations shall be designed to be mounted directly to a post, mast arm pole or wood pole. The station shall be aluminum and shall accept a 3 inch (75mm) round push-button assembly and a regulatory pedestrian instruction sign according to MUTCD, sign series R10-3e 9 x 15 inch sign with arrow(s) for a count-down pedestrian signal. The pedestrian station size without count-down pedestrian signals shall accommodate a MUTCD sign series R10-3b or R10-3d 9 x 12 inch sign with arrow(s).

Add the following to Article 1074.02(a) of the Standard Specifications:

(f) Location. Pedestrian push-buttons and stations shall be mounted directly to a post, mast arm pole or wood pole as shown on the plans and shall be fully accessible from a paved or concrete surface. See the District's Detail sheets for orientation and mounting details.

# CONTROLLER CABINET AND PERIPHERAL EQUIPMENT

Add the following to Article 1074.03 of the Standard Specifications:

- (a) (6) Cabinets shall be designed for NEMA TS2 Type 1 operation. All cabinets shall be pre-wired for a minimum of eight (8) phases of vehicular, four (4) phases of pedestrian and four (4) phases of overlap operation.
- (b) (5) Cabinets Provide 1/8" (3.2 mm) thick unpainted aluminum alloy 5052-H32. The surface shall be smooth, free of marks and scratches. All external hardware shall be stainless steel.
- (b) (6) Controller Harness Provide a TS2 Type 2 "A" wired harness in addition to the TS2 Type 1 harness.
- (b) (7) Surge Protection Plug-in type EDCO SHA-1250 or Atlantic/Pacific approved equal.
- (b) (8) BIU Containment screw required.
- (b) (9) Transfer Relays Solid state or mechanical flash relays are acceptable.
- (b) (10) Switch Guards All switches shall be guarded.

- (b) (11) Heating One (1) 200 watt, thermostatically-controlled, Hoffman electric heater, or approved equivalent.
- (b) (12) Lighting One (1) LED Panel shall be placed inside the cabinet top panel and one (1) LED Panel shall be placed on each side of the pull-out drawer/shelf assembly located beneath the controller support shelf. The LED Panels shall be controlled by a wall switch. Relume Traffic Control Box LED Panels and power supply or approved equivalent.
- (b) (13) The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1 ½ inch (38mm) deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one (1) complete set of cabinet prints and manuals. This drawer shall support 50 lbs. (23 kg) in weight when fully extended. The drawer shall open and close smoothly. Drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 24 inches (610mm) wide.
- (b) (14) Plan & Wiring Diagrams 12" x 16" (3.05mm x 4.06mm) moisture sealed container attached to door.
- (b) (15) Detector Racks Fully wired and labeled for four (4) channels of emergency vehicle pre-emption and sixteen channels (16) of vehicular operation.
- (b) (16) Field Wiring Labels All field wiring shall be labeled.
- (b) (17) Field Wiring Termination Approved channel lugs required.
- (b) (18) Power Panel Provide a nonconductive shield.
- (b) (19) Circuit Breaker The circuit breaker shall be sized for the proposed load but shall not be rated less than 30 amps.
- (b) (20) Police Door Provide wiring and termination for plug in manual phase advance switch.
- (b) (21) Railroad Pre-Emption Test Switch Eaton 8830K13 SHA 1250 or equivalent.

# RAILROAD, FULL-ACTUATED CONTROLLER AND CABINET

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

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

Add the following to Articles 1073.01 (c) (2) and 1074.03 (a) (5) (e) of the Standard Specifications:

Controllers and cabinets shall be new and NEMA TS2 Type 1 design.

A method of monitoring and/or providing redundancy to the railroad preemptor input to the controller shall be included as a component of the Railroad, Full Actuated Controller and Cabinet installation and be verified by the traffic signal equipment supplier prior to installation.

Railroad interconnected controllers and cabinets shall be assembled only by an approved traffic signal equipment supplier. All railroad interconnected (including temporary railroad interconnect) controllers and cabinets shall be new, built, tested and approved by the controller equipment vendor, in the vendor's District One facility, prior to field installation. The vendor shall provide the technical equipment and assistance as required by the Engineer to fully test this equipment.

# **UNINTERRUPTIBLE POWER SUPPLY (UPS)**

Revise Article 1074.04(a)(1) of the Standard Specifications to read:

The UPS shall be line interactive and provide voltage regulation and power conditioning when utilizing utility power. The UPS shall be sized appropriately for the intersection's normal traffic signal operating connected load, plus 20 percent (20%). The total connected traffic signal load shall not exceed the published ratings for the UPS. The UPS shall provide a minimum of six (6) hours of normal operation run-time for signalized intersections with LED type signal head optics at 77 °F (25 °C) (minimum 700 W/1000 VA active output capacity, with 90 percent minimum inverter efficiency).

Revise the first paragraph of Article 1074.04(a)(3) of the Standard Specifications to read:

The UPS shall have a minimum of four (4) sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel mounted terminal block or locking circular connectors, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans.

Revise Article 1074.04(a)(10) of the Standard Specifications to read:

The UPS shall be compatible with the District's approved traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.

Revise Article 1074.04(a)(17) of the Standard Specifications to read:

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

Revise Article 1074.04(b)(2)b of the Standard Specifications to read:

Batteries, inverter/charger and power transfer relay shall be housed in a separate NEMA Type 3R cabinet. The cabinet shall be Aluminum alloy, 5052-H32, 0.125-inch thick and have a natural mill finish.

Revise Article 1074.04(b)(2)c of the Standard Specifications to read:

No more than three batteries shall be mounted on individual shelves for a cabinet housing six batteries and no more than four batteries per shelf for a cabinet housing eight batteries.

Revise Article 1074.04(b)(2)e of the Standard Specifications to read:

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

#### **UPS**

End of paragraph 1074.04(b) (2)e

The door shall be equipped with a two position doorstop, one a 90° and one at 120°.

Revise Article 1074.04(b)(2)g of the Standard Specifications to read:

The door shall open to the entire cabinet, have a neoprene gasket, an Aluminum continuous piano hinge with stainless steel pin, and a three point locking system. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.

Add the following to Article 1074.04(b)(2) of the Standard Specifications:

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

Add the following to Article 1074.04(c) of the Standard Specifications:

- (8) The UPS shall include a tip or kill switch installed in the battery cabinet, which shall completely disconnect power from the UPS when the switch is manually activated.
- (9) The UPS shall incorporate a flanged electric generator inlet for charging the batteries and operating the UPS. The generator connector shall be male type, twist-lock, rated as 15A, 125VAC with a NEMA L5-15P configuration and weatherproof lift cover plate (Hubbell model HBL4716C or approved equal). Access to the generator inlet shall be from a secured weatherproof lift cover plate or behind a locked battery cabinet police panel.

#### Battery System.

Revise Article 1074.04(d)(3) of the Standard Specifications to read:

All batteries supplied in the UPS shall be either gel cell or AGM type, deep cycle, completely sealed, prismatic leadcalcium based, silver alloy, valve regulated lead acid (VRLA) requiring no

maintenance. All batteries in a UPS installation shall be the same type; mixing of gel cell and AGM types within a UPS installation is not permitted.

Revise Article 1074.04(d)(4) of the Standard Specifications to read:

Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F (-25 to + 71 °C) for gel cell batteries and -40 to 140 °F (-40 to + 60 °C) for AGM type batteries.

Add the following to Article 1074.04(d) of the Standard Specifications:

(9) The UPS shall consist of an even number of batteries that are capable of maintaining normal operation of the signalized intersection for a minimum of six hours. Calculations shall be provided showing the number of batteries of the type supplied that are needed to satisfy this requirement. A minimum of four batteries shall be provided.

Add the following to the Article 1074.04 of the Standard Specifications:

(e) Warranty. The warranty for an uninterruptible power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years from the date the traffic signal and UPS are placed into service.

# **ELECTRIC CABLE**

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

Add the following to the Article 1076.04(d) of the Standard Specifications:

Service cable may be single or multiple conductor cable.

# TRAFFIC SIGNAL POST

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

All posts and bases shall be steel and hot dipped galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with TRAFFIC SIGNAL PAINTING in Division 800 of these specifications.

### **PEDESTRIAN PUSH-BUTTON POST**

Add the following to Article 1077.02(b) of the Standard Specifications:

All posts and bases shall be steel and hot-dipped galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with Traffic Signal Painting in Division 800 of these specifications.

# **MAST ARM ASSEMBLY AND POLE**

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

Traffic signal mast arms shall be one piece construction, unless otherwise approved by the Engineer. All poles shall be galvanized. If the Department approves painting, powder coating by the manufacturer will be required over the galvanization in accordance with with TRAFFIC SIGNAL PAINTING in Division 800 of these specifications.

The shroud shall be of sufficient strength to deter pedestrian and vehicular damage. The shroud shall be constructed and designed to allow air to circulate throughout the mast arm but not allow infestation of insects or other animals, and such that it is not hazardous to probing fingers and feet. All mounting hardware shall be stainless steel.

# LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL HEAD

Add the following to Section 1078 of the Standard Specifications:

#### General.

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

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

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

LED signal heads (All Face and Section Quantities), (All Mounting Types) shall conform fully to the requirements of Articles 1078.01 and 1078.02 of the Standard Specifications amended herein.

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

# (a) Physical and Mechanical Requirements

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

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

# (b) Photometric Requirements

- 1. The minimum initial luminous intensity values for the modules shall conform to the values in Table 1 of the VTCSH (2005) for circular signal indications, and as stated in Table 3 of these specifications for arrow and pedestrian indications at 25 °C.
- 2. The modules shall meet or exceed the illumination values stated in Articles 1078.01 and 1078.02 the Standard Specifications for circular signal indications, and Table 3 of these specifications for arrow and pedestrian indications, throughout the useful life based on normal use in a traffic signal operation over the operating temperature range.
- 3. The measured chromaticity coordinates of the modules shall conform to the chromaticity requirements of Section 4.2 of the VTCSH (2005) or applicable successor ITE specifications.
- 4. The LEDs utilized in the modules shall be AlInGaP technology for red, yellow, Portland orange (pedestrian) and white (pedestrian) indications, and GaN for green indications, and shall be the ultra bright type rated for 100,000 hours of continuous operation from 40 °C to +74 °C.

### (c) Electrical

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

# (d) Retrofit Traffic Signal Module

- 1. The following specification requirements apply to the Retrofit module only. All general specifications apply unless specifically superseded in this section.
- 2. Retrofit modules can be manufactured under this specification for the following faces:
  - a. 12 inch (300 mm) circular, multi-section
  - b. 12 inch (300 mm) arrow, multi-section
  - c. 12 inch (300 mm) pedestrian, 2 sections
- 3. Each Retrofit module shall be designed to be installed in the doorframe of a standard traffic signal housing. The Retrofit module shall be sealed in the doorframe with a one-piece EPDM (ethylene propylene rubber) gasket.
- 4. The maximum weight of a Retrofit module shall be 4 lbs. (1.8 kg).
- 5. Each Retrofit module shall be a sealed unit to include all parts necessary for operation (a printed circuit board, power supply, a lens and gasket, etc.), and shall be weather proof after installation and connection.
- 6. Electrical conductors for modules, including Retrofit modules, shall be 39.4 inches (1m) in length, with quick disconnect terminals attached.
- 7. The lens of the Retrofit module shall be integral to the unit, shall be convex with a smooth outer surface and made of plastic or of glass.
- (e) The following specification requirements apply to the 12 inch (300 mm) arrow module only. All general specifications apply unless specifically superseded in this section.
  - 1. The arrow module shall meet specifications stated in Section 9.01 of the Equipment and Material Standards of the Institute of Transportation Engineers (November 1998) [ITE Standards], Chapter 2 (Vehicle Traffic Control Signal Heads) or applicable successor ITE specifications for arrow indications.
  - 2. The LEDs arrow indication shall be a solid display with a minimum of three (3) outlining rows of LEDs and at least one (1) fill row of LEDs.
- (f) The following specification requirement applies to the 12 inch (300 mm) programmed visibility (PV) module only. All general specifications apply unless specifically superseded in this section.
  - 1. The LED module shall be a module designed and constructed to be installed in a programmed visibility (PV) signal housing without modification to the housing.

- (g) The following specification requirements apply to the 12 inch (300 mm) Pedestrian module only. All general specifications apply unless specifically superseded in this section.
  - 1. Each pedestrian signal LED module shall provide the ability to actuate the solid upraised hand and the solid walking person on one 12 inch (300mm) section.
  - 2. Two (2) pedestrian sections shall be installed. The top section shall be wired to illuminate only the upraised hand and the bottom section shall be the walking man.
  - 3. "Egg Crate" type sun shields are not permitted. All figures must be a minimum of 9 inches (225mm) in height and easily identified from a distance of 120-feet (36.6m).

# LIGHT EMITTING DIODE (LED) PEDESTRIAN COUNTDOWN SIGNAL HEAD.

# Add the following to Article 1078.02 of the Standard Specifications:

#### General.

- 1. The module shall operate in one mode: Clearance Cycle Countdown Mode Only. The countdown module shall display actual controller programmed clearance cycle and shall start counting when the flashing clearance signal turns on and shall countdown to "0" and turn off when the steady Upraised Hand (symbolizing Don't Walk) signal turns on. Module shall not have user accessible switches or controls for modification of cycle.
- 2. At power on, the module shall enter a single automatic learning cycle. During the automatic learning cycle, the countdown display shall remain dark.
- 3. The module shall re-program itself if it detects any increase or decrease of Pedestrian Timing. The counting unit will go blank once a change is detected and then take one complete pedestrian cycle (with no counter during this cycle) to adjust its buffer timer.
- 4. The module shall allow for consecutive cycles without displaying the steady Upraised Hand.
- 5. The module shall recognize preemption events and temporarily modify the crossing cycle accordingly.
- 6. If the controller preempts during the Walking Person (symbolizing Walk), the countdown will follow the controller's directions and will adjust from Walking Person to flashing Upraised Hand. It will start to count down during the flashing Upraised Hand.
- 7. If the controller preempts during the flashing Upraised Hand, the countdown will continue to count down without interruption.

- 8. The next cycle, following the preemption event, shall use the correct, initially programmed values.
- 9. If the controller output displays Upraised Hand steady condition and the unit has not arrived to zero or if both the Upraised Hand and Walking Person are dark for some reason, the unit suspends any timing and the digits will go dark.
- 10. The digits will go dark for one pedestrian cycle after loss of power of more than 1.5 seconds.
- 11. The countdown numerals shall be two (2) "7 segment" digits forming the time display utilizing two rows of LEDs.
- 12. The LED module shall meet the requirements of the Institute of Transportation Engineers (ITE) LED purchase specification, "Pedestrian Traffic Control Signal Indications Part 2: LED Pedestrian Traffic Signal Modules," or applicable successor ITE specifications, except as modified herein.
- 13. The LED modules shall provide constant light output under power. Modules with dimming capabilities shall have the option disabled or set on a non-dimming operation.
- 14. In the event of a power outage, light output from the LED modules shall cease instantaneously.
- 15. The LEDs utilized in the modules shall be AlInGaP technology for Portland Orange (Countdown Numerals and Upraised Hand) and GaN technology for Lunar White (Walking Person) indications.
- 16. The individual LEDs shall be wired such that a catastrophic loss or the failure of one or more LED will not result in the loss of the entire module.

#### Electrical.

- 1. Maximum power consumption for LED modules is 29 watts.
- 2. The measured chromaticity shall remain unchanged over the input line voltage range listed of 80 VAC to 135 VAC.

# TRAFFIC SIGNAL BACKPLATE

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

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Add the following to the third paragraph of Article 1078.03 of the Standard Specifications. The reflective backplate shall not contain louvers.

Delete second sentence of the fourth paragraph of Article 1078.03 f the Standard Specifications.

Add the following to the fourth paragraph of Article 1078.03 of the Standard Specifications:

When retro reflective sheeting is specified, it shall be Type ZZ sheeting according to Article 1091.03 and applied in preferred orientation for the maximum angularity according to the manufacturer's recommendations. The retro reflective sheeting shall be installed under a controlled environment at the manufacturer/supplier before shipment to the contractor. The aluminum backplate shall be prepared and cleaned, following recommendations of the retro reflective sheeting manufacturer.

# INDUCTIVE LOOP DETECTOR

Add the following to Article 1079.01 of the Standard Specifications:

Contracts requiring new cabinets shall provide for rack mounted detector amplifier cards. Detector amplifiers shall provide LCD displays with loop frequency, inductance, and change of inductance readings.

#### **ILLUMINATED SIGN, LIGHT EMITTING DIODE**

Delete last sentence of Article 1084.01(a) and add "Mounting hardwire shall be black polycarbonate or galvanized steel and similar to mounting Signal Head hardware and bracket specified herein and shall provide tool free access to the interior."

Revise the second paragraph of Article 1084.01(a) to read:

The exterior surface of the housing shall be acid-etched and shop painted with one coat of zinc-chromate primer and two coats of exterior enamel. The housing shall be the same color (yellow or black) to match the existing or proposed signal heads. The painting shall be according to Section 851.

Add the following to Article 1084.01 (b) of the Standard Specifications:

The message shall be formed by rows of LEDs. The sign face shall be 24 inches (600 mm) by 24 inches (600 mm).

Add the following to Article 1084.01 of the Standard Specifications:

(e) The light emitting diode (LED) blank out signs shall be manufactured by National Sign & Signal Company, or an approved equal and consist of a weatherproof housing and door, LEDs and transformers.

# ILLUMINATED STREET NAME SIGN

The illuminate street name sign shall be as follows.

# (a) Description.

The LEDs shall be white in color and utilize InGaN or UV thermally efficient technology. The LED Light Engines shall be designed to fit inside a standard fluorescent illuminated street sign housing in lieu of fluorescent lamps and ballasts or a slim line type housing. The LED internally-illuminated street name sign shall display the designated street name clearly and legibly in the daylight hours without being energized and at night when energized. The sign assembly shall consist of a four-, six-, or eight-foot aluminum housing. White translucent 3M DG³ reflective sheeting sign faces with the street name applied in 3M/Scotchlite Series 1177 or current 3M equivalent transparent green shall be installed in hinged doors on the side of the sign for easy access to perform general cleaning and maintenance operations. Illumination shall occur with LED Light Engine as specified.

# (b) Environmental Requirements.

The LED lamp shall be rated for use in the ambient operating temperature range of -40 to  $+50^{\circ}$ C (-40 to  $+122^{\circ}$ F) for storage in the ambient temperature range of -40 to  $+75^{\circ}$ C (-40 to  $+167^{\circ}$ F).

# (c) General Construction.

- 1. The LED Light Engine shall be a single, self-contained device, for installation in an existing street sign housing. The power supply must be designed to fit and mounted on the inside wall at one end of the street sign housing. The LED Light Engine shall be mounted within the inner top portion of the housing and no components of the light source shall sit between the sign faces.
- 2. The assembly and manufacturing processes of the LED Light Engine shall be designed to ensure that all LED and electronic components are adequately supported to withstand mechanical shocks and vibrations in compliance with the specifications of the ANSI, C136.31-2001 standards.

## (d) Mechanical Construction.

1. The sign shall be constructed using a weatherproof, aluminum housing consisting of an extruded aluminum top with a minimum thickness of .140" x 10 3/4" deep (including the drip edge). The extruded aluminum bottom is .094" thick x 5 7/8" deep. The ends of the housing shall be cast aluminum with a minimum thickness of .250". A six-foot sign shall be 72 5/8" long and 22 5/16" tall and not weigh more than 77 pounds. An eight-foot sign shall be 96 5/8" long and 22 5/16" tall and not weigh more than 92 pounds. All corners

- are continuous TIG (Tungsten Inert Gas) welded to provide a weatherproof seal around the entire housing.
- 2. The door shall be constructed of extruded aluminum. Two corners are continuous TIG welded with the other two screwed together to make one side of the door removable for installation of the sign face. The door is fastened to the housing on the bottom by a full length, .040" x 1 1/8" open stainless steel hinge. The door shall be held secure onto a 1" wide by 5/32" thick neoprene gasket by three (six total for two-way sign) quarter-turn fasteners to form a watertight seal between the door and the housing.
- 3. The sign face shall be constructed of .125" white translucent polycarbonate. The letters shall be 8" upper case and 6" lower case. The sign face legend background shall consist of 3M/Scotchlite Series 4090T or current equivalent 3M translucent DG³ white VIP (Visual Impact Performance) diamond grade sheeting (ATSM Type 9) and 3M/Scotchlite Series 1177 or current 3M equivalent transparent green acrylic EC (electronic cut-able) film applied to the front of the sign face. The legend shall be framed by a white polycarbonate border. A logo symbol and/or name of the community may be included with approval of the Engineer.
- 4. All surfaces of the sign shall be etched and primed in accordance to industry standards before receiving appropriate color coats of industrial enamel.
- 5. All fasteners and hardware shall be corrosion resistant stainless steel. No tools are required for routine maintenance.
- 6. All wiring shall be secured by insulated wire compression nuts.
- 7. A wire entrance junction box shall be supplied with the sign assembly. The box may be supplied mounted to the exterior or interior of the sign and provide a weather tight seal.
- 8. A photoelectric switch shall be mounted in the control cabinet to control lighting functions for day and night display. Each sign shall be individually fused.
- 9. Brackets and Mounting: LED internally-illuminated street name signs will be factory drilled to accommodate mast arm two-point support assembly mounting brackets.

#### (e) Electrical.

- 1. Photocell shall be rated 105-305V, turn on at 1.5 fcs. with a 3-5 second delay. A manufacturer's warranty of six (6) years shall be provided. Power consumption shall be no greater than 1 watt at 120V.
- 2. The LED Light Engine shall operate from a 60 +- 3 cycle AC line power over a voltage range of 80 to 135 Vac rms. Fluctuations in line voltage over the range of 80 to 135 Vac shall not affect luminous intensity by more than +- 10%.

- 3. Total harmonic distortion induced into the AC power line by the LED Light Engine, operated at a nominal operating voltage, and at a temperature of +25°C (+77°F), shall not exceed 20%.
- 4. The LED Light Engine shall cycled ON and OFF with a photocell as shown on the detail sheet and shall not exceed the following maximum power values:

4-Foot Sign	60 W
6-Foot Sign	90 W
8-Foot Sign	120 W

The signs shall not be energized when traffic signals are powered by an alternate energy source such as a generator or uninterruptable power source (UPS). The signs shall be connected to the generator or UPS bypass circuitry.

# (f) Photometric Requirements.

- 1. The entire surface of the sign panel shall be evenly illuminated. The average maintained luminous intensity measured across the letters, operating under the conditions defined in Environmental Requirements and Wattage Sections shall be of a minimum value of 100 cd/m<sup>2</sup>.
- 2. The manufacturer shall make available independent laboratory test results to verify compliance to Voltage Range and Luminous Intensity Distribution Sections.
- 3. Twelve (12) 1.25 watt LED units shall be mounted on 1-inch x 22-inch metal cone printed circuit boards (MCPCB). The viewing angle shall be 120 degrees. LED shall have a color temperature of 5200k nominal, CRI of 80 with a life expectancy of 75,000 hrs.

# (g) Quality Assurance.

The LED Light Engine shall be manufactured in accordance with a vendor quality assurance (QA) program. The production QA shall include statistically controlled routine tests to ensure minimum performance levels of the LED Light Engine build to meet this specification. QA process and test result documentations shall be kept on file for a minimum period of seven (7) years. The LED Light Engine that does not satisfy the production QA testing performance requirements shall not be labeled, advertised, or sold as conforming to these specifications. Each LED Light Engine shall be identified by a manufacturer's serial number for warranty purposes. LED Light Engines shall be replaced or repaired if they fail to function as intended due to workmanship or material defects within the first sixty (60) months from the date of acceptance. LED Light Engines that exhibit luminous intensities less than the minimum value specified in Photometric Section within the first thirty-six (36) months from the date of acceptance shall be replaced or repaired.

# IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)

Effective: August 1, 2012 Revised: February 1, 2014

In addition to the Contractor's equal employment opportunity affirmative action efforts undertaken as elsewhere required by this Contract, the Contractor is encouraged to participate in the incentive program to provide additional on-the-job training to certified graduates of IDOT funded pre-apprenticeship training programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at \$15.00 per hour for training given a certified TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for the TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this Special Provision.

METHOD OF MEASUREMENT: The unit of measurement is in hours.

BASIS OF PAYMENT: This work will be paid for at the contract unit price of \$15.00 per hour for certified TRAINES TRAINING PROGRAM GRADUATE. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeyworker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is 2. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision \$15.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.



### **Storm Water Pollution Prevention Plan**

Route	F.A.U. 1637	Marked Rte.	University Parkway
Section	96-00014-00-PV	Project No.	M-CMM-4003(013)
County	Will	Contract No.	63709
Permit No	has been prepared to comply with the provisions of the LLR10 (Permit ILR10), issued by the Illinois Enviror truction site activities.		
accordance submitted. gathering am aware	nder penalty of law that this document and all attactive with a system designed to assure that qualified Based on my inquiry of the person or persons who the information, the information submitted is, to the bethat there are significant penalties for submitting false g violations.	personnel properl manage the syste est of my knowledg	y gathered and evaluated the information m, or those persons directly responsible for e and belief, true, accurate and complete. I
	Lafayette Linear	- The	Chine .
	Print Name		Signature
	Village Manager		4-20-13
	Title		Date
	Village of University Park		
	Agency		

# I. Site Description:

A. Provide a description of the project location (include latitude and longitude):

University Parkway (Stuenkel Avenue) from approximately 1,857 feet east of Central Avenue to approximately 720 east of Cicero Avenue. Cicero Avenue approximately 600 feet north and 550 south of University Parkway.

University Parkway/Central Avenue Intersection: Lat./Long.: 41°27'22.08"N / 87°44'53.00"W University Parkway/Cicero Avenue Intersection: Lat./Long.: 41°27'22.53"N / 87°43'55.74"W

B. Provide a description of the construction activity which is the subject of this plan:

Reconstruction and widening of University Parkway (Stuenkel Avenue) which includes earth excavation, embankment, storm sewers, culverts and culvert end sections, manholes, inlets, various pavement items, traffic signals, multi-use path, striping, signing, landscaping and other miscellaneous items of construction.

C. Provide the estimated duration of this project:

18 months

D. The total area of the construction site is estimated to be 9.0 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 9.0 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

A weighted average of runoff coefficient of 0.68 was determined for this project

F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:

<u>Name</u>	Slope	Surface Erosion Factor "k"	Risk of Erosion
Varna Silt Loam	4-6%	0.32	High
Bryce Silty Clay	0-2%	0.28	Moderate
Frankfort Silt Loam	0-2%	0.37	High
Frankfort Silt Loam	2-4%	0.37	High
Frankfort Silty Clay Loam	2-4%	0.37	High
Frankfort Silt Loam			J

- G. Provide an aerial extent of wetland acreage at the site:
  - 0.09 acres of wetlands present
- H. Provide a description of potentially erosive areas associated with this project:
  - Swale and stormwater ditches are potentially erosive areas associated with this project.
- 1. The following is a description of soil disturbing activities by stages, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):
  - Installation of soil erosion and sediment control measures including perimeter silt fencing and stabilized construction entrances as shown on the erosion control plans.
  - Isolated tree removal as shown on the plans. Trees to remain will be protected against damage.
  - Excavation and embankment will be completed along the job site to grade out for the proposed roadway and bike path and construct embankment and ditches.
  - Temporary seeding of bare earth on a bi-weekly basis to minimize the amount of erodible surface area within.
  - Construct the Culverts and end sections.
  - Storm sewers, manholes, inlets and culvert extensions.
  - Placement and maintenance of temporary erosion control, such as temporary ditch checks, inlet and pipe protection, temporary seeding, etc.
  - Construction of pavement and bike path subbase and surface course.
  - Final grading, landscaping, and other miscellaneous items.
  - Removal of all temporary erosion control measures and placement of permanent erosion control, such as seeding, sod, erosion control blanket or stabilizing blanket, riprap, etc.
- J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.
- K. Identify who owns the drainage system (municipality or agency) this project will drain into:

The Village of University Park will own the proposed storm sewer system which outlets to the East Branch of Hickory Creek and Butterfield Creek.

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.

Village of University Park

- M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the receiving waters can be found on the erosion and sediment control plans:
  - 1. East Branch Hickory Creek
  - 2. Butterfield Creek
- N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

Wetland Area 2 located within the project limits, but no associated impacts, shall be protected with double silt fencing so as not to be disturbed.

Ο.	The following sensitive environmental resources are associated with this project, and may have the potential to be
	impacted by the proposed development:

	Floodplain
$\boxtimes$	Wetland Riparian
	Threatened and Endangered Species
	Historic Preservation
	303(d) Listed receiving waters for suspended solids, turbidity, or siltation
	· · · · · · · · · · · · · · · · · · ·

	Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation Applicable Federal, Tribal, State or Local Programs Other				
1.	303(	d) Listed receiving waters (fill out this section if checked above):			
	N/A				
	a.	The name(s) of the listed water body, and identification of all pollutants causing impairment:			
	b.	Provide a description of how erosion and sediment control practices will prevent a discharge of sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:			
	c.	Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:			
	d.	Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body:			
2.	ТМС	DL (fill out this section if checked above)			
	a.	The name(s) of the listed water body:			
		N/A			

		b.	Provide a description of the erose design that is consistent with the			control strategy that will be incorporated into the site I requirements of the TMDL:
			N/A			
		c.	If a specific numeric waste loadischarges, provide a description			been established that would apply to the project's steps to meet that allocation:
			N/A			
Р.	The fe	ollowi	ng pollutants of concern will be as	ssociated w	ith this	construction project:
		Cor Cor Soli Pair Solv	Sediment norete norete norete Truck Waste norete Curing Compounds id Waste Debris nts vents tillizers / Pesticides		Antifro Waste Other Other Other Other	eum (gas, diesel, oil, kerosene, hydraulic oil / fluids) eeze / Coolants e water from cleaning construction equipment (specify) (specify) (specify) (specify) (specify) (specify)
Cont	rols:					
describing the irrange of the description of the de	ribed in e respo npleme propose	i I.C. a onsible entation	above and for all use areas, borro le for its implementation as indica on of the measures indicated. The anges, maintenance, or modifica	ow sites, and ated. The Contract ations to ke	id waste Contractor, and eep con	mented for each of the major construction activities a sites. For each measure discussed, the Contractor shall provide to the Resident Engineer a plan for subcontractors, will notify the Resident Engineer of struction activities compliant with the Permit ILR10 which are attached to, and are a part of, this plan:
	A. <b>E</b>	rosio	on and Sediment Controls: At a	minimum,	controls	s must be coordinated, installed and maintained to:
	_	. Mir . Ma rer	nimize the amount of soil exposed nimize the disturbance of steep slaintain natural buffers around surflavall and maximize storm water nimize soil compaction and, unlest	opes; ace waters infiltration,	, direct unless i	storm water to vegetated areas to increase sediment infeasible;
	В.	incluvego prace sode app initia mor perr	uding site- specific scheduling of etation is preserved where attain ctices may include but are not limited ding, vegetative buffer strips, ropriate measures. Except as pated immediately where constructed than one (1) day after the manently ceases on all disturbed teen (14) or more calendar days.	the implem able and d ited to: ter protection provided be ction activition construction of the construction of portions of the constructions of the construction of the con	entation listurbed mporary of treed slow in ies have on active of the s	ion of interim and permanent stabilization practices of the practices. Site plans will ensure that existing diportions of the site will be stabilized. Stabilization a seeding, permanent seeding, mulching, geotextiles es, preservation of mature vegetation, and othe II(B)(1) and II(B)(2), stabilization measures shall be temporarily or permanently ceased, but in no case with in that portion of the site has temporarily or ite where construction will not occur for a period of its precluded by snow cover, stabilization measures
			shall be initiated as soon as			is predicted by show cover, stabilization measures
			On areas where construction days, a temporary stabilization			porarily ceased and will resume after fourteen (14 used.
		The	following stabilization practices v	vill be used	for this	project:
			Preservation of Mature Vegetation Vegetated Buffer Strips Protection of Trees Temporary Erosion Control See Temporary Turf (Seeding, Class Temporary Mulching Permanent Seeding	ding		Erosion Control Blanket / Mulching Sodding Geotextiles Other (specify) Other (specify) Other (specify) Other (specify)

II.

Describe how the stabilization practices listed above will be utilized during construction:

During construction, areas outside the construction limits as outlined previously herein, shall be protected. The contractor shall not use this area for staging (except as described on the plans and as directed by the engineer), parking of vehicles or construction equipment, storage of materials, or other construction related activities.

Within the construction limits, areas which may be susceptible to erosion as determined by the engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.

Earth stockpiles shall be temporarily seeded if they are to remain unused for more than 14 days.

Protection of Trees – This item shall consist of item "Tree trunk Protection" as shown on the plans or directed by the engineer and in accordance with article 201.05 of the Illinois Department of transportation's Standard Specifications for Road and Bridge.

Excavated areas and embankment shall be permanently seeded or sodded within 7 days of final grading. If not, these areas shall be temporarily seeded by the 14<sup>th</sup> day if no construction activity in the area is planned for 21 days or more.

Construction equipment shall be stored and fueled only at designated locations. All necessary Measures shall be taken to contain any fuel of other pollutant in accordance with EPA Water Quality Regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.

The resident engineer shall inspect the project daily during construction activities. Inspection shall also be done weekly and after rains of 15 inch or greater or equivalent snowfall and during the winter shutdown period. The project shall additionally be inspected by the construction field Engineer on a biweekly basis to determine that erosion control efforts are in place and effective and if other erosion control work is necessary.

Sediment collected during construction of the various temporary erosion control systems shall be deposited on the site on a regular basis as directed by the engineer. The cost of this maintenance shall be included in the unit bid price for earth excavation.

Temporary erosion control seeding - This item will be applied to all disturbed areas within 7 days to minimize the amount of exposed surface areas.

Permanent Seeding - Seeding, Class 2A will be installed per IDOT specifications and in accordance with the plans.

Erosion Control Blanket/ Mulching - Erosion control blankets will be installed over fill slopes and high velocity areas (i.e. ditches) that have been brought to final grade and seeded to protect slopes from erosion and allow seeds to germinate.

Erosion control mat - Erosion control mat will be placed in ditch bottoms as a temporary control measures before final stabilization.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

Temporary erosion control measures will be removed and areas final stabilized as directed by the engineer. The cost of this removal shall be included in the Unit Bid Price for various temporary erosion control pay items. Temporary measures will be removed after site stabilization has been achieved. Permanent measures are within the roadway right of way and will be maintained by the Village.

C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the

discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following structural practices will be used for this project:

<ul> <li>☑ Perimeter Erosion Barrier</li> <li>☑ Temporary Ditch Check</li> <li>☑ Storm Drain Inlet Protection</li> <li>☐ Sediment Trap</li> <li>☐ Temporary Pipe Slope Drain</li> <li>☐ Temporary Sediment Basin</li> <li>☐ Temporary Stream Crossing</li> <li>☑ Stabilized Construction Exits</li> <li>☐ Turf Reinforcement Mats</li> <li>☐ Permanent Check Dams</li> <li>☐ Permanent Sediment Basin</li> <li>☐ Aggregate Ditch</li> <li>☐ Paved Ditch</li> </ul>		Rock Outlet Protection Riprap Gabions Slope Mattress Retaining Walls Slope Walls Concrete Revetment Mats Level Spreaders Other (specify) Other (specify) Other (specify) Other (specify) Other (specify)
Describe how the structural practices listed about	ove will b	be utilized during construction:
Perimeter erosion barrier will be installed prior as specified in the plans to prevent sediment is shown on the erosion control detail plans	to any ( laden rui	grubbing or earth moving activities and will be placed noff from leaving the site. All structural practices are
Stabilized construction exits will be installed the plans.	prior t	o any grubbing or earth moving activities as per
to fall out prior to entering into waters. Temp grade or minimum of every 200 feet, who aggregate, silt panels, rolled excelsior blan	orary di ichever nket, ur ales, hay	and swales to slow the runoff and allow sediments to the checks shall be located at every 1.5' change in is closer. Ditch checks shall be composed of ethane foam/geotextile (silt wedges) and/or other bales, perimeter barrier, and silt fence will not be
Temporary erosion control seeding shall be ap	plied at a	a rate of 100 lbs/acre
Inlet protection and riprap outlet protecti drainage items.	on will	be installed upon completion of the particula
Describe how the structural practices listed a completed:	above w	ill be utilized after construction activities have beer
checks, and stabilized construction exits, as per the plans. Permanent control me	will be easures	g perimeter erosion barrier, temporary ditch removed and the area permanently stabilized including riprap aprons and seeding will be ved and will be maintained in the future by the
Treatment Chemicals		
Will polymer flocculants or treatment chemicals	s be utiliz	zed on this project: 🔲 Yes 🗵 No
If yes above, identify where and how polymer project.	er floccu	lants or treatment chemicals will be utilized on this

D.

Ε.

Permanent Storm Water Management Controls: Provided below is a description of measures that will be installed during the construction process to control volume and pollutants in storm water discharges that will

occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

 Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design and Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

A riprap apron and outfall channel will be constructed at the outfall of the storm sewer along Cicero Ave at STA 206+03. The Phase II drainage design by CMT has determined that no stormwater detention is required for proposed storm sewer outlets to be constructed for this project.

F. Approved State or Local Laws: The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

The approved procedures and requirements are specified in the sediment and erosion control plans

- G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.
  - 1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
    - Approximate duration of the project, including each stage of the project
    - Rainy season, dry season, and winter shutdown dates
    - Temporary stabilization measures to be employed by contract phases
    - Mobilization timeframe
    - Mass clearing and grubbing/roadside clearing dates
    - Deployment of Erosion Control Practices
    - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
    - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
    - Paving, saw-cutting, and any other pavement related operations
    - Major planned stockpiling operations
    - Timeframe for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.

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- Permanent stabilization activities for each area of the project
- 2. The Contractor and each subcontractor shall provide, as an attachment to their signed Contractor Certification Statement, a discussion of how they will comply with the requirements of the permit in regard to the following items and provide a graphical representation showing location and type of BMPs to be used when applicable:
  - Vehicle Entrances and Exits Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
  - Material Delivery, Storage and Use Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
  - Stockpile Management Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
  - Waste Disposal Discuss methods of waste disposal that will be used for this project.
  - Spill Prevention and Control Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
  - Concrete Residuals and Washout Wastes Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
  - Litter Management Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
  - Vehicle and Equipment Fueling Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
  - Vehicle and Equipment Cleaning and Maintenance Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
  - Dewatering Activities Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
  - Polymer Flocculants and Treatment Chemicals Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
  - Additional measures indicated in the plan.

#### III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

Temporary and permanent erosion control measures will be inspected on a regular basis by the contractor and after storm events.

- Seeding All disturbed areas will be temporarily seeded on a weekly basis to minimize the amount of erodible surface within the contract limits.
- 2. Perimeter erosion barrier Sediment will be removed if the integrity of the fencing is injeopardy. Any fence that has been knocked down will be repaired immediately.
- 3. Ditch Checks Sediment will be removed if the integrity of the ditch check is in jeopardy. Any ditch checks which fail will be repaired and/or replaced immediately.
- 4. Inlet protection/Filters Sediment will be removed if the integrity of the inlet protection is in jeopardy. Any inlet protection filters which fail will be replaced immediately.

#### IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following

business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by email at: <a href="mailto:epa.swnoncomp@illinois.gov">epa.swnoncomp@illinois.gov</a>, telephone or fax within twenty-four (24) hours of the incident. The Resident Engineer shall then complete and submit an "Incidence of Non-Compliance" (ION) report for the identified violation within five (5) days of the incident. The Resident Engineer shall use forms provided by IEPA and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of non-compliance shall be signed by a responsible authority in accordance with Part VI. G of the Permit ILR10.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency Division of Water Pollution Control Attn: Compliance Assurance Section 1021 North Grand East Post Office Box 19276 Springfield, Illinois 62794-9276

# V. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



# **Contractor Certification Statement**

Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route	F.A.U. 1637	Marked Rte.	University Parkway
Section	96-00014-00-PV	Project No.	M-CMM-4003(013)
County	Will	Contract No.	63709
Permit N  I certify t	tification statement is a part of SWPPP for the lo. ILR10 issued by the Illinois Environmental Prounder penalty of law that I understand the terms of the ded with industrial activity from the construction site.	tection Agency. of the Permit No. ILF	R 10 that authorizes the storm water discharges
project; I	on, I have read and understand all of the informal have received copies of all appropriate mainten compliance with the Permit ILR10 and SWPPP ar	iance procedures; a	ind, I have provided all documentation required
☐ Con	itractor		
□ Sub	-Contractor		
	Print Name	<u> </u>	Signature
	Title	-	Date
	Name of Firm		Telephone
	Street Address	-	City/State/ZIP
Items wh	nich this Contractor/subcontractor will be responsi	ble for as required in	n Section II.G. of SWPPP:



# Illinois Department of Transportation

# Memorandum

To:

Diane O'Keefe

Attn: Pete Harmet

From:

Scott E. Stitt

By: Barbara H. Stevens

Subject:

Final Preliminary Site Investigation Report

Date:

January 11, 2012

Barbara H. Stevens

Refer to: FAU 1637 (University Parkway – Exchange Avenue)

Job No. P91-181-96

Central Avenue to Crawford Avenue

Will County

ISGS #938A/938B Sequence #7994C/7994B

Andrews4 Work Order #003

Attached is a copy of the completed Preliminary Site Investigation (PSI) Report submitted January 10, 2012 by Andrews Engineering regarding the above referenced project. Based on the recommendations of the PSI report, if the District wants to pursue construction in the area of soil contamination, then the Contractor shall be responsible for hiring an Environmental Firm with at least five (5) documented leaking underground storage tanks (LUST) cleanups or that is pre-qualified in hazardous waste by the Department to remediate the soil contamination and monitor for worker protection.

An estimated quantity of potentially non-special waste has been included in the PSI report. The impacted soils would be classified as a non-special waste. The estimated cost associated with contaminated soil is \$14,355 at the METRA University Park Station, &9,675 at the Raceco, \$8,245 at the University Park METRA Station, \$17,415 at the Canadian National Railway, and \$5,840 at the Governor's State University. All utility companies relocating within the following areas should be notified of the potential soil contamination and the attached special provision shall be included in the contract plans.

# Section 1

Station 141+10 to Station 142+40 0 to 60 feet RT (Raceco, Site 938B-3, 450 South Cicero Avenue) – non-special waste. Contaminants of concern sampling parameters: Arsenic and Lead.

Outside Project 2. Limits of Section 1 Station 163+20 to Station 163+50 0 to 50 feet RT (Canadian National Railroad, Site 938B-10) – non-special waste. Contaminants of concern sampling parameters: Arsenic.

Memorandum January 11, 2012 Page 2 of 3

# Limits of Section 1

- Outside Project 3. Station 164+10 to Station 164+80 0 to 50 feet LT (University Park METRA Station, Site 938B-9, 1900 University Parkway) - non-special waste. Contaminants of concern sampling parameters: PNAs and Arsenic.
  - 4. Station 165+10 to Station 165+75 0 to 50 feet RT (Governors State University, Site 938B-16, southeast corner of Governor's Highway and University Park) - non-special waste. Contaminants of concern sampling parameters: Arsenic.
  - 5. Station 301+10 to Station 304+30 0 to 60 feet RT (Wooded Land, Site 938B-13, northwest corner of Governor's Highway and University Parkway) - nonspecial waste. Contaminants of concern sampling parameters: Arsenic and Lead.
  - 6. Station 407+50 to Station 410+00 0 to 50 feet RT and LT (METRA University Park Station, 938A-5, 4500 West Stuenkel Road) - non-special waste. Contaminants of concern sampling parameters: Arsenic.

Some the soils identified above requiring management as a non-special waste can be managed on-site as fill. Although the soil concentrations exceed a residential property's Tier 1 soil remediation objective for the ingestion exposure pathway, they can be utilized on-site as fill because the roadway is not considered a residential property. All storm sewer excavated soils can be placed back into the excavated trench as trench backfill. If the soils cannot be utilized on-site as fill then they must be managed off-site as a non-special waste. The following areas can be managed on-site as fill.

# Section 1

1. Station 141+10 to Station 142+40 0 to 60 feet RT (Raceco, Site 938B-3, 450 South Cicero Avenue) - non-special waste. Contaminants of concern sampling parameters: Arsenic and Lead.

# Outside Project 2. Limits of Section 1

- Station 163+20 to Station 163+50 0 to 50 feet RT (Canadian National Railroad, Site 938B-10) - non-special waste. Contaminants of concern sampling parameters: Arsenic.
- 3. Station 165+10 to Station 165+75 0 to 50 feet RT (Governors State University, Site 938B-16, southeast corner of Governor's Highway and University Park) - non-special waste. Contaminants of concern sampling parameters: Arsenic.
- 4. Station 301+10 to Station 304+30 0 to 60 feet RT (Wooded Land, Site 938B-13, northwest corner of Governor's Highway and University Parkway) - nonspecial waste. Contaminants of concern sampling parameters: Arsenic and
- 5. Station 407+50 to Station 410+00 0 to 50 feet RT and LT (METRA University Park Station, 938A-5, 4500 West Stuenkel Road) - non-special waste. Contaminants of concern sampling parameters: Arsenic.

Memorandum January 11, 2012 Page 3 of 3

Any waste generated as a special waste or a waste not certified as a non-special waste from this project should be manifested off-site using the generator number associated with Will County. The generator number for Will County is 1978995012.

The pay item in the Special Provision should be included in the contact plans with the following quantities.

Pay Item Number	Pay Item	Quantity
66900200	NON-SPECIAL WASTE DISPOSAL.	900 cubic yards
66900450	SPECIAL WASTE PLANS AND REPORTS.	Lump Sum
66900530	SOIL DISPOSAL ANALYSIS.	5 Each

It is the opinion of this office in consultation with Chief Council, that the remedial work be documented for potential illegal trespass action. If you have any questions or comments, please contact Steven Gobelman at 217/785-4246.

#### Attachment

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cc: Andrews Engineering (w/o attachments)
Central Land Acquisition (w/o attachments)
District Land Acquisition (w/o attachments)
District Utilities Coordinator (w/o attachments)

#### REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

This work shall be according to Article 669 of the Standard Specifications and the following:

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is pre-qualified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

<u>General.</u> This Special Provision will likely require the Contractor to subcontract for the execution of certain activities. .

All contaminated materials shall be managed as non-special waste. <u>This work shall include monitoring and potential sampling, analytical testing, and management of a material contaminated by regulated substances.</u>

- A) The Environmental Firm shall continuously monitor for worker protection and the Contractor shall manage and dispose of all soils excavated within the following areas as classified below. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit whichever is less. Soil samples or analysis without the approval of the Engineer will be at no additional cost to the Department. Phase I Preliminary Engineering information is available through the District's Environmental Studies Unit.
  - Station 164+10 to Station 164+80 0 to 50 feet LT (University Park METRA Station, Site 938B-9, 1900 University Parkway) – non-special waste. Contaminants of concern sampling parameters: PNAs and Arsenic.
- B) The Environmental Firm shall continuously monitor for worker protection and the Contractor shall manage any excavated soils within the construction limits of this project as fill. Although the soil concentrations exceed a residential property's Tier 1 soil remediation objective for the ingestion exposure pathway, they can be utilized within the construction limits as fill because the roadway is not considered a residential property. All storm sewer excavated soils can be placed back into the excavated trench as backfill unless trench backfill is specified. If the soils cannot be utilized within the construction limits as fill then they must be managed off-site as a non-special waste. The following areas can be managed within the construction limits as fill.
  - 1. Station 141+10 to Station 142+40 0 to 60 feet RT (Raceco, Site 938B-3, 450 South Cicero Avenue) non-special waste. Contaminants of concern sampling parameters: Arsenic and Lead.
  - 2. Station 163+20 to Station 163+50 0 to 50 feet RT (Canadian National Railroad, Site 938B-10) non-special waste. Contaminants of concern sampling parameters: Arsenic.

- 3. Station 165+10 to Station 165+75 0 to 50 feet RT (Governors State University, Site 938B-16, southeast corner of Governor's Highway and University Park) non-special waste. Contaminants of concern sampling parameters: Arsenic.
- 4. Station 301+10 to Station 304+30 0 to 60 feet RT (Wooded Land, Site 938B-13, northwest corner of Governor's Highway and University Parkway) non-special waste. Contaminants of concern sampling parameters: Arsenic and Lead.
- 5. Station 407+50 to Station 410+00 0 to 50 feet RT and LT (METRA University Park Station, 938A-5, 4500 West Stuenkel Road) non-special waste. Contaminants of concern sampling parameters: Arsenic.

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# \*\*REVISED\*\*

# Preliminary Site Investigation Report 16 Potential Waste Sites FAU 1637 (University Parkway) Village of University Park Will County, Illinois

Contract Job No.: PTB 160-030 Work Order No.: 003 **IDOT Job No.:** P-91-181-96 Route: FAU 1637 ISGS Report No.: 938A & 938B Anticipated Design Approval Date: 01/26/2001 Bid Letting Date: 03/09/2012 Contract No.: NA

# **January 5, 2012**

Section 1 Final Summary Included Only

# Prepared for:



Illinois Department of Transportation
Bureau of Design and Environment

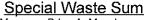
2300 South Dirksen Parkway Springfield, IL 62764

THIS IS A PRELIMINARY DRAFT. IT HAS BEEN PREPARED BASED ON PRELIMINARY INFORMATION AND ASSUMPTIONS. NO ONE MAY RELY ON THIS DRAFT. IT IS SUBJECT TO CHANGE AS ADDITIONAL INFORMATION BECOMES AVAILABLE OR IS CLARIFIED.



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- В **BORING LOGS**
- LABORATORY DATA PACKAGE AND PHOTO DOCUMENTATION C



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# 6. CONCLUSIONS AND RECOMMENDATIONS

#### 6.1. Conclusions

The results of Andrews Engineering's investigation in the project area indicate soils at five sites and groundwater at one site within the existing ROW and/or proposed ROW are impacted by levels of contaminants that exceed maximum allowable concentrations remediation objectives. Contaminated soils excavated from impacted areas are to be disposed of as non-special waste. The following includes the estimated costs for managing excavated soils from contaminated sites.

# 6.1.1 ISGS Site 938A-1- Canadian National Railroad

Contaminants of concern were not observed in ISGS site 938A-1 as discussed in Section 5; therefore, a cost estimate for remediation involving soil management and disposal is not necessary.

## 6.1.2 ISGS Site 938A-2 - Vacant Land

Contaminants of concern were not observed in ISGS site 938A-2 as discussed in Section 5; therefore, a cost estimate for remediation involving soil management and disposal is not necessary.

### 6.1.3 ISGS Site 938A-3 – Agricultural Land #3

Contaminants of concern were not observed in ISGS site 938A-3 as discussed in Section 5; therefore, a cost estimate for remediation involving soil management and disposal is not necessary.

#### 6.1.4 ISGS Site 938A-5 – METRA University Park Station

The METRA University Park Station site soils are impacted by arsenic at levels which exceed maximum allowable soil remediation objectives. Based on the laboratory analytical results, management, special handling, and disposal of soil generated by IDOT during excavation activities at this site is required. The volume of impacted soil that will require special handling and proper disposal as non-special waste is approximately 167 cubic yards.

ANDREWS

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As shown in Table 9, the estimated cost to excavate, manage, and dispose of contaminated soils, including the special waste plans and reports, and soil sample analyses, is approximately \$14,355.

## 6.1.5 ISGS Site 938A-6 - Agricultural Land #6

Contaminants of concern were not observed in ISGS site 938A-6 as discussed in Section 5; therefore, a cost estimate for remediation involving soil management and disposal is not necessary.

# 6.1.6 ISGS Site 938B-1 – Applied Systems, Inc.

Contaminants of concern were not observed in ISGS site 938B-1 as discussed in Section 5; therefore, a cost estimate for remediation involving soil management and disposal is not necessary.

### 6.1.7 ISGS Site 938B-2 – Agricultural Land #2

Contaminants of concern were not observed in ISGS site 938B-1 as discussed in Section 5; therefore, a cost estimate for remediation involving soil management and disposal is not necessary.

## Section 1

#### 6.1.8 ISGS Site 938B-3 – Raceco

The Raceco site soils are impacted by arsenic and lead at levels which exceed maximum allowable soil remediation objectives. Based on the laboratory analytical results, management, special handling, and disposal of soil generated by IDOT during excavation activities at this site is required. The volume of impacted soil that will require special handling and proper disposal as non-special waste is approximately 95 cubic yards.

As shown in Table 9, the estimated cost to excavate, manage, and dispose of contaminated soils, including the special waste plans and reports, and soil sample analyses, is approximately \$9,675.

ANDREWS

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6.1.9 ISGS Site 938B-9 - University Park Metra Station

The University Park Metra Station site soils are impacted by benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and arsenic at levels which exceed maximum allowable soil remediation objectives. Based on the laboratory analytical results, management, special handling, and disposal of soil generated by IDOT during excavation activities at this site is required. The volume of impacted soil that will require special handling and proper disposal as non-special waste is approximately 73 cubic

yards.

As shown in Table 9, the estimated cost to excavate, manage, and dispose of contaminated

soils, including the special waste plans and reports, and soil sample analyses, is approximately

\$8,245.

6.1.10 ISGS Site 938B-10 - Canadian National Railway at University Park

The Canadian National Railway at University Park site soils are impacted by arsenic and lead at

levels which exceed maximum allowable soil remediation objectives. Based on the laboratory

analytical results, management, special handling, and disposal of soil generated by IDOT during

excavation activities at this site is required. The volume of impacted soil that will require special

handling and proper disposal as non-special waste is approximately 191 cubic yards.

As shown in Table 9, the estimated cost to excavate, manage, and dispose of contaminated

soils, including the special waste plans and reports, and soil sample analyses, is approximately

\$17,415.

6.1.11 ISGS Site 938B-13 - Wooded Land #13

Contaminants of concern were not observed in ISGS site 938B-13 as discussed in Section 5;

therefore, a cost estimate for remediation involving soil management and disposal is not

necessary.

Special Waste Summary

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6.1.12 ISGS Site 938B-14 - Vacant Building

**ANDREWS** 

Contaminants of concern were not observed in ISGS site 938B-14 as discussed in Section 5;

therefore, a cost estimate for remediation involving soil management and disposal is not

necessary.

6.1.13 ISGS Site 938B-15 - Speedway

Contaminants of concern were not observed in ISGS site 938B-15 as discussed in Section 5;

therefore, a cost estimate for remediation involving soil management and disposal is not

necessary.

6.1.14 ISGS Site 938B-16 – Governors State University

The Governors State University site soils are impacted by arsenic at levels which exceed

maximum allowable soil remediation objectives. Based on the laboratory analytical results,

management, special handling, and disposal of soil generated by IDOT during excavation

activities at this site is required. The volume of impacted soil that will require special handling

and proper disposal as non-special waste is approximately 36 cubic yards.

Groundwater at the Governors State University site is impacted by benzo(a)anthracene,

benzo(a)pyrene, arsenic, beryllium, chromium, lead, nickel and thallium at levels which exceed

maximum groundwater remediation objectives. Contaminated groundwater encountered during

excavation may be managed within the excavation and allowed to infiltrate back into the ground.

As shown in Table 9, the estimated cost to excavate, manage, and dispose of contaminated

soils, including the special waste plans and reports, and soil sample analyses, is approximately

\$5,840.

6.1.15 ISGS Site 938B-17 - Wooded Land #17

Contaminants of concern were not observed in ISGS site 938B-17 as discussed in Section 5:

therefore, a cost estimate for remediation involving soil management and disposal is not

necessary.



**Special Waste Summary** 

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### 6.1.16 ISGS Site 938B-18 - Southern Star Cab Company

Contaminants of concern were not observed in ISGS site 938B-18 as discussed in Section 5; therefore, a cost estimate for remediation involving soil management and disposal is not necessary.

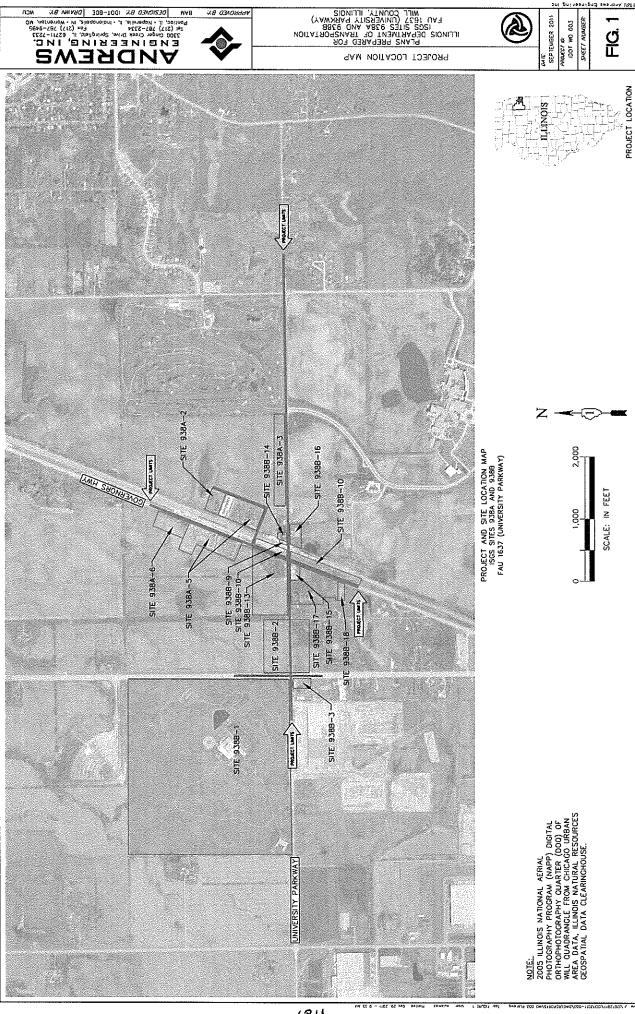
#### 6.2. Recommendations

#### 6.2.1 Additional Investigations

Additional soil and groundwater samples are not proposed at the project area. All environmental media collected have been analyzed and compared with maximum allowable remediation objectives and TACO groundwater ingestion remediation objectives and evaluated relative to proposed construction activities.

#### 6.2.2 Construction Worker Health and Safety

This report presents analytical results of site soils and groundwater, where applicable. Construction worker health and safety are the sole responsibility of the construction contractor. OSHA regulations should be adhered to during all construction activities. Where IDOT will be excavating and disposing of non-special waste, it is recommended a Health and Safety Plan be developed in accordance with 29 CFR 1910.120, and implemented during soil excavation activities.



ANDREW IN THE PROPERTY OF COLLECTOR OF COLLE

ESTIMATED SOIL VOLUME NON-SPECIAL WASTE

PROPOSED EXCAVATION

SITE ID & NAME 938B-3 RACECO

95 yd³

DRAINAGE & UTILITY CONSTRUCTION

NO CONTAMINANTS OF CONCERN NOTED FOR SITES 938B-1.

NOTES:

SCALE: IN FEET

DECEMBER 2011 

PROJECT IO: IDOT WO GO3 SHEET NUMBER:

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NOTE. ALL DIDITES SHOWN ARE APPROXIMATE IN LOCATION BORING LICKATIONS MUST BE VERRED AND THE UTILITES FELD STAKED BY UTILITY SEARCH IN ACCORDANCE, WITH THE WISK PLAN.

CONTAMINATED SOIL AREA

ESTIMATED AREA OF CONTAMINATED SOIL EXCAVATION TEMPORARY MONITORING WELL LOCATION SOIL BORING LOCATION LEGEND

CICERO AVENUE · 经基础管理 27 **⊙**ā Φ. CLLE-F SITE 9388-1 APPLIED SYSTEMS, INC. SITE 938B-3. RACECO ቫ 170 111 3988-3-801/001 388-1-801/cot PR CONCRETE MEDIAN PR MULTIUSE PATH 9368-3-80

J = Result is less than the reporting frmt, but greater than or equal to the method detection limit. The concentration is an approximate value in marking = Miligrams per hitogram marking = Miligrams per hitogram marking.
 I Miligrams per ker
 I Feet

0,0077

SPLP Metals (mg/L)

Lesa TCLP Metals (mg/

rorganic Compounds.

mple pH

SPLP = Synthetic Precipitation Leaching Procedure TCLP = Toxicity Characteristic Leaching Procedure

1 = Exceeds Naximum Allowable Concentrations of Chemical Constituents in Uncontaminated Sci Used as Fit Material At Regulated Fit Operations (35 III Adm. Code 1100 Subpart F ND = Not Detected at or above the laboratory reporting limit

Proposed!) November 29, 2011.
2 = Exceeds Tier I Groundwater Remediation Objective for the Groundwater Ingestion Route. (Class I) (TACO Appendix B, Table E) OR Tier I concentration for the Soil Component of the Groundwater Ingestion Exposure Route, Class I (TACO Appendix B Tables A and B)

11,11,201

Sample Depth (ft)
Sample Date
% Solids

9368-3-801-1 11/2011

Sample ID

ISGS Site 938B-3

PLANS PREPARED FOR ILLINOIS DEFARMENT OF TRANSPORTATION ISCS SITE 9388-2 FAU 1637 (UNIVERSITY PARKWAY)

WILL COUNTY, ILLINOIS

WILL COUNTY, ILLINOIS 38 MM VBQ 308~1001 AB Q3N9/53Q OUTE DECEMBER 2011 ANDREWS IL WORMING IL - Indonpolie, IN - Worken NO. Ponico, I. L. Worken In - Indonpolie, IN - Worken NO. Ponico, I. L. Worken In - Indonpolie, IN - Worken NO. PROJECT ID: 100T WG 003 SHEET NUMBER <u>면</u> BORING LOCATIONS AND CONTAMINANTS OF CONCERN HOTE, ALL UTHES SHOWN ARE APPROXILATE IN LOCATION BORING LOCATIONS WISS BE KREMED AND THE UTHJIES FIELD STAMED BY UTLITY SEARCH IN ACCORDANCE WITH THE WORK PLAN. TEMPORARY MONITORING WELL LOCATION And the state of t LEGEND SOIL BORING LOCATION  $\Phi_{ij}$ 0 (3) \$ ĕ SITE 938B-2 AGRICULTURAL LAND #2 SCALE; IN FEET SITE 938B-2 AGRICULTURAL LAND z <del>- -</del> -CICERO STA 200+00.00 UP STA 143+58.74 -PR BIT SHLD And Applications of the Control of t And the second s NOTES: 1. NO CONTAMINANTS OF CONCERN NOTED FOR SITES 938B-2. зэрАЯот≳ ИЫ Ō,

# State of Illinois Department of Transportation Bureau of Local Roads and Streets

### SPECIAL PROVISION FOR COOPERATION WITH UTILITIES

Effective: January 1, 1999 Revised: January 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

Replace Article 105.07 of the Standard Specifications with the following:

"105.07 Cooperation with Utilities. The adjustment of utilities consists of the relocation, removal, replacement, rearrangements, reconstruction, improvement, disconnection, connection, shifting, new installation or altering of an existing utility facility in any manner.

When the plans or special provisions include information pertaining to the location of underground utility facilities, such information represents only the opinion of the Department as to the location of such utilities and is only included for the convenience of the bidder. The Department assumes no responsibility in respect to the sufficiency or the accuracy of the information shown on the plans relative to the location of the underground utility facilities.

Utilities which are to be adjusted shall be adjusted by the utility owner or the owner's representative or by the Contractor as a contract item. Generally, arrangements for adjusting existing utilities will be made by the Department prior to project construction; however, utilities will not necessarily be adjusted in advance of project construction and, in some cases, utilities will not be removed from the proposed construction limits. When utility adjustments must be performed in conjunction with construction, the utility adjustment work will be shown on the plans and/or covered by Special Provisions.

When the Contractor discovers a utility has not been adjusted by the owner or the owner's representative as indicated in the contract documents, or the utility is not shown on the plans or described in the Special Provisions as to be adjusted in conjunction with construction, the Contractor shall not interfere with said utility, and shall take proper precautions to prevent damage or interruption of the utility and shall promptly notify the Engineer of the nature and location of said utility.

All necessary adjustments, as determined by the Engineer, of utilities not shown on the plans or not identified by markers, will be made at no cost to the Contractor except traffic structures, light poles, etc., that are normally located within the proposed construction limits as hereinafter defined will not be adjusted unless required by the proposed improvement.

- (a) Limits of Proposed Construction for Utilities Paralleling the Roadway. For the purpose of this Article, limits of proposed construction for utilities extending in the same longitudinal direction as the roadway, shall be defined as follows:
  - (1) The horizontal limits shall be a vertical plane, outside of, parallel to, and 600 mm (2 ft) distant at right angles from the plan or revised slope limits.
  - In cases where the limits of excavation for structures are not shown on the plans, the horizontal limits shall be a vertical plane 1.2 m (4 ft) outside the edges of structure footings or the structure where no footings are required.
  - (2) The upper vertical limits shall be the regulations governing the roadbed clearance for the specific utility involved.
  - (3) The lower vertical limits shall be the top of the utility at the depth below the proposed grade as prescribed by the governing agency or the limits of excavation, whichever is less.
- (b) Limits of Proposed Construction for Utilities Crossing the Roadway. For the purpose of this Article, limits of proposed construction for utilities crossing the roadway in a generally transverse direction shall be defined as follows:
  - (1) Utilities crossing excavations for structures that are normally made by trenching such as sewers, underdrains, etc. and all minor structures such as manholes, inlets, foundations for signs, foundations for traffic signals, etc., the limits shall be the space to be occupied by the proposed permanent construction unless otherwise required by the regulations governing the specific utility involved.
  - (2) For utilities crossing the proposed site of major structures such as bridges, sign trusses, etc., the limits shall be as defined above for utilities extending in the same general direction as the roadway.

The Contractor may make arrangements for adjustment of utilities outside of the limits of proposed construction provided the Contractor furnishes the Department with a signed agreement with the utility owner covering the adjustments to be made. The cost of any adjustments made outside the limits of proposed construction shall be the responsibility of the Contractor unless otherwise provided.

The Contractor shall request all utility owners to field locate their facilities according to Article 107.31. The Engineer may make the request for location from the utility after receipt of notice from the Contractor. On request, the Engineer will make an inspection to verify that the utility company has field located its facilities, but will not assume responsibility for the accuracy of such work. The Contractor shall be responsible for maintaining the excavations or markers provided by the utility owners. This field location procedure may be waived if the utility owner has stated in writing to the Department it is satisfied the construction plans are sufficiently accurate. If the utility owner does not submit such statement to the Department, and they do not field locate their facilities in both horizontal and vertical alignment, the Engineer will authorize the Contractor in writing to proceed to locate the facilities in the most economical and reasonable manner, subject to the approval of the Engineer, and be paid according to Article 109.04.

The Contractor shall coordinate with any planned utility adjustment or new installation and the Contractor shall take all precautions to prevent disturbance or damage to utility facilities. Any failure on the part of the utility owner, or their representative, to proceed with any planned utility adjustment or new installation shall be reported promptly by the Contractor to the Engineer orally and in writing.

The Contractor shall take all necessary precautions for the protection of the utility facilities. The Contractor shall be responsible for any damage or destruction of utility facilities resulting from neglect, misconduct, or omission in the Contractor's manner or method of execution or nonexecution of the work, or caused by defective work or the use of unsatisfactory materials. Whenever any damage or destruction of a utility facility occurs as a result of work performed by the Contractor, the utility company will be immediately notified. The utility company will make arrangements to restore such facility to a condition equal to that existing before any such damage or destruction was done.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utilities in their present and/or adjusted positions.

No additional compensation will be allowed for any delays, inconvenience, or damage sustained by the Contractor due to any interference from the said utility facilities or the operation of relocating the said utility facilities.

# State of Illinois Department of Transportation Bureau of Local Roads and Streets

## SPECIAL PROVISION FOR INSURANCE

Effective: February 1, 2007 Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's

/illage of University Park		
		 <del>.</del>
		 <del></del>

held harmless in accordance with Article 107.26.

## COATED GALVANIZED STEEL CONDUIT (BDE)

Effective: January 1, 2013

Revise Article 1088.01(a)(3) of the Standard Specifications to read:

"(3) Coated Galvanized Steel Conduit. The conduit prior to coating shall meet the requirements for rigid metal conduit and be manufactured according to NEMA Standard No. RN1.

The coating shall have the following characteristics.

Hardness	85+ Shore A Durometer
Dielectric Strength	400 V/mil @ 60 Hz
Aging	1,000 Hours Atlas Weatherometer
Brittleness Temperature	0 °F (-18 °C) when tested according to ASTM D 746
Elongation	200 percent

The exterior galvanized surfaces shall be coated with a primer before the coating to ensure a bond between the zinc substrate and the coating. The bond strength created shall be greater than the tensile strength of the plastic coating. The nominal thickness of the coating shall be 40 mils (1 mm). The coating shall pass the following bonding test.

Two parallel cuts 1/2 in. (13 mm) apart and 1 1/2 in. (38 mm) in length shall be made with a sharp knife along the longitudinal axis. A third cut shall be made perpendicular to and crossing the longitudinal cuts at one end. The knife shall then be worked under the coating for 1/2 in. (13 mm) to free the coating from the metal.

Using pliers, the freed tab shall be pulled with a force applied vertically and away from the conduit. The tab shall tear rather than cause any additional coating to separate from the substrate.

A two part urethane coating shall be applied to the interior of the conduit. The internal coating shall have a nominal thickness of 2 mils (50  $\mu$ m). The interior coating shall be applied in a manner so there are no runs, drips, or pinholes at any point. The coating shall not peel, flake, or chip off after a cut is made in the conduit or a scratch is made in the coating. The urethane interior coating applied shall afford sufficient flexibility to permit field bending without cracking or flaking of the interior coating.

All conduit fittings and couplings shall be as specified and recommended by the conduit manufacturer. All conduit fitting covers shall be furnished with stainless steel screws which have been encapsulated with a polyester material on the head to ensure maximum corrosion protection."

## CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010 Revised: January 1, 2014

The reduction of emissions of particulate matter (PM) for off-road equipment shall be accomplished by installing retrofit emission control devices. The term "equipment" refers to diesel fuel powered devices rated at 50 hp and above, to be used on the jobsite in excess of seven calendar days over the course of the construction period on the jobsite (including rental equipment).

Contractor and subcontractor diesel powered off-road equipment assigned to the contract shall be retrofitted using the phased in approach shown below. Equipment that is of a model year older than the year given for that equipment's respective horsepower range shall be retrofitted:

Effective Dates	Horsepower Range	Model Year
June 1, 2010 <sup>1/</sup>	600-749	2002
04110 1, 2010	750 and up	2002
June 1, 2011 <sup>2/</sup>	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 <sup>2/</sup>	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

<sup>1/</sup> Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

The retrofit emission control devices shall achieve a minimum PM emission reduction of 50 percent and shall be:

- a) Included on the U.S. Environmental Protection Agency (USEPA) Verified Retrofit
   Technology List (<a href="http://www.epa.gov/cleandiesel/verification/verif-list.htm">http://www.epa.gov/cleandiesel/verification/verif-list.htm</a>),
   or verified by the California Air Resources Board (CARB)
   (<a href="http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm">http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm</a>); or
- b) Retrofitted with a non-verified diesel retrofit emission control device if verified retrofit emission control devices are not available for equipment proposed to be used on the project, and if the Contractor has obtained a performance certification from the retrofit

<sup>2/</sup> Effective dates apply to Contractor and subcontractor diesel powered off-road equipment assigned to the contract.

device manufacturer that the emission control device provides a minimum PM emission reduction of 50 percent.

Note: Large cranes (Crawler mounted cranes) which are responsible for critical lift operations are exempt from installing retrofit emission control devices if such devices adversely affect equipment operation.

Diesel powered off-road equipment with engine ratings of 50 hp and above, which are unable to be retrofitted with verified emission control devices or if performance certifications are not available which will achieve a minimum 50 percent PM reduction, may be granted a waiver by the Department if documentation is provided showing good faith efforts were made by the Contractor to retrofit the equipment.

Construction shall not proceed until the Contractor submits a certified list of the diesel powered off-road equipment that will be used, and as necessary, retrofitted with emission control devices. The list(s) shall include (1) the equipment number, type, make, Contractor/rental company name; and (2) the emission control devices make, model, USEPA or CARB verification number, or performance certification from the retrofit device manufacturer. Equipment reported as fitted with emissions control devices shall be made available to the Engineer for visual inspection of the device installation, prior to being used on the jobsite.

The Contractor shall submit an updated list of retrofitted off-road construction equipment as retrofitted equipment changes or comes on to the jobsite. The addition or deletion of any diesel powered equipment shall be included on the updated list.

If any diesel powered off-road equipment is found to be in non-compliance with any portion of this special provision, the Engineer will issue the Contractor a diesel retrofit deficiency deduction.

Any costs associated with retrofitting any diesel powered off-road equipment with emission control devices shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed. The Contractor's compliance with this notice and any associated regulations shall not be grounds for a claim.

#### **Diesel Retrofit Deficiency Deduction**

When the Engineer determines that a diesel retrofit deficiency exists, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be \$1,000.00 for each deficiency identified.

The deficiency will be based on lack of diesel retrofit emissions control.

If a Contractor accumulates three diesel retrofit deficiency deductions for the same piece of equipment in a contract period, the Contractor will be shutdown until the deficiency is corrected.

Such a shutdown will not be grounds for any extension of the contract time, waiver of penalties, or be grounds for any claim.

#### **CONTRACT CLAIMS (BDE)**

Effective: April 1, 2014

Revise the first paragraph of Article 109.09(a) of the Standard Specifications to read:

"(a) Submission of Claim. All claims filed by the Contractor shall be in writing and in sufficient detail to enable the Department to ascertain the basis and amount of the claim. As a minimum, the following information must accompany each claim submitted."

Revise Article 109.09(e) of the Standard Specifications to read:

"(e) Procedure. The Department provides two administrative levels for claims review.

Level I Engineer of Construction

Level II Chief Engineer/Director of Highways or Designee

- (1) Level I. All claims shall first be submitted at Level I. Two copies each of the claim and supporting documentation shall be submitted simultaneously to the District and the Engineer of Construction. The Engineer of Construction, in consultation with the District, will consider all information submitted with the claim and render a decision on the claim within 90 days after receipt by the Engineer of Construction. Claims not conforming to this Article will be returned without consideration. The Engineer of Construction may schedule a claim presentation meeting if in the Engineer of Construction's judgment such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. If a Level I decision is not rendered within 90 days of receipt of the claim, or if the Contractor disputes the decision, an appeal to Level II may be made by the Contractor.
- (2) Level II. An appeal to Level II shall be made in writing to the Engineer of Construction within 45 days after the date of the Level I decision. Review of the claim at Level II shall be conducted as a full evaluation of the claim. A claim presentation meeting may be scheduled if the Chief Engineer/Director of Highways determines that such a meeting would aid in resolution of the claim, otherwise a decision will be made based on the claim documentation submitted. A Level II final decision will be rendered within 90 days of receipt of the written request for appeal.

Full compliance by the Contractor with the provisions specified in this Article is a contractual condition precedent to the Contractor's right to seek relief in the Court of Claims. The Director's written decision shall be the final administrative action of the Department. Unless the Contractor files a claim for adjudication by the Court of Claims within 60 days after the date of the written decision, the failure to file shall constitute a release and waiver of the claim."

## DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000 Revised: August 2, 2011

<u>FEDERAL OBLIGATION</u>. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

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

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

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

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

<u>CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR</u>. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is

based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 22.00% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal: or
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217)785-4611, or by visiting the Department's website at <a href="https://www.dot.il.gov">www.dot.il.gov</a>.

<u>BIDDING PROCEDURES</u>. Compliance with this Special Provision is a material bidding requirement. The failure of the bidder to comply will render the bid not responsive.

- (a) The bidder shall submit a Disadvantaged Business Utilization Plan on Department forms SBE 2025 and 2026 with the bid.
- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of plan approval or disapproval under the procedures of this Special Provision.
- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
  - The names and addresses of DBE firms that will participate in the contract;

- (2) A description, including pay item numbers, of the work each DBE will perform;
- (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
- (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal:
- (5) if the bidder is a joint venture comprised of DBE companies and non-DBE companies, the plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
- (6) If the contract goal if not met, evidence of good faith efforts.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work performance to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere pro forma efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

(a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.

- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
- (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
- (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.
  - b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

- (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination.
- (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217)785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation and/or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

<u>CALCULATING DBE PARTICIPATION</u>. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is

generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
  - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
  - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
  - (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
  - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a regular dealer or manufacturer.

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

- (a) <u>NO AMENDMENT</u>. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217)785-4611. Telefax number (217)785-1524.
- (b) <u>TERMINATION OR REPLACEMENT</u>. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in the Special Provision.
- (c) <u>CHANGES TO WORK</u>. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, than a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (d) <u>ALTERNATIVE WORK METHODS</u>. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractorinitiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:

- (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
- (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
- (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.
- (e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;

- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- (6) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.
  - When a DBE is terminated, or fails to complete its work on the Contract for any reason the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal.
- (f) PAYMENT RECORDS. The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Regional Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the BDE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative

- reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.
- (g) <u>ENFORCEMENT</u>. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (h) <u>RECONSIDERATION</u>. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor my request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department.

#### **GRANULAR MATERIALS (BDE)**

Effective: November 1, 2012

Revise the title of Article 1003.04 of the Standard Specifications to read:

"1003.04 Fine Aggregate for Bedding, Trench Backfill, Embankment, Porous Granular Backfill, Sand Backfill for Underdrains, and French Drains."

Revise Article 1003.04(c) of the Standard Specifications to read:

"(c) Gradation. The fine aggregate gradations for granular embankment, granular backfill, bedding, and trench backfill for pipe culverts and storm sewers shall be FA 1, FA 2, or FA 6 through FA 21.

The fine aggregate gradation for porous granular embankment, porous granular backfill, french drains, and sand backfill for underdrains shall be FA 1, FA 2, or FA 20, except the percent passing the No. 200 (75  $\mu$ m) sieve shall be 2±2."

Revise Article 1004.05(c) of the Standard Specifications to read:

"(c) Gradation. The coarse aggregate gradations shall be as follows.

Application	Gradation
Blotter	CA 15
Granular Embankment, Granular Backfill, Bedding, and Trench Backfill for Pipe Culverts and Storm Sewers	CA 6, CA 9, CA 10, CA 12, CA17, CA18, and CA 19
Porous Granular Embankment, Porous Granular Backfill, and French Drains	CA 7, CA 8, CA 11, CA 15, CA 16 and CA 18"

## **HOT-MIX ASPHALT - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)**

Effective: January 1, 2010 Revised: April 1, 2012

<u>Description</u>. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

"Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced ten feet apart longitudinally along the unconfined pavement edge and centered at the random density test location."

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

"Mixture Composition	Parameter	Individual Test (includes confined	Unconfined Edge Joint Density
		edges)	Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4%	91.0%
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0%	90.0%
IL-9.5,IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 - 96.0%	90.0%
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4%	90.0%

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%
All Other	Ndesign = 30	93.0 - 97.4%	90.0%"

# LRFD STORM SEWER BURIAL TABLES (BDE)

Effective: November 1, 2013

Revise Article 550.02 of the Standard Specifications to read as follows:

"Item	Article Section
(a) Clay Sewer Pipe	1040.02
(b) Extra Strength Clay Pipe	1040.02
(c) Concrete Sewer, Storm Drain, and Culvert Pipe	1042
(d) Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe	
(e) Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (Note	
(f) Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe (Note 1)	
(g) Polyvinyl Chloride (PVC) Pipe	
(h) Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior	
(i) Corrugated Polypropylene (CPP) Pipe with Smooth Interior	
(j) Rubber Gaskets and Preformed Flexible Joint Sealants for Concrete Pipe	1056
(k) Mastic Joint Sealer for Pipe (l) External Sealing Band (m) Fine Aggregate (Note 2)	1055
(I) External Sealing Band	1057
(m) Fine Aggregate (Note 2)	1003.04
(ii) Coarse Aggregate (Note 3)	1004.05
(o) Reinforcement Bars and Welded Wire Fabric	1006.10
(p) Handling Hole Plugs	
(q) Polyethylene (PE) Pipe with a Smooth Interior	
(r) Corrugated Polyethylene (PE) Pipe with a Smooth Interior	1040.04

Note 1. The class of elliptical and arch pipe used for various storm sewer sizes and heights of fill shall conform to the requirements for circular pipe.

- Note 2. The fine aggregate shall be moist.
- Note 3. The coarse aggregate shall be wet."

Revise the table for permitted materials in Article 550.03 of the Standard Specifications as follows:

"Class	Materials
Α	Rigid Pipes:
	Clay Sewer Pipe
	Extra Strength Clay Pipe
	Concrete Sewer, Storm Drain, and Culvert Pipe
	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
	Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
В	Rigid Pipes:
	Clay Sewer Pipe
	Extra Strength Clay Pipe
	Concrete Sewer, Storm Drain, and Culvert Pipe
	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
	Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe
	Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe
	Flexible Pipes:
	Polyvinyl Chloride (PVC) Pipe
	Corrugated Polyvinyl Chloride Pipe (PVC) with a Smooth Interior
	Polyethylene (PE) Pipe with a Smooth Interior
	Corrugated Polyethylene (PE) Pipe with a Smooth Interior
	Corrugated Polypropylene (CPP) Pipe with a Smooth Interior"

Replace the storm sewers tables in Article 550.03 of the Standard Specifications with the following:

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This material may be used for the given pipe diameter and fill height. This material is Not Acceptable for the given pipe diameter and fill height. May also use Standard Strength Clay Pipe

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May also use Standard Strength Clay Pipe

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Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe Concrete Sewer, Storm drain, and Culvert Pipe

Polyvinyl Chloride Pipe
Corrugated Polyvinyl Chloride Pipe
Extra Strength Clay Pipe
Extra Strength Clay Pipe
Polysthylene Pipe with a Smooth Interior
Corrugated Polypropylene Pipe with a Smooth Interior
Corrugated Polypropylene Pipe with a Smooth Interior
This material may be used for the given pipe diameter and fill height.
This material is Not Acceptable for the given pipe diameter and fill height.
May also use Standard Strength Clay Pipe
RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

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STORM STORM KIND OF MATERIAL PERMIOR A GIVEN PIPE DIAMETERS AND		Greater than 3 m seeding 4.5 m	CPVC	×	×	×	×	×	×	NA	×	¥	×	Ϋ́	Ä	Α	¥	NA	Ν	Ϋ́	Ν	AN	Y X	ΑN	NA
KIND OF ÆN PIPE	Type 3	Height: Greater than not exceeding 4.5 m	PVC	×	×	×	×	×	×	NA	×	ΑN	×	×	×	¥	¥	ΑN	Ν	¥ Z	NA	NA	¥ X	ΑĀ	NA
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		Nominal Diameter	<u>-</u>	250	300	375	450	525	900	675	750	825	006	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700

Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
Concrete Sewer, Storm drain, and Culvert Pipe
Polyvinyl Chloride Pipe
Corrugated Polyvinyl Chloride Pipe
Extra Strength Clay Pipe
Polyvethylene Pipe with a Smooth Interior
Corrugated Polyvethylene Pipe with a Smooth Interior
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Corrugated Polyvethylene Pipe With a Smooth Interior
Corrugated Poly

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STORM SEWERS KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE	Type 7	Greater than 30'	not exceeding 35'	CPVC	×	×	×	×	×	×	ΝΑ	×	NA	×	ΑN	NA	AN	Α̈́	NA	¥	¥	N A	¥	ΑN	Ϋ́	¥	
	TyT	Fill Height: Greater than 30'	not exce	RCCP	AN	>	>	>	>	>	^	>	>	^	>	>	>	>	>	>	2730	2740	2750	2750	2760	2770	•
		than 25' 30'		CPVC	×	×	×	×	×	×	AN	×	۲	×	٩	AN	NA	Ϋ́	NA	NA	Ϋ́	Ϋ́	NA	¥	Ϋ́	ž	
	Type 6	Fill Height: Greater than 25 not exceeding 30'		PVC	×	×	×	×	×	×	٧N	×	NA	X	×	×	ΝA	¥	NA	ΝA	Ϋ́	¥	ΑĀ	Ϋ́	¥	ΑĀ	ļο
		Fill Heigh		RCCP	Ϋ́	>	>	>	>	>	>	>	>	>	>	>	>	>	۸	^	2370	2380	2390	2400	2410	2410	ond Course
		than 20' 25'		CPVC	×	×	×	×	×	×	NA	×	NA	×	Ϋ́	Ν	AA	۷ Z	NA	ΑN	Ϋ́	Α̈́	ΑN	Ϋ́	¥	N	Ctorm Denis
	Type 5	Fill Height: Greater than 20' not exceeding 25'		PVC	×	×	×	×	×	×	NA	×	NA	×	×	×	NA	¥	NA	ΑN	¥	Ϋ́	Ν	Ϋ́	¥	NA	ı
		Fill Height		RCCP	NA	≥	≥	2	≥	^	^	≥	2	2	≥	^	2	≥	2	>	2020	2020	2030	2040	2050	2060	Pointage Congress
FÖ		Nominal Diameter	Ë		10	12	15	18	21	24	27	30	33	36	42	48	54	09	99	72	78	84	06	96	102	108	projeiro

RCCP PVC CPVC NA NA Note

Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
Polyvinyl Chloride Pipe
Corrugated Polyvinyl Chloride Pipe
Extra Strength Clay Pipe
This material may be used for the given pipe diameter and fill height.
This material is Not Acceptable for the given pipe diameter and fill height.
RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the D-load to produce a 0.01 in crack.

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STORM SEWERS (metric) KIND OF MATERIAL PERMITTED AND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE	7.5	reater than	, ding 35°	CPVC	×	×	×	×	×	×	NA	×	ΑN	×	ΑN	¥	ΑN	ΑN	NA	۷N	NA	NA	۷N	NA	ΑN	AN
	Type 7	Fill Height: Greater than	30' not exceeding 35'	RCCP	ΝΑ	>	>	>	>	>	^	>	>	>	>	>	>	>	>	>	130	130	130	130	130	130
		er than	30'	CPVC	×	×	×	×	×	×	NA	×	Α	×	¥	¥	Ϋ́	Š	NA	AN	Ą	NA	AN	Ą	¥	Ϋ́
	Type 6	Fill Height: Greater than	25' not exceeding 30'	PVC	×	×	×	×	×	×	ΥN	×	NA.	×	×	×	NA N	Ϋ́	NA	NA	Ϋ́	NA	NA	ΑN	Ą	ΝA
		Fill Hei	not	RCCP	NA	>	>	>	>	>	^	>	^	>	>	>	>	>	>	>	110	110	110	120	120	120
		er than	25'	CPVC	×	×	×	×	×	×	ΑN	×	ΑN	×	¥	Ϋ́	ΑÑ	ž	- VA	ΑN	ž	 V	ΑN	Š	ξ	Š
	Type 5	Fill Height: Greater than	20' not exceeding 25'	PVC	×	×	×	×	×	×	NA	×	NA	×	×	×	Ϋ́	ž	ž	ΝĀ	ž	ž	٧N	ž	ž	ž
		Fill Heig	not e	RCCP	ΑN	2	2	2	≥	2	2	2	2	2	2	2	2	≥	2	^	100	100	100	100	100	100
FO		Nominal	Diameter in.		250	300	375	450	525	009	675	750	825	006	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700

RCCP PVC CPVC ESCP NA Note

Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
Polyvinyl Chloride Pipe
Cortogated Polyvinyl Chloride Pipe
Extra Strength Clay Pipe
This material may be used for the given pipe diameter and fill height.
This material is Not Acceptable for the given pipe diameter and fill height.
RCCP with a number instead of a Roman numeral shall be furnished according to AASHTO M170 Section 6. This number represents the metric D-load to produce a 25.4 micro-meter crack.

Revise the sixth paragraph of Article 550.06 of the Standard Specifications to read:

"PVC, PE and CPP pipes shall be joined according to the manufacturer's specifications."

Revise the first and second paragraphs of Article 550.08 of the Standard Specifications to read:

"550.08 Deflection Testing for Storm Sewers. All PVC, PE, and CPP storm sewers shall be tested for deflection not less than 30 days after the pipe is installed and the backfill compacted. The testing shall be performed in the presence of the Engineer.

For PVC, PE, and CPP storm sewers with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC, PE, and CPP storm sewers with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel shall be used."

Revise the fifth paragraph of Article 550.08 to read as follows.

"The outside diameter of the mandrel shall be 95 percent of the base inside diameter. For all PVC pipe the base inside diameter shall be defined using ASTM D 3034 methodology. For all PE and CPP pipe, the base inside diameter shall be defined as the average inside diameter based on the minimum and maximum tolerances specified in the corresponding ASTM or AASHTO material specifications."

Revise the first paragraph of Article 1040.03 of the Standard Specifications to read:

"1040.03 Polyvinyl Chloride (PVC) Pipe. Acceptance testing of PVC pipe and fittings shall be accomplished during the same construction season in which they are installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements."

Delete Articles 1040.03(e) and (f) of the Standard Specifications.

Revise Articles 1040.04(c) and (d) of the Standard Specifications to read:

- "(c) PE Profile Wall Pipe for Insertion Lining. The pipe shall be according to ASTM F 894. When used for insertion lining of pipe culverts, the pipe liner shall have a minimum pipe stiffness of 46 psi (317 kPa) at five percent deflection for nominal inside diameters of 42 in. (1050 mm) or less. For nominal inside diameters of greater than 42 in. (1050 mm), the pipe liner shall have a minimum pipe stiffness of 32.5 psi (225 kPa) at five percent deflection. All sizes shall have wall construction that presents essentially smooth internal and external surfaces.
- (d) PE Pipe with a Smooth Interior. The pipe shall be according to ASTM F 714 (DR 32.5) with a minimum cell classification of PE 335434 as defined in ASTM D 3350. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written

certification that the material meets those properties and the resin used to manufacture the pipe meets or exceeds the minimum cell classification requirements."

Add the following to Section 1040 of the Standard Specifications:

"1040.08 Polypropylene (PP) Pipe. Storage and handling shall be according to the manufacturer's recommendations, except in no case shall the pipe be exposed to direct sunlight for more than six months. Acceptance testing of the pipe shall be accomplished during the same construction season in which it is installed. The section properties shall be according to the manufacturer pre-submitted geometric properties on file with the Department. The manufacturer shall submit written certification that the material meets those properties. The pipe shall meet the following additional requirements.

- (a) Corrugated PP Pipe with a Smooth Interior. The pipe shall be according to AAHSTO M 330 (nominal size 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type S or D.
- (b) Perforated Corrugated PP Pipe with A Smooth Interior. The pipe shall be according to AASHTO M 330 (nominal size – 12 to 60 in. (300 to 1500 mm)). The pipe shall be Type SP. In addition, the top centerline of the pipe shall be marked so that it is readily visible from the top of the trench before backfilling, and the upper ends of the slot perforations shall be a minimum of ten degrees below the horizontal."

## **PAVEMENT PATCHING (BDE)**

Effective: January 1, 2010

Revise the first sentence of the second paragraph of Article 701.17(e)(1) of the Standard Specifications to read:

"In addition to the traffic control and protection shown elsewhere in the contract for pavement, two devices shall be placed immediately in front of each open patch, open hole, and broken pavement where temporary concrete barriers are not used to separate traffic from the work area."

## PAYROLLS AND PAYROLL RECORDS (BDE)

Effective: January 1, 2014

<u>FEDERAL AID CONTRACTS</u>. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

#### "STATEMENTS AND PAYROLLS

The payroll records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable.

The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form."

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

## "IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

- 1. Prevailing Wages. All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
- 2. Payroll Records. The Contractor and each subcontractor shall make and keep, for a period of five years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll

records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, the worker's starting and ending times of work each day. However, any contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable at a location within the State, during reasonable hours, for inspection by the Department or the Department of Labor; and Federal, State, or local law enforcement agencies and prosecutors.

3. Submission of Payroll Records. The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

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

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

## PORTLAND CEMENT CONCRETE EQUIPMENT (BDE)

Effective: November 1, 2013

Add the following to the first paragraph of Article 1103.03(a)(5) of the Standard Specifications to read:

"As an alternative to a locking key, the start and finish time for mixing may be automatically printed on the batch ticket. The start and finish time shall be reported to the nearest second."

## PROGRESS PAYMENTS (BDE)

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

"(a) Progress Payments. At least once each month, the Engineer will make a written estimate of the quantity 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.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

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."

## QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012 Revised: January 1, 2014

Revise Note 7/ of Schedule B of Recurring Special Provision Check Sheet #31 of the Standard Specifications to read:

7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of two 6 x 12 in. (150 x 300 mm) cylinder breaks, three 4 x 8 in. (100 x 200 mm) cylinder breaks, or two beam breaks for field tests. Per Illinois Modified AASHTO T 23, cylinders shall be 6 x 12 in. (150 x 300 mm) when the nominal maximum size of the coarse aggregate exceeds 1 in. (25 mm).

## REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2012 Revised: November 2, 2012

Revise Article 669.01 of the Standard Specifications to read:

"669.01 Description. This work shall consist of the transportation and proper disposal of contaminated soil and water. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities."

Revise Article 669.08 of the Standard Specifications to read:

"669.08 Contaminated Soil and/or Groundwater Monitoring. The Contractor shall hire a qualified environmental firm to monitor the area containing the regulated substances. The affected area shall be monitored with a photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID). Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. No excavated soils can be taken to a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation with detectable PID or FID meter readings that are above background. The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily. All testing shall be done by a qualified engineer/technician. Such testing and monitoring shall be included in the work. The Contractor shall identify the exact limits of removal of non-special waste, special waste, or hazardous waste. All limits shall be approved by the Engineer prior to excavation. The Contractor shall take all necessary precautions.

Based upon the land use history of the subject property and/or PID or FID readings indicating contamination, a soil or groundwater sample shall be taken from the same location and submitted to an approved laboratory. Soil or groundwater samples shall be analyzed for the contaminants of concern, including pH, based on the property's land use history or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605. The analytical results shall serve to document the level of soil contamination. Soil and groundwater samples may be required at the discretion of the Engineer to verify the level of soil and groundwater contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, location and elevation, and any other observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 and "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective."

Replace the first two paragraphs of Article 669.09 of the Standard Specifications with the following:

"669.09 Contaminated Soil and/or Groundwater Management and Disposal. The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
  - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. Such soil excavated for storm sewers can be placed back into the excavated trench as backfill, when suitable, unless trench backfill is specified. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
  - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County provided the pH of the soil is within the range of 6.25 9.0, inclusive.
  - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 9.0, inclusive.

- (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
- (5) When the Engineer determines soil cannot be managed according to Articles 669.09(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC but the pH of the soil is less than 6.25 or greater than 9.0, the excavated soil can be utilized within the construction limits or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation.
- (c) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste.

All groundwater encountered within lateral trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than 10 <sup>-7</sup> cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer."

Revise Article 669.14 of the Standard Specifications to read:

"669.14 Final Environmental Construction Report. At the end of the project, the Contractor will prepare and submit three copies of the Environmental Construction Report on the activities conducted during the life of the project, one copy shall be submitted to the Resident Engineer, one copy shall be submitted to the District's Environmental Studies Unit, and one copy shall be submitted with an electronic copy in Adode.pdf format to the Geologic

and Waste Assessment Unit, Bureau of Design and Environment, IDOT, 2300 South Dirksen Parkway, Springfield, Illinois 62764. The technical report shall include all pertinent information regarding the project including, but not limited to:

- (a) Measures taken to identify, monitor, handle, and dispose of soil or groundwater containing regulated substances, to prevent further migration of regulated substances, and to protect workers,
- (b) Cost of identifying, monitoring, handling, and disposing of soil or groundwater containing regulated substances, the cost of preventing further migration of regulated substances, and the cost for worker protection from the regulated substances. All cost should be in the format of the contract pay items listed in the contract plans (identified by the preliminary environmental site investigation (PESA) site number),
- (c) Plan sheets showing the areas containing the regulated substances,
- (d) Field sampling and testing results used to identify the nature and extent of the regulated substances,
- (e) Waste manifests (identified by the preliminary environmental site investigation (PESA) site number) for special or hazardous waste disposal, and
- (f) Landfill tickets (identified by the preliminary environmental site investigation (PESA) site number) for non-special waste disposal."

Revise the second paragraph of Article 669.16 of the Standard Specifications to read:

"The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL."

## REMOVAL AND DISPOSAL OF SURPLUS MATERIALS (BDE)

Effective: November 2, 2012

Revise the first four paragraphs of Article 202.03 of the Standard Specifications to read:

"202.03 Removal and Disposal of Surplus, Unstable, Unsuitable, and Organic Materials. Suitable excavated materials shall not be wasted without permission of the Engineer. The Contractor shall dispose of all surplus, unstable, unsuitable, and organic materials, in such a manner that public or private property will not be damaged or endangered.

Suitable earth, stones and boulders naturally occurring within the right-of-way may be placed in fills or embankments in lifts and compacted according to Section 205. Broken concrete without protruding metal bars, bricks, rock, stone, reclaimed asphalt pavement with no expansive aggregate, or uncontaminated dirt and sand generated from construction or demolition activities may be used in embankment or in fill. If used in fills or embankments, these materials shall be placed and compacted to the satisfaction of the Engineer; shall be buried under a minimum of 2 ft (600 mm) of earth cover (except when the materials include only uncontaminated dirt); and shall not create an unsightly appearance or detract from the natural topographic features of an area. Broken concrete without protruding metal bars, bricks, rock, or stone may be used as riprap as approved by the Engineer. If the materials are used for fill in locations within the right-of-way but outside project construction limits, the Contractor must specify to the Engineer, in writing, how the landscape restoration of the fill areas will be accomplished. Placement of fill in such areas shall not commence until the Contractor's landscape restoration plan is approved by the Engineer.

Aside from the materials listed above, all other construction and demolition debris or waste shall be disposed of in a licensed landfill, recycled, reused, or otherwise disposed of as allowed by State or Federal laws and regulations. When the Contractor chooses to dispose of uncontaminated soil at a clean construction and demolition debris (CCDD) facility or at an uncontaminated soil fill operation, it shall be the Contractor's responsibility to have the pH of the material tested to ensure the value is between 6.25 and 9.0, inclusive. A copy of the pH test results shall be provided to the Engineer.

A permit shall be obtained from IEPA and made available to the Engineer prior to open burning of organic materials (i.e., plant refuse resulting from pruning or removal of trees or shrubs) or other construction or demolition debris. Organic materials originating within the right-of-way limits may be chipped or shredded and placed as mulch around landscape plantings within the right-of-way when approved by the Engineer. Chipped or shredded material to be placed as mulch shall not exceed a depth of 6 in. (150 mm)."

## TRACKING THE USE OF PESTICIDES (BDE)

Effective: August 1, 2012

Add the following paragraph after the first paragraph of Article 107.23 of the Standard Specifications:

"Within 48 hours of the application of pesticides, including but not limited to herbicides, insecticides, algaecides, and fungicides, the Contractor shall complete and return to the Engineer, Operations form "OPER 2720"."

**TRAINING SPECIAL PROVISIONS (BDE)** This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 2. In the event the contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather then clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

## WARM MIX ASPHALT (BDE)

Effective: January 1, 2012 Revised: November 1, 2013

<u>Description</u>. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

## Materials.

Add the following to Article 1030.02 of the Standard Specifications.

"(h) Warm Mix Asphalt (WMA) Technologies (Note 3)"

Add the following note to Article 1030.02 of the Standard Specifications.

"Note 3. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, "Warm-Mix Asphalt Technologies"."

## Equipment.

Revise the first paragraph of Article 1102.01 of the Standard Specifications to read;

"1102.01 Hot-Mix Asphalt Plant. The hot-mix asphalt (HMA) plant shall be the batch-type, continuous-type, or dryer drum plant. The plants shall be evaluated for prequalification rating and approval to produce HMA according to the current Bureau of Materials and Physical Research Policy Memorandum, "Approval of Hot-Mix Asphalt Plants and Equipment". Once approved, the Contractor shall notify the Bureau of Materials and Physical Research to obtain approval of all plant modifications. The plants shall not be used to produce mixtures concurrently for more than one project or for private work unless permission is granted in writing

by the Engineer. The plant units shall be so designed, coordinated and operated that they will function properly and produce HMA having uniform temperatures and compositions within the tolerances specified. The plant units shall meet the following requirements."

Add the following to Article 1102.01(a) of the Standard Specifications.

- "(13) Equipment for Warm Mix Technologies.
  - a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of ± 2 percent of the actual water metered. The foaming control system shall be electronically interfaced with the asphalt binder meter.
  - b. Additives. Additives shall be introduced into the plant according to the supplier's recommendations and shall be approved by the Engineer. The system for introducing the WMA additive shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes."

## Mix Design Verification.

Add the following to Article 1030.04 of the Standard Specifications.

- "(e) Warm Mix Technologies.
  - (1) Foaming. WMA mix design verification will not be required when foaming technology is used alone (without WMA additives). However, the foaming technology shall only be used on HMA designs previously approved by the Department.
  - (2) Additives. WMA mix designs utilizing additives shall be submitted to the Engineer for mix design verification.

## Production.

Revise the second paragraph of Article 1030.06(a) of the Standard Specifications to read:

"At the start of mix production for HMA, WMA, and HMA using WMA technologies, QC/QA mixture start-up will be required for the following situations; at the beginning of production of a new mixture design, at the beginning of each production season, and at every plant utilized to produce mixtures, regardless of the mix."

## Quality Control/Quality Assurance Testing.

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

	Frequency of Tests	Frequency of Tests	Test Method
Parameter	High ESAL Mixture	All Other Mixtures	See Manual of Test Procedures
A	Low ESAL Mixture		for Materials
Aggregate Gradation	1 washed ignition oven test on the mix per half day of production	1 washed ignition oven test on the mix per day of production	Illinois Procedure
% passing sieves: 1/2 in. (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), No. 30 (600 μm) No. 200 (75 μm)	Note 4.	Note 4.	
Note 1.			
Asphalt Binder			
Content by Ignition Oven	1 per half day of production	1 per day	Illinois-Modified AASHTO T 308
Note 2.			
VMA	Day's production ≥ 1200 tons:	N/A	Illinois-Modified AASHTO R 35
Note 3.	2 1200 tons.		AMSHIOR 35
	1 per half day of production		
	Day's production < 1200 tons:		
	1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		
Air Voids	Day's production		
	≥ 1200 tons:		
Bulk Specific Gravity of Gyratory Sample	1 per half day of production	1 per day	Illinois-Modified AASHTO T 312
Note 5.	Day's production < 1200 tons:		
	1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		
Maximum Specific Gravity of Mixture	Day's production ≥ 1200 tons:	1 per day	Illinois-Modified AASHTO T 209
	1 per half day of production		
	Day's production < 1200 tons:		-
	1 per half day of production for first 2 days and 1 per		

	Frequency of Tests	Frequency of Tests	Test Method
Parameter	High ESAL Mixture Low ESAL Mixture	All Other Mixtures	See Manual of Test Procedures for Materials
	day thereafter (first sample of the day)		

Note 1. The No. 8 (2.36 mm) and No. 30 (600  $\mu$ m) sieves are not required for All Other Mixtures.

Note 2. The Engineer may waive the ignition oven requirement for asphalt binder content if the aggregates to be used are known to have ignition asphalt binder content calibration factors which exceed 1.5 percent. If the ignition oven requirement is waived, other Department approved methods shall be used to determine the asphalt binder content.

Note 3. The  $G_{sb}$  used in the voids in the mineral aggregate (VMA) calculation shall be the same average  $G_{sb}$  value listed in the mix design.

Note 4. The Engineer reserves the right to require additional hot bin gradations for batch

Note 5. The WMA compaction temperature for mixture volumetric testing shall be 270  $\pm$  5 °F (132  $\pm$  3 °C) for quality control testing. The WMA compaction temperature for quality assurance testing will be 270  $\pm$  5 °F (132  $\pm$  3 °C) if the mixture is not allowed to cool to room temperature. If the mixture is allowed to cool to room temperature it shall be reheated to standard HMA compaction temperatures."

## Construction Requirements.

Revise the second paragraph of Article 406.06(b)(1) of the Standard Specifications to read:

"The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C). WMA shall be delivered at a minimum temperature of 215 °F (102 °C)."

## Basis of Payment.

This work will be paid at the contract unit price bid for the HMA pay items involved. Anti-strip will not be paid for separately, but shall be considered as included in the cost of the work.

## WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

The Contractor shall provide a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used on the jobsite; or used for the delivery and/or removal of equipment/material to and from the jobsite. The jobsite shall also include offsite locations, such as plant sites or storage sites, when those locations are used solely for this contract.

The report shall be submitted on the form provided by the Department within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur. The report shall be submitted to the Engineer and a copy shall be provided to the district EEO Officer.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

# REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

#### **ATTACHMENTS**

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

#### I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

- 2. Subject to the applicability criteria noted in the following sections, 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.
- 3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
- 4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

#### II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

- 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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.
- b. The contractor will accept as its 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, pre-apprenticeship, and/or onthe-job training."
- 2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.
- 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 minorities and women 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 employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.
- c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 its 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 their avenues of appeal.

#### 6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
- 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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
- 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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
- b. The contractor will use good faith 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 contracting agency 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 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 qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

- 8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
- 9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
- a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
- b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

#### 10. Assurance Required by 49 CFR 26.13(b):

- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
- b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.
- 11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.
  - a. The records kept by the contractor shall document the following:
- (1) The number and work hours of minority and nonminority 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; and
  - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;
- b. The contractors and subcontractors will submit an annual report to the contracting agency 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. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

## III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color,

religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

#### IV. Davis-Bacon and Related Act Provisions

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages

a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, 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 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) 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.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The classification is utilized in the area by the construction industry; and
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.
- (3) In the event the contractor, the laborers or mechanics to be employed in the 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 questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour 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.
- (4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs 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.

### 2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, 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 contracting agency 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.

#### 3. Payrolls and basic records

- a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose Wage and Hour Division Web http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..
- (2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
  - (i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
  - (ii) That each 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 Regulations, 29 CFR part 3;

- (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (3) 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 3.b.(2) of this section.
- (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

### 4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker 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 on 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 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's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.
  - d. 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.

- **5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- **6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- **7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for

debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

- **8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- **9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

### 10. Certification of eligibility.

- a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

#### V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

- 1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- 2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.
- 3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

#### VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

- 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 contracting agency. 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 635.116).
- a. The term "perform work with its own organization" refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:
- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
  - (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
- 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 or propose 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 VI 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 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 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 contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
- 5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

#### **VII. SAFETY: ACCIDENT PREVENTION**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

- 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 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. 3704).
- 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.3704).

### **VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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, Form FHWA-1022 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:

### 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 under this title or imprisoned not more than 5 years or both."

# IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

- 1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
- 2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

# X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more — as defined in 2 CFR Parts 180 and 1200.

## 1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded,"

as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

- f. The prospective first 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 entering into this transaction.
- g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- 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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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# 2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
- (2) Have not within a three-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;
- (3) 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 (a)(2) of this certification; and

- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- b. Where the prospective 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 Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- 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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- 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 exceeding the \$25,000 threshold.
- 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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.
- 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 dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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# Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

- 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 participating in covered transactions by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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# XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is 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 its bid or proposal that the participant 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 shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

#### NOTICE

The most current **General Wage Determination Decisions** (wage rates) are available on the IDOT web site. They are located on the Letting and Bidding page at <a href="http://www.dot.state.il.us/desenv/delett.html">http://www.dot.state.il.us/desenv/delett.html</a>.

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 <a href="http://www.dot.state.il.us/desenv/subsc.html">http://www.dot.state.il.us/desenv/subsc.html</a>.

If you have any questions concerning the wage rates, please contact IDOT's Chief Contract Official at 217-782-7806.