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 or Not for 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 http://www.idot.illinois.gov/doing-business/procurements/construction-services/construction-bulletins/transportation-bulletins/transportation-bulletin 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 DOT.D&Econtracts@illlinois.gov

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

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 sure 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, <u>do not</u> 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. 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 <u>signature and date must be original</u> 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.

Page 20 (Workforce Projection) – Be sure to include the Duration of the Project. It is acceptable to use the phrase "Per Contract Specifications".

□ **Proposal Bid Bond** – (Insert after the proposal signature page) Submit your proposal Proposal Bid Bond (if applicable) using the current Proposal Bid Bond form provided in the proposal package. The Power of Attorney page should be stapled to the Proposal Bid Bond. If you are using an electronic bond, include your bid bond number on the Proposal Bid Bond and attach the Proof of Insurance printed from the Surety's Web Site.

Disadvantaged Business Utilization Plan and/or Good Faith Effort – The last items in your bid should be the DBE Utilization Plan (SBE 2026), followed by the DBE Participation Statement (SBE 2025) and supporting paperwork. If you have 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 Web Site. A link to the stream will be placed on the main page of the current letting on the day of the Letting. The stream will not begin until 10 AM. The actual reading of the bids does not begin until approximately 10:30 AM.

Following the Letting, the As-Read Tabulation of Bids will be posted by the end of the day. You will find the link on the main Web page for the current letting.

QUESTIONS: pre-letting up to execution of the contract

| Contractor pre-qualification | |
|-------------------------------------------------------------|--|
| Small Business, Disadvantaged Business Enterprise (DBE) | |
| Contracts, Bids, Letting process or Internet downloads | |
| Estimates Unit. | |
| Aeronautics | |
| IDNR (Land Reclamation, Water Resources, Natural Resources) | |

QUESTIONS: following contract execution

| Subcontractor documentation, payments | 217-782-3413 |
|---------------------------------------|--------------|
| Railroad Insurance | 217-785-0275 |

Proposal Submitted By

12

Name

Address

City

Letting January 30, 2015

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

Illinois Department of Transportation

Springfield, Illinois 62764

Contract No. 61A78 MCHENRY County Section 13-00012-00-BT (Lakewood) Routes FAU 118 & FAU 3870 (Lake Ave. & Lakewood Rd.) Project M-4003(217) District 1 Construction Funds

PLEASE MARK THE APPROPRIATE BOX BELOW:

A Bid Bond is included.

A Cashier's Check or a Certified Check is included

An Annual Bid Bond is included or is on file with IDOT.

Prepared by

Checked by

(Printed by authority of the State of Illinois)

F

Page intentionally left blank



PROPOSAL

TO THE DEPARTMENT OF TRANSPORTATION

1. Proposal of ______

Taxpayer Identification Number (Mandatory)

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

Contract No. 61A78 MCHENRY County Section 13-00012-00-BT (Lakewood) Project M-4003(217) Routes FAU 118 & FAU 3870 (Lake Ave. & Lakewood Rd.) District 1 Construction Funds

- Project consists of HMA base patching, surface removal, resurfacing, shoulder and base course widening, storm sewers and culverts, driveway replacements, guardrail gutter and curb and gutter, restoration, pavement marking, signage and all other incidental items to complete the work on FAU Route 3870 (Lakewood Road) from Hailgus Road to Ackman Road and on FAU Route 118 (Lake Avenue) from Huntley Road to West Village Limit, in the Village of Lakewood.
- 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:

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

Bank cashier's checks or properly certified checks accompanying 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 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 to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise, the bid bond will become void or the proposal guaranty check will be returned to the undersigned.

Attach Cashier's Check or Certified Check Here

In the event that one proposal guaranty check is intended to cover two or more bid proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual bid proposal. If the guaranty check is placed in another bid 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. **COMBINATION BIDS.** The undersigned bidder further agrees that if awarded the contract for the sections contained in the following combination, he/she will perform the work in accordance with the requirements of each individual contract comprising the combination bid specified in the schedule below, and that the combination bid shall be prorated against each section in proportion to the bid submitted for the same. If an error is found to exist in the gross sum bid for one or more of the individual sections included in a combination, the combination bid shall be corrected as provided in the specifications.

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

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

Schedule of Combination Bids

| Combination | | Combination B | id |
|-------------|----------------------------------|---------------|-------|
| No. | Sections Included in Combination | Dollars | Cents |
| | | | |
| | | | |
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- 7. SCHEDULE OF PRICES. The undersigned bidder submits herewith, in accordance with the rules and instructions, a schedule of prices for the items of work for which bids are sought. The unit prices bid are in U.S. dollars and cents, and all extensions and summations have been made. The bidder understands that the quantities appearing in the bid schedule are approximate and are provided for the purpose of obtaining a gross sum for the comparison of bids. If there is an error in the extension of the unit prices, the unit prices will govern. Payment to the contractor awarded the contract will be made only for actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as provided elsewhere in the contract.
- 8. AUTHORITY TO DO BUSINESS IN ILLINOIS. Section 20-43 of the Illinois Procurement Code (the Code) (30 ILCS 500/20-43) provides that a person (other than an individual acting as a sole proprietor) must be a legal entity authorized to transact business or conduct affairs in the State of Illinois prior to submitting the bid.
- 9. EXECUTION OF CONTRACT: The Department of Transportation will, in accordance with the rules governing Department procurements, execute the contract and shall be the sole entity having the authority to accept performance and make payments under the contract. Execution of the contract by the Chief Procurement Officer (CPO) or the State Purchasing Officer (SPO) is for approval of the procurement process and execution of the contract by the Department. Neither the CPO nor the SPO shall be responsible for administration of the contract or determinations respecting performance or payment there under except as otherwise permitted in the Code.

10. The services of a subcontractor will be used.

Check box Yes Check box No

For known subcontractors with subcontracts with an annual value of more than \$50,000, the contract shall include their name, address, general type of work to be performed, and the dollar allocation for each subcontractor. (30 ILCS 500/20-120)

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4. A BID MAY BE DECLARED UNACCEPTABLE IF NEITHER A UNIT PRICE NOR A TOTAL PRICE IS SHOWN.

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.

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 calendar 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 provide a submission to a vendor portal or 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, not making a submission to a vendor portal, or who withholds a bid or submission to a vendor portal 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. <u>Revolving Door Prohibition</u>

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. <u>Reporting Anticompetitive Practices</u>

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 or submission to a vendor portal 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 and every vendor's submission to a vendor portal 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 Section 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 void if any of the certifications completed pursuant to this Section are false.

E. Section 42 of the Environmental Protection Act

Section 50-14 Environmental Protection Act violations.

The bidder or contractor or subcontractor, respectively, certifies in accordance with Section 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, 5 ILCS 385/3.

Pursuant to the Educational Loan Default Act no State agency shall contract with an individual for goods or services if that individual is in default on an educational loan.

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, 720 ILCS 5/3BE-11.

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

(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.

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 Act.

J. Disclosure of Business Operations in Iran

Section 50-36 of the Code 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, or companies involved in 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 may 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 appropriate statement:

/___/ Company has no business operations in Iran to disclose.

/___/ Company has business operations in Iran as disclosed on 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.**

Additionally, Section 30-22 of the Code requires that the bidder certify that an Illinois office be maintained as the primary place of employment for persons employed for this contract.

NA-FEDERAL_____

The requirements of these certifications and disclosures are a material part of the contract, and the contractor shall require these certification provisions 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 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 committee established to promote the candidacy of the officeholder responsible for making any political contributions to any political committee established to promote the candidacy of the officeholder 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 or any other procurement opportunity 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:

Name and address of person:

All costs, fees, compensation, reimbursements and other remuneration paid to said person:

□ I acknowledge, 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 \$50,000 and all submissions to a vendor portal 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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 individual 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 individual 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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 <u>NOT APPLICABLE STATEMENT</u> on Form A must be signed and dated by an individual 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
- 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 individual 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 an individual that is authorized to execute contracts for your organization. The individual signing can be, but does not have to be, the individual 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 an individual 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 | | |
| City, State, Zip | | |
| Telephone Number | Email Address | Fax Number (if available) |

Disclosure of the information contained in this Form is required by 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 \$50,000, 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. <u>See Disclosure Form Instructions</u>.

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 own | ership/distributable income share | : | |
| stock | sole proprietorship | Partnership | other: (explain on separate sheet): |
| % or \$ value | of ownership/distributable income sh | nare: | |

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 | employr | ment of services. |
|-----|-------------------------------------------------------------------------------|---------|-------------------|
| | | Yes | No |

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

- 1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ____No ___
- 2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor provide the name the State agency for which you are employed and your annual salary.

- 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, are you entitled to receive
 (i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor? Yes ____ No ___
- 4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15% in aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes No ___
- (b) State employment of spouse, father, mother, son, or daughter, including contractual employment for services in the previous 2 years.

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

- 1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ____No ___
- 2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of the spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary.
- 3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 71/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess 100% of the annual salary of the Governor? Yes ____ No ___
- 4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or any minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income from your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?

Yes ___ No ___

Yes No

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

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

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

| (f) Relationship to anyone | holding appointive office | currently or in the | previous 2 years; | spouse, fa | ather, mother, |
|----------------------------|---------------------------|---------------------|-------------------|------------|----------------|
| son, or daughter. | | | Yes _ | No | |

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

- (h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes <u>No</u>
- (i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes No
- (j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.

Yes <u>No</u>

3. Communication Disclosure.

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s):

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 Representative

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 CONTRACTOR listed on the previous page. | | | | | | | | | | |
| | | | | | | | | | | |
| | 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

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

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B must be completed for all bids.

DISCLOSURE OF OTHER CONTRACTS AND PROCUREMENT RELATED INFORMATION

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

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

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

THE FOLLOWING STATEMENT MUST BE CHECKED

| Signature of Authorized Representative | Date |
|----------------------------------------|------|

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership.

Any remaining ownership interest is held by individuals receiving less than \$106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

| 🗌 Yes 🗌 No | □ N/A (Form A disclosure(s) established 100% ownership |) |
|------------|--------------------------------------------------------|---|
|------------|--------------------------------------------------------|---|

SPECIAL NOTICE TO CONTRACTORS

The following requirements of the Illinois Department of Human Rights Act 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 Title 44, Illinois Administrative Code, Section 750.120. 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.



Contract No. 61A78 MCHENRY County Section 13-00012-00-BT (Lakewood) Project M-4003(217) Routes FAU 118 & FAU 3870 (Lake Ave. & Lakewood

Rd.)

PART I. IDENTIFICATION

Dept. of Human Rights # _____

Duration of Project:

District 1 Construction Funds

Name of Bidder:

PART II. WORKFORCE PROJECTION

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

| | | TOT | AL Wo | rkforce | e Projec | tion for | Contra | act | | | | | | (| CURRENT TO BE | | | S |
|---------------------------|----------|-------|---------|---------|----------|----------|--------|------|------|------|--------|--------|---|---|------------------|---|-------|---|
| | | | | MIN | ORITY I | EMPLO | YEES | | | TRA | AINEES | 5 | | | | | RACT | |
| JOB | | TAL | | | | | *OT | HER | APPI | REN- | ON T | HE JOB | | | DTAL | | MINC | |
| CATEGORIES | | OYEES | | ACK | HISP | | MIN | | TIC | | | INEES | | | OYEES | | EMPLO | |
| | М | F | М | F | М | F | М | F | М | F | М | F | - | М | F | - | М | F |
| OFFICIALS (MANAGERS) | | | | | | | | | | | | | | | | | | |
| SUPERVISORS | | | | | | | | | | | | | | | | | | |
| FOREMEN | | | | | | | | | | | | | | | | | | |
| CLERICAL | | | | | | | | | | | | | | | | | | |
| EQUIPMENT OPERATORS | | | | | | | | | | | | | | | | | | |
| MECHANICS | | | | | | | | | | | | | | | | | | |
| TRUCK DRIVERS | | | | | | | | | | | | | | | | | | |
| IRONWORKERS | | | | | | | | | | | | | | | | | | |
| CARPENTERS | | | | | | | | | | | | | | | | | | |
| CEMENT MASONS | | | | | | | | | | | | | | | | | | |
| ELECTRICIANS | | | | | | | | | | | | | | | | | | |
| PIPEFITTERS, PLUMBERS | | | | | | | | | | | | | | | | | | |
| PAINTERS | | | | | | | | | | | | | | | | | | |
| LABORERS, SEMI-SKILLED | | | | | | | | | | | | | | | | | | |
| LABORERS, UNSKILLED | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | | | | |
| | | BLE C | | | | | | | | | Г | EOE | | | IENT USE | | | |
| | OTAL Tra | | ojectio | n for C | ontract | | | | | | | FUF | | | | | | |
| EMPLOYEES | | TAL | | | | | | THER | | | | | | | | | | |
| IN | | DYEES | | ACK | | ANIC | | NOR. | 4 | | | | | | | | | |
| TRAINING APPRENTICES | M | F | M | F | M | F | M | F | | | | | | | | | | |
| ON THE JOB TRAINEES | | | | | | | | | - | | | | | | | | | |

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

BC 1256 (Rev. 12/11/07)

Note: See instructions on page 2

Contract No. 61A78 MCHENRY County Section 13-00012-00-BT (Lakewood) Project M-4003(217) Routes FAU 118 & FAU 3870 (Lake Ave. & Lakewood Rd.) District 1 Construction Funds

PART II. WORKFORCE PROJECTION - continued

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

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

office or base of operation is located.

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

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

PART III. AFFIRMATIVE ACTION PLAN

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

Company _____

Telephone Number _____

Address

| NOTICE REGARDING SIGNATURE | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Bidder's signature on the Proposal Signature Sheet will constitute the signing of this form. The following signature block needs to be completed only if revisions are required. | |
| Signature: | Title: Date: |
| Instructions: | All tables must include subcontractor personnel in addition to prime contractor personnel. |
| Table A - | Include both the number of employees that would be hired to perform the contract work and the total number currently employed (Table B) that will be allocated to contract work, and include all apprentices and on-the-job trainees. The "Total Employees" column should include all employees including all minorities, apprentices and on-the-job trainees to be employed on the contract work. |
| Table B - | Include all employees currently employed that will be allocated to the contract work including any apprentices and on-the-job trainees currently employed. |
| Table C - | Indicate the racial breakdown of the total apprentices and on-the-job trainees shown in Table A. |

BC-1256 (Rev. 12/11/07)

RETURN WITH BID

ADDITIONAL FEDERAL REQUIREMENTS

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

- A. By the execution of this proposal, the signing bidder certifies that the bidding entity has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This statement made by the undersigned bidder is true and correct under penalty of perjury under the laws of the United States.
- B. <u>CERTIFICATION, EQUAL EMPLOYMENT OPPORTUNITY</u>:
 - 1. Have you participated in any previous contracts or subcontracts subject to the equal opportunity clause. YES _____ NO _____
 - 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. 61A78 MCHENRY County Section 13-00012-00-BT (Lakewood) Project M-4003(217) Routes FAU 118 & FAU 3870 (Lake Ave. & Lakewood Rd.) 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) | Signature of Owner | |
| | Business Address | |
| | | |
| | Firm Name | |
| | | |
| (IF A CO-PARTNERSHIP) | | |
| | | |
| | | Name and Address of All Members of the Firm: |
| - | | |
| | Corporate Name | |
| | Ву | |
| (IF A CORPORATION) | | Signature of Authorized Representative |
| | | Typed or printed name and title of Authorized Representative |
| | Attest | |
| (IF A JOINT VENTURE, USE THIS SECTION FOR THE MANAGING PARTY AND THE | | Signature |
| SECOND PARTY SHOULD SIGN BELOW) | | |
| | Corporate Name | |
| | | |
| (IF A JOINT VENTURE) | _, | Signature of Authorized Representative |
| | | Typed or printed name and title of Authorized Representative |
| | Attest | |
| | | Signature |
| | Business Address | |



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

as SURETY, and held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in the bid proposal under "Proposal Guaranty" in effect on the date of the Invitation for Bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that whereas, the PRINCIPAL may submit bid proposal(s) to the STATE OF ILLINOIS, acting through the Department of Transportation, for various improvements published in the Transportation Bulletin during the effective term indicated above.

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

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

| In TESTIMONY WHEREOF, the said PRINCIPAL has caused this instrument to be signed by its officer day of A.D., . | | In TESTIMONY WHEREOF, th instrument to be signed by its o day of | ne said SURETY has caused this officer A.D., . | |
|----------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------|---------------------------------------------------|--|
| day of | A.D., | day of | ^.U., | |
| (Coi | mpany Name) | (Comp | any Name) | |
| Ву | | Ву | | |
| (S | ignature and Title) | (Signature | of Attorney-in-Fact) | |
| Notary for PRINCIPAL | | Notary for SURETY | | |
| STATE OF | | STATE OF | | |
| Signed and attested before me on (date) | | Signed and attested before me on (date) | | |
| by | | by | | |
| (Name | of Notary Public) | | Notary Public) | |
| | | | | |
| (Seal) | | (Seal) | | |
| | (Signature of Notary Public) | | (Signature of Notary Public) | |
| | (Date Commission Expires) | | (Date Commission Expires) | |

BDE 356A (Rev. 1/21/14)

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

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.



Division of Highways Proposal Bid Bond

Item No.

Letting Date

KNOW ALL PERSONS BY THESE PRESENTS, That We

as PRINCIPAL, and

as SURETY, and held jointly, severally and firmly bound unto the STATE OF ILLINOIS in the penal sum of 5 percent of the total bid price, or for the amount specified in the bid proposal under "Proposal Guaranty" in effect on the date of the Invitation for Bids, whichever is the lesser sum, well and truly to be paid unto said STATE OF ILLINOIS, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

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

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

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

| | EREOF, the said PRINCIPAL has ent to be signed by its officer | In TESTIMONY WHEREOF, the said SURETY has caused this instrument to be signed by its officer | | |
|------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--|--|
| day of | A.D., | day of A.D., | | |
| | (Company Name) | (Company Name) | | |
| Ву | | Ву | | |
| | (Signature and Title) | (Signature of Attorney-in-Fact) | | |
| Notary for PRINCIP | AL | Notary for SURETY | | |
| STATE OF | | STATE OF | | |
| COUNTY OF | | COUNTY OF | | |
| Signed and attested by | before me on (date) | Signed and attested before me on (date) by | | |
| (N | lame of Notary Public) | (Name of Notary Public) | | |
| (Seal) | | (Seal) | | |
| | (Signature of Notary Public) | (Signature of Notary Public) | | |
| | (Date Commission Expires) | (Date Commission Expires) | | |
| proposal the Princip | | d form, the Principal may file an Electronic Bid Bond. By signing the bond has been executed and the Principal and Surety are firmly | | |

bound unto the State of Illinois under the conditions of the bid bond as shown above.

Electronic Bid Bond ID #

Signature and Title



(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

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) Project and Bid Identification

Complete the following information concerning the project and bid:

| Route | Total Bid | | |
|------------------|-------------------|-----------|-----------------|
| Section | Contract DBE Goal | | |
| Project | | (Percent) | (Dollar Amount) |
| County | | | |
| Letting Date | | | |
| Contract No. | | | |
| Letting Item No. | | | |

(4) Assurance

I, acting in my capacity as an officer of the undersigned bidder (or bidders if a joint venture), hereby assure the Department that on this project my company : (check one)

Meets or exceeds contract award goals and has provided documented participation as follows:

Disadvantaged Business Participation _____ percent

Attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

Failed to meet contract award goals and has included good faith effort documentation to meet the goals and that my company has provided participation as follows:

Disadvantaged Business Participation _____ percent

The contract goals should be accordingly modified or waived. Attached is all information required by the Special Provision in support of this request including good faith effort. Also attached are the signed participation statements, forms SBE 2025, required by the Special Provision evidencing availability and use of each business participating in this plan and assuring that each business will perform a commercially useful function in the work of the contract.

| | Company | The "as read" Low Bidder is required to com | ply with the Special Provision. |
|-------|---------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Ву | | Submit only one utilization plan for each pro submitted in accordance with the special pro | |
| Title | | Bureau of Small Business Enterprises 2300 South Dirksen Parkway Springfield, Illinois 62764 | Local Let Projects Submit forms to the Local Agency |
| Date | | | |

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.



DBE Participation Statement

| Subcontractor Registration Number | Letting |
|-----------------------------------|--------------|
| Participation Statement | Item No. |
| (1) Instructions | Contract No. |

This form must be completed for each disadvantaged business participating in the Utilization Plan. This form shall be submitted in accordance with the special provision and will be attached to the Utilization Plan form. If additional space is needed complete an additional form for the firm.

(2) Work:

| Please indicat | ie: J | I/V | Manufacturer | Supplier (60%) | Subcont | ractor | Trucking |
|-----------------|-------|-----|--------------|----------------|----------|------------|----------|
| Pay Item No. | | | Description | | Quantity | Unit Price | Total |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | Total | |

(3) Partial Payment Items (For any of the above items which are partial pay items) Description must be sufficient to determine a Commercially Useful Function, specifically describe the work and subcontract dollar amount:

(4) Commitment

When a DBE is to be a second-tier subcontractor, or if the first-tier DBE subcontractor is going to be subcontracting a portion of its subcontract, it must be clearly indicated on the DBE Participation Statement, and the details of the transaction fully explained.

In the event a DBE subcontractor second-tiers a portion of its subcontract to one or more subcontractors during the work of a contract, the prime must submit a DBE Participation Statement, with the details of the transaction(s) fully explained.

The undersigned certify that the information included herein is true and correct, and that the DBE firm listed below has agreed to perform a commercially useful function in the work of the contract item(s) listed above and to execute a contract with the prime contractor or 1st Tier subcontractor. The undersigned further understand that no changes to this statement may be made without prior approval from the Department's Bureau of Small Business Enterprises and that complete and accurate information regarding actual work performed on this project and the payment therefore must be provided to the Department.

| Signature for Contractor 1 st Tier 2 nd Tier | Signature for DBE Firm1 st Tier2 nd Tier |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Title | Title |
| Date | Date |
| Contact Person | Contact Person |
| Phone | Phone |
| Firm Name | Firm Name |
| Address | Address |
| City/State/Zip | City/State/Zip |
| | Ε |
| The Department of Typese dution is requestion disclosure of information that is reasonable to an | wC |

The Department of Transportation is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under the 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 Management Center.

PROPOSAL ENVELOPE



PROPOSALS

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

| Item No. | Item No. | Item No. |
|----------|----------|----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Submitted By:

| Name: | |
|-----------|--|
| Address: | |
| | |
| | |
| Phone No. | |

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

Engineer of Design and Environment - Room 326 Illinois Department of Transportation 2300 South Dirksen Parkway Springfield, Illinois 62764

NOTICE

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

CONTRACTOR OFFICE COPY OF CONTRACT SPECIFICATIONS

NOTICE

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

Contract No. 61A78 MCHENRY County Section 13-00012-00-BT (Lakewood) Project M-4003(217) Routes FAU 118 & FAU 3870 (Lake Ave. & Lakewood Rd.) 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. Debt Delinguency

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 or 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.

The undersigned, on behalf of the subcontracting company, has read and understands the above certifications and makes the certifications as required by law.

 Name of Subcontracting Company

 Authorized Officer
 Date

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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 individual 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 individual 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. Disclosure Form Instructions

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 100 shareholders, it may submit the information that Federal 10K companies are required to report, and list the names of any individual 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 <u>NOT APPLICABLE STATEMENT</u> on the second page of Form A must be signed and dated by an individual 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 per individual per subcontract 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 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 an individual that is authorized to execute contracts for your organization. The individual signing can be, but does not have to be, the individual 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 an individual 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</u> <u>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 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.

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)

| FOR INDIVIDUAL | (type or print information) | | |
|------------------|--------------------------------------|-------------|-------------------------------------|
| NAME: | | | |
| ADDRESS | | | |
| | | | |
| Type of owne | ership/distributable income share | : | |
| stock | sole proprietorship | Partnership | other: (explain on separate sheet): |
| % or \$ value of | of ownership/distributable income sh | nare: | |

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

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

Yes No

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

- 1. Are you currently an officer or employee of either the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ____No ___
- 2. Are you currently appointed to or employed by any agency of the State of Illinois? If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 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 State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive
(i) more than 7 1/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of 100% of the annual salary of the Governor?

Yes No

- 4. If you are currently appointed to or employed by any agency of the State of Illinois, and your annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor? Yes No
- (b) State employment of spouse, father, mother, son, or daughter, including contractual employment services in the previous 2 years.

Yes <u>No</u>

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

- 1. Is your spouse or any minor children currently an officer or employee of the Capitol Development Board or the Illinois State Toll Highway Authority? Yes ____No ___
- 2. Is your spouse or any minor children currently appointed to or employed by any agency of the State of Illinois? If your spouse or minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, provide the name of your spouse and/or minor children, the name of the State agency for which he/she is employed and his/her annual salary.
- 3. If your spouse or any minor children is/are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you entitled to receive (i) more than 71/2% of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of of 100% of the annual salary of the Governor? Yes No ___
- 4. If your spouse or any minor children are currently appointed to or employed by any agency of the State of Illinois, and his/her annual salary exceeds 60% of the annual salary of the Governor, are you and your spouse or minor children entitled to receive (i) more than 15% in the aggregate of the total distributable income of your firm, partnership, association or corporation, or (ii) an amount in excess of two times the salary of the Governor?

Yes <u>No</u>

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

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

- (e) Appointive office; the holding of any appointive government office of the State of Illinois, the United States of America, or any unit of local government authorized by the Constitution of the State of Illinois or the statutes of the State of Illinois, which office entitles the holder to compensation in excess of the expenses incurred in the discharge of that office currently or in the previous 3 years. Yes ____No ___
- (f) Relationship to anyone holding appointive office currently or in the previous 2 years; spouse, father, mother, son, or daughter. Yes <u>No</u>
- (g) Employment, currently or in the previous 3 years, as or by any registered lobbyist of the State government. Yes ____No ___

- (h) Relationship to anyone who is or was a registered lobbyist in the previous 2 years; spouse, father, mother, son, or daughter. Yes <u>No</u>
- (i) Compensated employment, currently or in the previous 3 years, by any registered election or reelection committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections. Yes ____No ___
- (j) Relationship to anyone; spouse, father, mother, son, or daughter; who was a compensated employee in the last 2 years by any registered election or re-election committee registered with the Secretary of State or any county clerk of the State of Illinois, or any political action committee registered with either the Secretary of State or the Federal Board of Elections.

Yes <u>No</u>

3 Communication Disclosure.

Disclose the name and address of each lobbyist and other agent of the bidder or offeror who is not identified in Section 2 of this form, who is has communicated, is communicating, or may communicate with any State officer or employee concerning the bid or offer. This disclosure is a continuing obligation and must be promptly supplemented for accuracy throughout the process and throughout the term of the contract. If no person is identified, enter "None" on the line below:

Name and address of person(s): _____

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:

| t |
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| |

ILLINOIS DEPARTMENT OF TRANSPORTATION

Form B Subcontractor: Other Contracts & Financial Related Information Disclosure

| ail Address | Fax Number (if available) |
|-------------|---------------------------|
| 1 | ail Address |

Disclosure of the information contained in this Form is required by Section 50-35 of the Code (30 ILCS 500). This information shall become part of the publicly available contract file. This Form B 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 open-ended contracts.

DISCLOSURE OF OTHER CONTRACTS, SUBCONTRACTS, AND PROCUREMENT RELATED INFORMATION

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 this page.

2. If "Yes" is checked. Identify each such relationship by showing State of Illinois agency name and other descriptive

information such as bid or project number (attach additional pages as necessary). SEE DISCLOSURE FORM INSTRUCTIONS:

THE FOLLOWING STATEMENT MUST BE CHECKED

| Signature of Authorized Officer | Date |
|---------------------------------|------|
| | |

OWNERSHIP CERTIFICATION

Please certify that the following statement is true if the individuals for all submitted Form A disclosures do not total 100% of ownership

Any remaining ownership interest is held by individuals receiving less than \$106,447.20 of the bidding entity's or parent entity's distributive income or holding less than a 5% ownership interest.

| 🗌 Yes | 🗌 No | □ N/A (Form A disclosure(s) established 100% ownership) |
|-------|------|---------------------------------------------------------|
|-------|------|---------------------------------------------------------|

NOTICE TO BIDDERS



- 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 (iCX-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 a.m.January 30, 2015. 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 10:00 a.m.
- 2. DESCRIPTION OF WORK. The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

Contract No. 61A78 MCHENRY County Section 13-00012-00-BT (Lakewood) Project M-4003(217) Routes FAU 118 & FAU 3870 (Lake Ave. & Lakewood Rd.) District 1 Construction Funds

Project consists of HMA base patching, surface removal, resurfacing, shoulder and base course widening, storm sewers and culverts, driveway replacements, guardrail gutter and curb and gutter, restoration, pavement marking, signage and all other incidental items to complete the work on FAU Route 3870 (Lakewood Road) from Hailgus Road to Ackman Road and on FAU Route 118 (Lake Avenue) from Huntley Road to West Village Limit, in the Village of Lakewood.

- **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

Erica J. Borggren, Acting Secretary

CONTRACT 61A78

INDEX FOR SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2015

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 1-1-15)

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| 32 | ^ | Quality Control/Quality Assurance of Concrete Mixtures | |
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| 36 36 | | Preventive Maintenance – Cape Seal | |
| 30 37 | | Preventive Maintenance – Micro-Surfacing | |
| 38 38 | | Preventive Maintenance – Slurry Seal | |
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The following LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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| LR SD13 | | П | Required Cold Milled Surface Texture | Nov. 1, 1987 | Jan. 1, 2007 |
| LR SD406 | | H | RESCINDED | 100.1, 1907 | Jan. 1, 2007 |
| LR 102-2 | | П | Bidding Requirements and Conditions for Contract Proposals | Jan. 1, 2001 | Jan. 1, 2014 |
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| LR 355-1 | | | Bituminous Stabilized Base Course, Road Mix or Traveling | Oct. 1, 1973 | Jan. 1, 2007 |
| | | - | Plant Mix | | , |
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| LR 400-1 | | | Bituminous Treated Earth Surface | Jan. 1, 2007 | Apr. 1, 2012 |
| LR 400-2 | | Ц | Bituminous Surface Plant Mix (Class B) | Jan. 1, 2008 | |
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| LR 400-4 | | Ц | Full-Depth Reclamation (FDR) with Emulsified Asphalt | Apr. 1, 2012 | Jun. 1, 2012 |
| LR 400-5 | | Ц | Cold In-Place Recycling (CIR) With Emulsified Asphalt | Apr. 1, 2012 | Jun. 1, 2012 |
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| LK 403-1 | | | Surface Profile Milling of Existing, Recycled or Reclaimed Flexible Pavement | Apr. 1, 2012 | Jun. 1, 2012 |
| LR 403-2 | | | Bituminous Hot Mix Sand Seal Coat | Aug. 1, 1969 | Jan. 1, 2007 |
| LR 406 | | | Filling HMA Core Holes with Non-shrink Grout | Jan. 1, 2008 | 0an. 1, 2007 |
| LR 420 | | | PCC Pavement (Special) | May 12, 1964 | Jan. 2, 2007 |
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| LR 542 | | | Pipe Culverts, Type (Furnished) | Sep. 1, 1964 | Jan. 1, 2007 |
| LR 663 | | Ц | Calcium Chloride Applied | Jun. 1, 1958 | Jan. 1, 2007 |
| LR 702 | | Ц | Construction and Maintenance Signs | Jan. 1, 2004 | Jun. 1, 2007 |
| LR 1000-1 | | | Cold In-Place Recycling (CIR) and Full Depth Reclamation (FDR) with Emulsified Asphalt Mix Design Procedures | Apr. 1, 2012 | Jun. 1, 2012 |
| LR 1000-2 | | | Cold In-Place Recycling (CIR) and Full Depth Reclamation | June 1, 2012 | |
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| LR 1004 | | Ц | Coarse Aggregate for Bituminous Surface Treatment | Jan. 1, 2002 | Jan. 1, 2007 |
| LR 1030 | | Ц | Growth Curve | Mar. 1, 2008 | Jan. 1, 2010 |
| LR 1032-1 | | Ц | Emulsified Asphalts | Jan. 1, 2007 | Feb. 7, 2008 |
| LR 1102 | | | Road Mix or Traveling Plan Mix Equipment | Jan. 1, 2007 | |

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

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| 80099 | | | Accessible Pedestrian Signals (APS) | April 1, 2003 | Jan. 1, 2012 |
| 80274 | | | Aggregate Subgrade Improvement | April 1, 2003 | Jan. 1, 2014 |
| 80192 | | | Automated Flagger Assistance Device | Jan. 1, 2008 | Jan. 1, 2013 |
| 80173 | | | Bituminous Materials Cost Adjustments | Nov. 2, 2006 | Aug 1 2012 |
| 80241 | | | Bridge Demolition Debris | July 1, 2009 | Aug. 1, 2013 |
| 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 |
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| 50531 | | | Building Removal-Case IV (No Asbestos) | Sept. 1, 1990 | April 1, 2010 |
| * 80310 | | | Coated Galvanized Steel Conduit | Jan. 1, 2013 | Jan. 1, 2015 |
| * 80341 | | | Coilable Nonmetallic Conduit | Aug. 1, 2014 | Jan. 1, 2015 |
| 80198 | | | Completion Date (via calendar days) | April 1, 2008 | Jan. 1, 2015 |
| 80199 | | | Completion Date (via calendar days) Plus Working Days | April 1, 2008 | |
| 80293 | | | Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 | April 1, 2012 | April 1, 2014 |
| 00004 | | | Feet | | April 1, 2014 |
| 80294 | | | Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet | April 1, 2012 | April 1, 2014 |
| 80311 | | | Concrete End Sections for Pipe Culverts | Jan. 1, 2013 | |
| 80334 | 110 | Х | Concrete Gutter, Curb, Median, and Paved Ditch | April 1, 2014 | Aug. 1, 2014 |
| 80277 | | | Concrete Mix Design – Department Provided | Jan. 1, 2012 | Jan. 1, 2014 |
| 80261 | 111 | Х | Construction Air Quality – Diesel Retrofit | June 1, 2010 | Nov. 1, 2014 |
| 80335 | 114 | Х | Contract Claims | April 1, 2014 | |
| * 80029 | 115 | X | Disadvantaged Business Enterprise Participation | Sept. 1, 2000 | Jan. 2, 2015 |
| 80265 | 125 | Х | Friction Aggregate | Jan. 1, 2011 | Nov. 1, 2014 |
| 80229 | | | Fuel Cost Adjustment | April 1, 2009 | July 1, 2009 |
| 80329 | | | Glare Screen | Jan. 1, 2014 | , |
| 80304 | | | Grooving for Recessed Pavement Markings | Nov. 1, 2012 | Aug. 1, 2014 |
| 80246 | 129 | X | 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 | Nov. 1, 2014 |
| | | | Requirements | | |
| 80323 | | | Hot-Mix Asphalt – Mixture Design Verification and Production | Nov. 1, 2013 | Nov. 1, 2014 |
| 80347 | | | Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits – | Nov. 1, 2014 | |
| 000.00 | | | Jobsite Sampling | | |
| 80348 | 131 | X | Hot-Mix Asphalt – Prime Coat | Nov. 1, 2014 | |
| 80315 | | | Insertion Lining of Culverts | Jan. 1, 2013 | Nov. 1, 2013 |
| * 80351 | | | Light Tower | Jan. 1, 2015 | |
| 80336 | 100 | | Longitudinal Joint and Crack Patching | April 1, 2014 | |
| 80324 | 136 | X | LRFD Pipe Culvert Burial Tables | Nov. 1, 2013 | Nov. 1, 2014 |
| 80325 | 156 | Х | LRFD Storm Sewer Burial Tables | Nov. 1, 2013 | Nov. 1, 2014 |
| 80045 | | | Material Transfer Device | June 15, 1999 | Aug. 1, 2014 |
| * 80342 | | | Mechanical Side Tie Bar Inserter | Aug. 1, 2014 | Jan. 1, 2015 |
| 80165 | | | Moisture Cured Urethane Paint System | Nov. 1, 2006 | Jan. 1, 2010 |
| 80337 | ļ | | Paved Shoulder Removal | April 1, 2014 | |
| 80349 | ŀ | | Pavement Marking Blackout Tape | Nov. 1, 2014 | |
| 80298 | 100 | | Pavement Marking Tape Type IV | April 1, 2012 | |
| 80254 | 166 | X | Pavement Patching | Jan. 1, 2010 | |
| * 80352 | 167 | X | Pavement Striping - Symbols | Jan. 1, 2015 | |
| * 80353 | | | Portland Cement Concrete Inlay or Overlay | Jan. 1, 2015 | |
| 80338 | burner dan | | Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching | April 1, 2014 | |

| <u>File</u> <u>Name</u> | Pg. | | Special Provision Title | Effective | <u>Revised</u> |
|----------------------------|-----|------|--------------------------------------------------------|---------------|----------------|
| 80343 | | | Precast Concrete Handhole | Aug. 1, 2014 | |
| 80300 | | | Preformed Plastic Pavement Marking Type D - Inlaid | April 1, 2012 | |
| 80328 | 168 | Х | | Nov. 2, 2013 | |
| 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 |
| | | | Shingles (RAS) | , | , |
| 80350 | 169 | X | Retroreflective Sheeting for Highway Signs | Nov. 1, 2014 | |
| 80327 | | | Reinforcement Bars | Nov. 1, 2013 | |
| 80344 | | | Rigid Metal Conduit | Aug. 1, 2014 | |
| * 80354 | 171 | X | Sidewalk, Corner, or Crosswalk Closure | Jan. 1, 2015 | |
| 80340 | | | Speed Display Trailer | April 2, 2014 | |
| 80127 | | | Steel Cost Adjustment | April 2, 2004 | April 1, 2009 |
| 80317 | | | Surface Testing of Hot-Mix Asphalt Overlays | Jan. 1, 2013 | |
| * 80355 | 170 | | Temporary Concrete Barrier | Jan. 1, 2015 | |
| 80301 | 172 | Х | Tracking the Use of Pesticides | Aug. 1, 2012 | |
| * 80356 | 170 | | Traffic Barrier Terminals Type 6 or 6B | Jan. 1, 2015 | |
| 20338 | 173 | Х | Training Special Provisions | Oct. 15, 1975 | |
| 80318 | ŀ | | Traversable Pipe Grate | Jan. 1, 2013 | April 1, 2014 |
| 80345 | | | Underpass Luminaire | Aug. 1, 2014 | |
| * 80357 | | | Urban Half Road Closure with Mountable Median | Jan. 1, 2015 | |
| 80346 | 170 | ~~~~ | Waterway Obstruction Warning Luminaire | Aug. 1, 2014 | |
| 80288 | 176 | X | Warm Mix Asphalt | Jan. 1, 2012 | Nov. 1, 2014 |
| 80302 | 178 | X | Weekly DBE Trucking Reports | June 2, 2012 | |
| 80289 | 470 | | Wet Reflective Thermoplastic Pavement Marking | Jan. 1, 2012 | |
| 80071 | 179 | Х | Working Days | Jan. 1, 2002 | |

The following special provisions are in the 2015 Supplemental Specifications and Recurring Special Provisions:

| <u>File</u> Name | Special Provision Title | New Location | Effective | Revised |
|---------------------|-------------------------------------------------------------|-------------------------------------------------------------|---------------|---------------|
| 80292 | Coarse Aggregate in Bridge Approach Slabs/Footings | Articles 1004.01(b) and 1004.02(f) | April 1, 2012 | April 1, 2013 |
| 80303 | Granular Materials | Articles 1003.04, 1003.04(c), and 1004.05(c) | Nov. 1, 2012 | |
| 80330 | Pavement Marking for Bike Symbol | Article 780.14 | Jan. 1, 2014 | |
| 80331 | Payrolls and Payroll Records | Recurring CS #1 and #5 | Jan. 1, 2014 | |
| 80332 | Portland Cement Concrete – Curing of Abutments and Piers | Article 1020.13 | Jan. 1, 2014 | |
| 80326 | Portland Cement Concrete Equipment | Article 1103.03(a)(5) | Nov. 1, 2013 | |
| 80281 | Quality Control/Quality Assurance of Concrete Mixtures | Recurring CS #31 | Jan. 1, 2012 | Jan. 1, 2014 |
| 80283 | Removal and Disposal of Regulated Substances | Articles 669.01, 669.08, 669.09, 669.09, 669.14, and 669.16 | Jan. 1, 2012 | Nov. 2, 2012 |
| 80319 | Removal and Disposal of Surplus Materials | Article 202.03 | Nov. 2, 2012 | |
| 80307 | Seeding | Article 250.07 | Nov. 1, 2012 | |
| 80339 | Stabilized Subbase | Article 312.06 | April 1, 2014 | |
| 80333 | Traffic Control Setup and Removal Freeway/Expressway | Articles 701.18(I) and 701.19(a) | Jan. 1, 2014 | |

The following special provisions require additional information from the designer. The additional information needs to be included in a separate document attached to this check sheet. The Project Development and Implementation section will then include the information in the applicable special provision. The Special Provisions are:

- Bridge Demolition Debris
- Building Removal-Case I
 - Building Removal-Case II
- Building Removal-Case III

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- 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

CONTRACT NO: 61A78

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2012, the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of Route: Lakewood Road/Lake Avenue; Section: 13-00012-00-BT; Project: M-4003(217), Job: C-91-393-13; County: McHenry; and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

LOCATION OF PROJECT:

The project is located on Lakewood Road FAU 3870 from Haligus Road to Ackman Road and Lake Avenue FAU 0118 from west village limits 1400' from Briarwood Road to Huntley Road, in the Village of Lakewood, McHenry County, Illinois. The gross and net length of this project is 8,578 feet (1.63 mi).

DESCRIPTION OF WORK:

The work consists of furnishing all labor, materials, equipment, and other incidentals necessary for the completion of hot-mix asphalt base patching; hot-mix asphalt surface removal; hot-mix asphalt resurfacing; hot-mix asphalt shoulders; hot-mix asphalt base course widening; storm sewers and culverts; driveway replacements; guardrail; gutter and curb & gutter; restoration; pavement marking; signage; and other incidental and miscellaneous items of work in accordance with the Plans, Standard Specifications, and these Special Provisions.

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.

CONSTRUCTION DEBRIS:

Effective: October 18, 1999

Add the following to the third paragraph of Article 202.03 of the Standard Specifications:

"The Contractor shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures, and roads that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled or treated. This documentation must be maintained by the Contractor for 3 years."

PUBLIC CONVENIENCE AND SAFETY (DIST 1)

Effective: May 1, 2012 Revised: July 15, 2012

Add the following to the end of the fourth paragraph of Article 107.09:

"If the holiday is on a Saturday or Sunday, and is legally observed on a Friday or Monday, the length of Holiday Period for Monday or Friday shall apply."

Add the following sentence after the Holiday Period table in the fourth paragraph of Article 107.09:

"The Length of Holiday Period for Thanksgiving shall be from 5:00 AM the Wednesday prior to 11:59 PM the Sunday After"

Delete the fifth paragraph of Article 107.09 of the Standard Specifications:

"On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical."

STATUS OF UTILITIES TO BE ADJUSTED:

Effective: January 30, 1987 Revised: January 24, 2013

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

| Name of Utility | Type | Location | Estimated Duration of Time for the Completion of Relocation or Adjustments |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| AT&T Legal Mandate Group 1000 Commerce Dr, 1 st Floor Oakbrook, IL 60523 Hector Garcia 630.573.5450 | Telephone | Various locations along Lakewood Road and Lake Avenue | Minor conflicts will be resolved by AT&T during the winter months |
| Comcast 688 Industrial Drive Elmhurst, Illinois 60126 Pat Goheen (847) 789-0976 | Overhead television cable line sharing ComEd poles and Underground cable | Lakewood Road: Underground cable within east ROW on the northeast and southeast corners of N. Muirfield Dr & Lakewood Rd (Sta. 51+00 and 52+00 RT) | Potential conflict will be resolved by Comcast during construction. |
| | | Underground cable within east ROW just east of Turnberry Trail (Sta. 56+50 RT) | Potential conflict will be resolved by Comcast during construction. |

| | | | ·, ······ |
|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------|
| ComEd 123 Energy Avenue Rockford, Illinois 61109 Noraima Fernandez 815.490.2869 ComEd Ref #: | Overhead power lines and power poles and Underground cable | Lakewood Road: Underground cable under road at Sta. 13+34, 30+44, and 70+60 | No conflicts anticipated. |
| H16441CRY | | Underground cable just outside east ROW from Sta. 13+34 RT to 13+65 RT. | No conflicts anticipated. |
| | | Overhead power lines along the west side from Ackman Road to Sta. 35+00. | No conflicts anticipated. |
| | | Overhead power lines along the east side from Sta. 35+00 to 54+00 | No conflicts anticipated. |
| | | Overhead power lines along the south side from Sta. 54+00 to Haligus Road | No conflicts anticipated. |
| | | Lake Avenue: | |
| | | Overhead power lines along the south side from Sta. 101+00 to 102+83 | No conflicts anticipated. |

| Nicor Gas 1844 Ferry Road | Underground Gas Mains | Lakewood Road: | |
|------------------------------|--------------------------|-----------------------------------------|-----------------------------------------|
| Naperville, Illinois 60563 | Cas Mains | Storm sewer and | Nicor to relocate |
| Connie Lane | | ditch grading in | gas main from Sta. |
| 630.388.2362 | | conflict with gas | 36+50 to 68+50, |
| | | main from Sta. | RT. Schedule |
| EN Engineering | | 36+50 to 53+50, | pending. |
| Phil Doll | | RT | |
| 630.967.6764 | | Ctorms course and | Nilaan ta mata ata |
| Nicor Ref #: | | Storm sewer and ditch grading in | Nicor to relocate gas main from Sta. |
| N9230 | | conflict with gas | 36+50 to 68+50, |
| | | main from Sta. | RT. Schedule |
| EN Engineering #: | | 62+20 to 67+98, | pending. |
| 140002.38 | | RT | 1 5 |
| | | Lake Avenue: | |
| | | | |
| | | Storm sewer and | Nicor to relocate |
| | | gas main potential crossings at Sta. | gas main from Sta. 100+30 to 113+00, |
| | | 101+78, 17' RT, | RT. Schedule |
| | | 107+96, 23' RT, | pending. |
| | | 111+43, 23' RT, | r |
| | | and 112+89, 10' RT | |
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|----------------------------------------|----------------|-------------------|---------------------------|
| Village of Lakewood | 8" Sanitary | Lakewood Road: | |
| 2500 Lake Avenue Lakewood, IL 60014 | Sewer | 01. 45.00 57. | |
| Barry Wikersheim | | Sta. 15+00 RT to | No conflicts |
| 815.459.3156 | | 37+14 RT | anticipated. |
| | | Lake Avenue: | |
| | | | |
| | | Sta. 101+66 RT to | No conflicts |
| | | 108+86 RT | anticipated. |
| | | | |
| | | Sta. 108+86 LT to | No conflicts |
| | | 113+00 LT | anticipated. |
| | | | |
| | | Lakewood Road: | |
| | | | |
| | | Sta. 51+36 RT to | No conflicts |
| | | 55+83 RT | anticipated. |
| | | | |
| | | | |
| | | Lakewood Road: | |
| | 12" Sanitary | Sta. 40+50 RT to | Nie zweflich |
| | Sewer | 43+71 RT | No conflicts anticipated. |
| | | | anticipateu. |
| | | | |
| | | Lakewood Road: | |
| | Unknown size | Sta. 14+19 RT to | No conflicts |
| | Sanitary Sewer | 43+17 RT | anticipated. |
| | | | |
| | | Lakowa ad Daad | |
| | | Lakewood Road: | |
| | 8" Water Main | Sta. 51+80 RT to | No conflicts |
| | | 71+00 RT | anticipated. |
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| | | Lakewood Road: | |
|---------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------|
| | Unknown size Water Main | Sta. 20+81, 28' RT, 25+55, 23' RT, 27+39, 19' RT, 29+25, 24' RT, 55+11, 21' RT | No conflicts anticipated. |
| | Sanitary Sewer structure | Lake Avenue: Sta. 101+66, 26' RT, Sta. 108+83, | To be completed by contractor. |
| | adjustments | 17' RT, Sta. 111+55, 20' RT | |
| | | Lakewood Road: | |
| | Water Main Valve Vault frame adjustments | Sta. 24+35, 30' RT | To be completed by contractor. |
| | | Lakewood Road: | |
| | Water Main Valve Box adjustments | Sta. 43+17, 26' RT, 43+18, 30' RT, 57+52, 19' RT, 59+90, 18' RT, 67+12, 18' RT | To be completed by contractor. |
| City of Crystal Lake 100 West Woodstock St. | | Lake Avenue: | |
| Crystal Lake, IL 60014 Mark Stonikas 815.356.3700 | Water Main | Sta 101+00 RT to 101+50 RT | No conflicts 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.

AGGREGATE SUBGRADE IMPROVEMENT (D-1)

Effective: February 22, 2012 Revised: November 1, 2014

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 | |
| (b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2 and 3) | |

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.

| Grad No. | COA | | GATE SUBGR, ze and Percen | | IONS |
|----------|-----|--------|------------------------------|---------|-------------|
| Glau NO. | 8" | 6" | 4" | 2" | #4 |
| CS 01 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |
| CS 02 | | 100 | 80 ± 10 | 25 ± 15 | |

| | COARSE | EAGGREGAT | E SUBGRADE | GRADATION | IS (Metric) |
|----------|--------|-----------|---------------|-----------|-------------|
| Grad No. | | Sieve Si | ze and Percen | t Passing | |
| | 200 mm | 150 mm | 100 mm | 50 mm | 4.75 mm |
| CS 01 | 100 | 97 ± 3 | 90 ± 10 | 45 ± 25 | 20 ± 20 |
| CS 02 | | 100 | 80 ± 10 | 25 ± 15 | |

(2) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.

VALVE BOXES TO BE ADJUSTED:

This work shall consist of adjusting cast iron water valve boxes which are either the slide or screw type, to the finished pavement grade. Prior to adjustment and during the construction operation, the Contractor shall be responsible for protecting the valve box from damage or from being filled with debris. Should the box be damaged or filled, it shall be repaired or cleaned by the Contractor and no additional compensation shall be made for this work.

Final adjustment of the box shall be made after the binder course has been installed and prior to the installation of the surface course if it is located in the pavement, or final adjustment of the box shall be made prior to completing driveways, pouring sidewalk or restoration of the parkway if it is not located in the pavement. Any excavation around the box necessary to free the upper slide or screw box for adjustment shall be backfilled with sand and thoroughly tamped. If located in the pavement after adjusting to final grade, the space around the box for the full depth of base and binder course thickness shall be filled with Class SI or Class PP concrete.

Basis of Payment. This work will be paid for at the contract unit price each for VALVE BOXES TO BE ADJUSTED

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", and 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.

HIGHWAY STANDARDS: 701001-02, 701006-05, 701011-04, 701301-04, 701311-03, 701501-06, 701701-09, 701901-04

DETAILS:

Traffic Control and Protection for Side Roads, Intersections, and Driveways (TC-10) Typical Applications Raised Reflective Pavement Markers (Snow-Plow Resistant) (TC-11) District One Typical Pavement Markings (TC-13) Arterial Road Information Sign (TC-22)

SPECIAL PROVISIONS (Included in these Special Provisions): Maintenance of Roadways Work Zone Traffic Control (LRS 3) Public Convenience and Safety

HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 3":

This work shall be performed in accordance with Articles 406.02, 406.03, 406.05, 406.06, 406.07, and 406.12 of the Standard Specifications, and the detail shown on the Plans, except as modified herein. This work shall consist of placing HMA Surface Course, Mix "D" N50, to a minimum thickness of 3 inches, or to match the existing HMA thickness, whichever is greater, on a prepared aggregate base course. This work shall include installation of prime coat in accordance with Article 406.05.

<u>Method of Measurement</u>. This work shall be measured for payment in place and the area computed in square yards.

Basis of Payment. This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 3".

HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6":

This work shall be performed in accordance with Articles 406.02, 406.03, 406.05, 406.06, 406.07, and 406.12 of the Standard Specifications, and the detail shown on the Plans, except as modified herein. This work shall consist of placing HMA Binder Course, IL-19.0, N50 to a minimum thickness of 4 inches or to match the existing HMA thickness, whichever is greater, on a prepared aggregate base course. A final lift of HMA Surface Course, Mix "D" N50 to a minimum thickness of 2 inches shall be placed to grade. This work shall include installation of prime coat in accordance with Article 406.05.

<u>Method of Measurement</u>. This work shall be measured for payment in place and the area computed in square yards.

<u>Basis of Payment</u>. This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6", which includes both the surface course and binder course.

DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED:

This work shall be done in accordance with Section 602 of the Standard Specifications except as modified herein.

602.01 Description. Revise this Article to read:

"602.01 Description. This work shall consist of adjusting existing catch basins, manholes, inlets, or valve vaults."

602.02 Materials. Revise Note 3 at the end of this Article to read:

Note 3. Riser rings fabricated from recycled rubber must be used to adjust the frames and grates of drainage and utility structures up to a maximum of 50 mm (2 in.). They shall be installed and sealed underneath the frames according to the manufacturer's specifications.

Recycled rubber products shall consist of no less than 80 percent by weight recycled rubber. The riser shall meet or exceed the following when maintained at $23 \pm 2^{\circ}$ C (73 $\pm 3^{\circ}$ F) for at least 24 hours prior to and during testing.

| Physical Property | Test Standard | Value |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Density | ASTM C 642-90 | 1.10 ± 0.034 g/cu cm (68.63 ± 2.11 lb/cu ft) |
| Durometer Hardness | ASTM D 2240-97 Shore A | 72 ± 6^{1} |
| Compression Deformation under 1000 kPa (145 psi) | ASTM D 575 –Test Method B Test of Specified Force | 9±4% |
| Compression Set | ASTM D 395 – Illinois Modified Test Method B Compression Set under Constant Deflection in Air | $5 \pm 3 \%^2$ |
| Weathering (70 hrs at 70 °C (158 °F)) Hardness retained | ASTM D 573 | 98 %, minimum |
| Freeze/thaw when exposed to deicing chemicals | ASTM C 672-91 | 3 % loss, maximum |

¹Average of three tests over a 28 mm (1.12") diameter sample.

²Samples compressed to 75 percent of initial height.

Recycled rubber adjusting rings shall have no void areas, cracks, or tears, and have no effects due to exposure to ultraviolet light. The actual diameter or length shall not vary more than 3 mm (0.125") from the specified diameter or length. Variations in height are limited to \pm 1.6 mm (0.063") for parts up to 50 mm (2")."

602.11 <u>Furnishing and Placing Castings</u>. Revise the last three sentences of the second paragraph of part (c) of this Article 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 SI

concrete to the elevation of the surface of the base course or binder course. The Class SI concrete shall be cured for a period of 72 hours. HMA materials will not be allowed to backfill around an adjusted casting."

602.16 Basis of Payment. Revise the second paragraph of this Article to read:

"This work shall be paid for at the contract unit price each for DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED, which price shall include the adjustment of existing catch basins, manholes, inlets or valve vaults, resetting the frame and grate or lid, removing and resetting the existing external chimney seal, and excavation and backfilling."

DRYWELL:

This work shall be done in accordance with Section 602 of the Standard Specifications, except as modified herein, and the detail shown in the Plans. The drywell shall be constructed with either 8-inch concrete masonry units in accordance with Article 602.06 with horizontal joints only or precast concrete sections with 1-inch diameter weepholes as shown in the detail in accordance with Article 602.07.

Weepholes shall not be installed in the walls of the structure above the invert of the lowest inlet pipe or the top of drainage stone layer, whichever is lower. Standard manhole sections shall be used above this level. A 36" diameter opening shall be provided centered at the bottom of the drywell to allow drainage to the base layer and allow for fluctuations in the water table.

Excavation for the drywell shall be 30" wider than the outside diameter of the drywell. 24 inches minimum of well-draining, washed bedding material meeting the CA 14 gradation, or a gradation approved by the Engineer, shall be installed at the bottom of the excavation as the bedding layer for the drywell. The area between the drywell walls and the sides of the excavation shall be backfilled with well-draining, washed 1"-3" stone meeting the CA 3 gradation, or a gradation approved by the Engineer, to a level of 12 inches above the top of the existing sand or gravel layer or to the invert of the lowest inlet pipe, whichever is higher.

An engineering fabric shall be installed over the top of washed stone layer. The fabric shall be extended down the sides on the outside of the excavation to 12 inches below the bottom of the existing clay, or poor draining, layer as shown in the detail if necessary.

A precast concentric cone or flat slab top shall be installed at the top of the structure with a Type 1 Frame, Closed Lid at the elevation required on the plans or as determined by the Engineer.

The remaining backfill shall be either trench backfill material if required or excavated material to the top of the existing ground.

The drywell and the surrounding storm sewer and grading shall be constructed in such a manner to minimize the amount of silt and other contaminates from entering the drywell.

<u>Basis of Payment</u>. This work will be paid for at the contract unit price per each for DRYWELL, which includes the cost of frame and lid.

TEMPORARY INFORMATION SIGNING:

Effective: November 13, 1996 Revised: January 1, 2012

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

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

| | Item | | | | | | | <u>Article</u> |
|---|------------|---|--|---|--|---|-----|----------------|
| 1 | ~ · | - | | 4 | | ~ | - 1 | |

| a) | Sign | Base | (Notes | 1 & | 2) | 1090 |
|----|------|------|--------|-----|----|------|
| | ~ ' | | | | | |

b) Sign Face (Note 3) 1091

- c) Sign Legends 1091.02
- d) Sign Supports 1093
- e) Overlay Panels (Note 4) 1090.02
- Note 1: The Contractor may use 5/8-inch (16 mm) instead of 3/4-inch (19 mm) thick plywood.
- Note 2: Type A sheeting can be used on the plywood base.
- Note 3: All sign faces shall be Type A except all orange signs shall meet the requirements in Article 1106.01
- Note 4: The overlay panels shall be 0.08-inch (2 mm) thick.

CONSTRUCTION REQUIREMENTS

Installation. The sign sizes and legend sizes shall be verified by the Contractor prior to fabrication.

Signs which are placed along the roadway and/or within the construction zone shall be installed according to the requirements of Article 701.14 and Article 720.04. The signs shall be 7 ft (2.1 m) above the near edge of the pavement and shall be a minimum of 2 ft (600 mm) beyond the edge of the paved shoulder. A minimum of two (2) posts shall be used.

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

Signs which are placed on overhead bridge structures shall be fastened to the handrail with stainless steel bands. These signs shall rest on the concrete parapet where possible. The Contractor shall furnish mounting details for approval by the Engineer.

<u>Method of Measurement</u>. This work shall be measured for payment in square feet (square meters) edge to edge (horizontally and vertically).

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

<u>Basis of Payment</u>. This work will be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

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 50.

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.

EXPLORATION TRENCH, SPECIAL:

This work shall consist of constructing a trench for the purpose of verifying clearances and locations of existing private and public utilities and storm sewers prior to constructing proposed utilities. The exploration trench shall be constructed at the locations as directed by the Engineer and in accordance with Article 213.02 of the Standard Specifications, except as modified herein.

The depth of the trench shall be variable, but shall be deep enough to locate all potential conflicts. The width of the trench shall be sufficient to allow proper investigation of the entire trench.

<u>Method of Measurement</u>. This work will be measured for payment per lineal foot of actual trench constructed.

Basis of Payment. This work will be paid for at the contract unit price per foot for EXPLORATION TRENCH, SPECIAL, regardless of depth.

PERIMETER EROSION BARRIER, SPECIAL

This work shall be done in accordance with Section 280 of the Standard Specifications, except as modified herein. The length of the barrier shall be long enough to cover the width of the existing curb opening plus a minimum of 1 foot on each side. Logs shall be secured in a manner satisfactory to the Engineer.

<u>Materials</u>. Material used to construct the rolled excelsior log shall meet the requirements of Section 1081.15(f) of the Standard Specifications.

<u>Method of Measurement</u>. This work will be measured for payment in place per lineal foot along the centerline of the log.

Basis of Payment. This work will be paid at the contract unit price per foot for PERIMETER EROSION BARRIER, SPECIAL.

AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS:

This work shall consist of furnishing and placing aggregate for use as temporary access in accordance with section 402 of the Standard Specifications, except as modified herein.

Revise Article 402.10 of the Standard Specifications to read:

"402.10 <u>For Temporary Access</u>. The contractor shall construct and maintain aggregate surface course for temporary access to private entrances, commercial entrances and field entrances according to Article 402.07 and as determined by the Engineer.

The aggregate surface course shall be constructed to the dimensions and grades specified below, except as modified by the plans or as determined by the Engineer.

- (a) Private Entrance. The minimum width shall be 12 ft. The minimum compacted thickness shall be 6 in. The maximum grade shall be eight percent, except as required to match the existing grade.
- (b) Commercial Entrance. The minimum width shall be 24 ft. The minimum compacted thickness shall be 9 in. The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Field Entrance. The minimum width shall be 12 ft. The minimum compacted thickness shall be 6 in. The maximum grade shall be eight percent, except as required to match the existing grade.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface coarse for any operation that may disturb or remove the temporary access. The same type and gradation of material used to construct the temporary access shall be used to maintain it.

When use of the temporary access is discontinued, the aggregate shall be removed and utilized in the permanent construction or disposed of according to Article 202.03".

402.12 Method of Measurement. Add the following to this article:

"Aggregate surface Course for temporary access will be measured for payment as each for every private entrance, commercial entrance or field entrance for the purpose of temporary access. If a residential drive, commercial entrance, or filed entrance is to be constructed under multiple stages, the aggregate needed to construct the second or subsequent stages will not be measured for payment but shall be included in the cost per each of the type specified".

402.13 Basis of Payment. Revise the second paragraph of this Article to read:

"Aggregate surface course for temporary access will be paid for at the contract unit price per each for TEMPORARY ACCESS (PRIVATE ENTRANCE), TEMPORARY ACCESS (COMMERCIAL ENTRANCE) or TEMPORARY ACCESS (FIELD ENTRANCE).

Partial payment of the each amount bid for temporary access, of the type specified, will be paid according to the following schedule:

- (a) Upon construction of the temporary access, sixty percent of the contract unit price per each, of the type constructed, will be paid.
- (b) Subject to the approval of the Engineer for the adequate maintenance and removal of the temporary access, the remaining forty percent of the pay item will be paid upon the permanent removal of the temporary access".

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH:

This work shall be performed in accordance with Section 440 of the Standard Specifications except as modified below.

440.04 <u>HMA Surface Removal for Subsequent Resurfacing</u>. Add the following paragraph to the end of this Article:

"This work shall consist of milling the existing HMA surface to a minimum 1 3/4-inch depth and a 7-foot minimum width, so as to provide a smooth butt joint between the proposed and existing HMA surface course. The length of milling shall be such that a bump in the finished surface is not created. The HMA surface to remain shall be saw-cut in a neat, straight line and shall be included in this pay item. This saw-cut shall be a minimum of 7 feet from the edge of pavement unless otherwise specified by the engineer."

440.08 Basis of Payment. Revise this Article to read:

"440.08 Basis of Payment. This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH."

CATCH BASINS, WITH SPECIAL FRAME AND GRATE: INLETS, WITH SPECIAL FRAME, OPEN LID:

This work shall be completed in accordance with Section 602 of the Standard Specifications, except as modified herein.

602.02 Materials. Add the following to the end of this Article:

"Special frames and grates and special frames, open lids shall be heavy duty (4") Neenah R-2595-A, East Jordan Iron Works 1037, or US Foundry 465 cast iron catch basin frame and grate."

602.16 Basis of Payment. Revise this Article to read:

"602.16 Basis of Payment. This work will be paid for at the contract unit price per each for CATCH BASINS, WITH SPECIAL FRAME AND GRATE or INLETS, WITH SPECIAL FRAME, OPEN LID, of the type and diameter specified."

HMA MIXTURE DESIGN REQUIREMENTS (D-1)

Effective: January 1, 2013 Revised: November 1, 2014

1) Design Composition and Volumetric Requirements

Revise the last sentence of the first paragraph of Article 312.05 of the Standard Specifications to read:

"The minimum compacted thickness of each lift shall be according to Article 406.06(d)."

Delete the minimum compacted lift thickness table in Article 312.05 of the Standard Specifications.

Revise the second paragraph of Article 355.02 of the Standard Specifications to read:

"The mixture composition used shall be IL-19.0."

Revise Article 355.05(a) of the Standard Specifications to read:

"(a) The top lift thickness shall be 2 1/4 in. (60 mm) for mixture composition IL-19.0."

Revise the Leveling Binder table and second paragraph of Article 406.05(c) of the Standard Specifications to read:

| "Leveling | Binder |
|------------------------------------------------------------|-----------------------------|
| Nominal, Compacted, Leveling Binder Thickness, in. (mm) | Mixture Composition |
| ≤ 1 1/4 (32) | IL-4.75, IL-9.5, or IL-9.5L |
| > 1 1/4 to 2 (32 to 50) | IL-9.5 or IL-9.5L |

The density requirements of Article 406.07(c) shall apply for leveling binder, machine method, when the nominal compacted thickness is: 3/4 in. (19 mm) or greater for IL-4.75 mixtures; and 1 1/4 in. (32 mm) or greater for IL-9.5 and IL-9.5L mixtures."

 "MINIMUM COMPACTED LIFT THICKNESS

 Mixture Composition
 Thickness, in. (mm)

 IL-4.75
 3/4 (19)

 SMA-9.5, IL-9.5, IL-9.5L
 1 1/2 (38)

 SMA-12.5
 2 (50)

 IL-19.0, IL-19.0L
 2 1/4 (57)"

Revise the table in Article 406.06(d) of the Standard Specifications to read:

Revise the ninth paragraph of Article 406.14 of the Standard Specifications to read: "Test strip mixture will be evaluated at the contract unit price according to the following."

Revise Article 406.14(a) of the Standard Specifications to read:

"(a) If the HMA placed during the initial test strip is determined to be acceptable the mixture will be paid for at the contract unit price."

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 according to the Department's test results, the mixture will not be paid for and shall be removed at the Contractor's expense. An additional test strip shall be constructed and the 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 according to the Department's test results, the mixture shall be removed. Removal will be paid according to Article 109.04. This initial mixture will be paid for at the contract unit price. An additional test strip shall be constructed and the 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."

Delete Article 406.14(d) of the Standard Specifications.

Delete Article 406.14(e) of the Standard Specifications.

Delete the last sentence of Article 407.06(c) of the Standard Specifications.

Revise Note 2. of Article 442.02 of the Standard Specifications to read:

"Note 2. The mixture composition of the HMA used shall be IL-19.0 binder, designed with the same Ndesign as that specified for the mainline pavement."

Delete the second paragraph of Article 482.02 of the Standard Specifications.

Revise the first sentence of the sixth paragraph of Article 482.05 of the Standard Specifications to read:

"When the mainline HMA binder and surface course mixture option is used on resurfacing projects, shoulder resurfacing widths of 6 ft (1.8 m) or less may be placed simultaneously with the adjacent traffic lane for both the binder and surface courses."

Revise the second sentence of the fourth paragraph of Article 601.04 of the Standard Specifications to read:

"The top 5 in. (125 mm) of the trench shall be backfilled with an IL-19.0L Low ESAL mixture meeting the requirements of Section 1030 and compacted to a density of not less than 90 percent of the theoretical density."

Revise the second sentence of the fifth paragraph of Article 601.04 of the Standard Specifications to read:

"The top 8 in. (200 mm) of the trench shall be backfilled with an IL-19.0L Low ESAL mixture meeting the requirements of Section 1030 and compacted to a density of not less than 90 percent of the theoretical density."

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

"(c) Gradation. The fine aggregate gradation for all HMA shall be FA 1, FA 2, FA 20, FA 21, or FA 22. The fine aggregate gradation for SMA shall be FA/FM 20.

For mixture IL-4.75 and surface mixtures with an Ndesign = 90, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag meeting the FA 20 gradation.

For mixture IL-19.0, Ndesign = 90 the fine aggregate fraction shall consist of at least 67 percent manufactured sand meeting FA 20 or FA 22 gradation. For mixture IL-19.0, Ndesign = 50 or 70 the fine aggregate fraction shall consist of at least 50 percent manufactured sand meeting FA 20 or FA 22 gradation. The manufactured sand shall be stone sand, slag sand, steel slag sand, or combinations thereof.

Gradation FA 1, FA 2, or FA 3 shall be used when required for prime coat aggregate application for HMA."

Delete the last sentence of the first paragraph of Article 1004.03(b) of the Standard Specifications.

| "Use | Size/Application | Gradation No. |
|-------------------|----------------------|-----------------------------------|
| Class A-1, 2, & 3 | 3/8 in. (10 mm) Seal | CA 16 |
| Class A-1 | 1/2 in. (13 mm) Seal | CA 15 |
| Class A-2 & 3 | Cover | CA 14 |
| HMA High ESAL | IL-19.0 | CA 11 ^{1/} |
| | IL-9.5 | CA 16, CA 13 ^{3/} |
| HMA Low ESAL | IL-19.0L | CA 11 ^{1/} |
| | IL-9.5L | CA 16 |
| | Stabilized Subbase | |
| | or Shoulders | |
| SMA ^{2/} | 1/2 in. (12.5mm) | CA13 ^{3/} , CA14 or CA16 |
| | Binder & Surface | |
| | IL 9.5 | CA16, CA 13 ^{3/} |
| | Surface | |

Revise the table in Article 1004.03(c) of the Standard Specifications to read:

1/ CA 16 or CA 13 may be blended with the gradations listed.

- 2/ The coarse aggregates used shall be capable of being combined with stone sand, slag sand, or steel slag sand meeting the FA/FM 20 gradation and mineral filler to meet the approved mix design and the mix requirements noted herein.
- 3/ CA 13 shall be 100 percent passing the 1/2 in. (12.5mm) sieve.

Revise Article 1004.03(e) of the Supplemental Specifications to read:

"(e) Absorption. For SMA the coarse aggregate shall also have water absorption

≤ 2.0 percent."

Revise the nomenclature table in Article 1030.01 of the Standard Specifications to read:

| "High ESAL | IL-19.0 binder; IL-9.5 surface; IL-4.75; SMA-12.5, SMA-9.5 |
|------------|--------------------------------------------------------------------------------------------------------------|
| Low ESAL | IL-19.0L binder; IL-9.5L surface; Stabilized Subbase (HMA) ^{1/} ; HMA Shoulders ^{2/} |

1/ Uses 19.0L binder mix.

2/ Uses 19.0L for lower lifts and 9.5L for surface lift."

Revise Article 1030.02 of the Standard Specifications and Supplemental Specifications to read:

"1030.02 Materials. Materials shall be according to the following.

| Item | Article/Section |
|--------------------------------------------------|-----------------|
| (a) Coarse Aggregate | 1004.03 |
| (b) Fine Aggregate | 1003.03 |
| (c) RAP Material | 1031 |
| (d) Mineral Filler | 1011 |
| (e) Hydrated Lime | 1012 01 |
| (f) Slaked Quicklime (Note 1) | 1012.01 |
| (g) Performance Graded Asphalt Binder (Note 2) | 1032 |
| (h) Fibers (Note 3) | 1002 |
| (i) Warm Mix Asphalt (WMA) Technologies (Note 4) | |

Note 1. Slaked quicklime shall be according to ASTM C 5.

Note 2. The asphalt binder shall be an SBS PG 76-28 when the SMA is used on a fulldepth asphalt pavement and SBS PG 76-22 when used as an overlay, except where modified herein. The asphalt binder shall be an Elvaloy or SBS PG 76-22 for IL-4.75, except where modified herein. The elastic recovery shall be a minimum of 80.

Note 3. A stabilizing additive such as cellulose or mineral fiber shall be added to the SMA mixture according to Illinois Modified AASHTO M 325. The stabilizing additive shall meet the Fiber Quality Requirements listed in Illinois Modified AASHTO M 325. Prior to approval and use of fibers, the Contractor shall submit a notarized certification by the producer of these materials stating they meet these requirements. Reclaimed

Asphalt Shingles (RAS) may be used in Stone Matrix Asphalt (SMA) mixtures designed with an SBA polymer modifier as a fiber additive if the mix design with RAS included meets AASHTO T305 requirements. The RAS shall be from a certified source that produces either Type I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

Note 4. Warm mix additives or foaming processes shall be selected from the current Bureau of Materials and Physical Research Approved List, "Warm Mix Asphalt Technologies"."

Revise Article 1030.04(a)(1) of the Standard Specifications and the Supplemental Specifications to read:

| High ESAL, MIXTURE COMPOSITION (% PASSING) ^{1/} | | | | | | | | | | | |
|----------------------------------------------------------|-------|--------|-----|---------------------------------|-----|-------------------------------------|-------|------------------|-------|-----------------|--|
| Sieve Size | IL-19 | 9.0 mm | | SMA ^{4/} IL-12.5 mm | | SMA ^{4/} IL-9 IL-9.5 mm | | .5 mm | IL-4. | IL-4.75 mm | |
| | min | max | min | max | min | max | min | max | min | max | |
| 1 1/2 in (37.5 mm) | | | | | | | | | 1 | | |
| 1 in. (25 mm) | | 100 | | | | | | | | | |
| 3/4 in. (19 mm) | 90 | 100 | | 100 | | | | | | | |
| 1/2 in. (12.5 mm) | 75 | 89 | 80 | 100 | | 100 | | 100 | | 100 | |
| 3/8 in. (9.5 mm) | | | | 65 | 90 | 100 | 90 | 100 | | 100 | |
| #4 (4.75 mm) | 40 | 60 | 20 | 30 | 36 | 50 | 34 | 69 | 90 | 100 | |
| #8 (2.36 mm) | 20 | 42 | 16 | 24 5/ | 16 | 325/ | 34 6/ | 52 ^{2/} | 70 | 90 | |
| #16 (1.18 mm) | 15 | 30 | | | | | 10 | 32 | 50 | 65 | |
| #30 (600 μm) | | | 12 | 16 | 12 | 18 | | | | | |
| #50 (300 μm) | 6 | 15 | | | | | 4 | 15 | 15 | 30 | |
| #100 (150 μm) | 4 | 9 | | | | | 3 | 10 | 10 | 18 | |
| #200 (75 μm) | 3 | 6 | 7.0 | 9.0 3/ | 7.5 | 9.5 ^{3/} | 4 | 6 | 7 | 9 ^{3/} | |
| Ratio Dust/Asphalt Binder | | 1.0 | | 1.5 | | 1.5 | | 1.0 | | 1.0 | |

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

1/ Based on percent of total aggregate weight.

- 2/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign = 90.
- 3/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.
- 4/ The maximum percent passing the #635 (20 μ m) sieve shall be \leq 3 percent.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted above the percentage stated on the table.
- 6/ When establishing the Adjusted Job Mix Formula (AJMF) the percent passing the #8 (2.36 mm) sieve shall not be adjusted below 34 percent.

Delete Article 1030.04(a)(3) of the Standard Specifications.

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.

| | VOLUI | METRIC REQUIE High ESAL | REMENTS | |
|-------------------------------------------------------|---------|----------------------------|-----------------------|----------------------------------------|
| Voids in the Mineral Aggregate (VMA), % minimum | | | | Voids Filled with Asphalt Binder |
| Ndesign | IL-19.0 | IL-9.5 | IL-4.75 ^{1/} | (VFA), % |
| 50 | | | 18.5 | 65 – 78 ^{2/} |
| 70 | 13.5 | 15.0 | | 05 75 |
| 90 | 10.0 | 10.0 | | 65 - 75 |

1/ Maximum Draindown for IL-4.75 shall be 0.3 percent

2/ VFA for IL-4.75 shall be 72-85 percent"

Revise the table in Article 1030.04(b)(2) of the Standard Specifications to read:

| | "VOLUME | TRIC REQUI Low ESAL | REMENTS | |
|------------------------|--------------------------------|---------------------------------|----------------------------------------------------------|-------------------------------------------------------|
| Mixture Composition | Design Compactive Effort | Design Air Voids Target % | VMA (Voids in the Mineral Aggregate), % min. | VFA (Voids Filled with Asphalt Binder), % |
| IL-9.5L | N _{DES} =30 | 4.0 | 15.0 | 65-78 |
| IL-19.0L | N _{DES} = 30 | 4.0 | 13.5 | N/A" |

Replace Article 1030.04(b)(3) of the Standard Specifications with the following:

"(3) SMA Mixtures.

| | Volumetric R SM | Requirements | |
|---------|------------------------------|----------------------------------------------------|------------------------------------------|
| Ndesign | Design Air Voids Target % | Voids in the Mineral Aggregate (VMA), % min. | Voids Filled with Asphalt (VFA), % |
| 80 4/ | 3.5 | 17.0 ^{2/} 16.0 ^{3/} | 75 - 83 |

- 1/ Maximum draindown shall be 0.3 percent. The draindown shall be determined at the JMF asphalt binder content at the mixing temperature plus 30 °F.
- 2/ Applies when specific gravity of coarse aggregate is \geq 2.760.
- 3/ Applies when specific gravity of coarse aggregate is < 2.760.
- 4/ Blending of different types of aggregate will not be permitted. For surface course, 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.

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

Delete Article 1030.04(b)(5) from the Supplemental Specifications.

Delete last sentence of the second paragraph of Article 1102.01(a) (13) a.

Add to second paragraph in Article 1102.01 (a) (13) a.:

"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 SMA mix for the entire project and 2) a mix design was prepared with collected bag-house dust."

Revise the table in Article 1030.05(d)(2)a. of the Standard Specifications to read:

| [| 5 | |
|--------------------------------------|---------------------------------|------------------------------|
| | Frequency of Tests | Test Method See Manual of |
| "Parameter | High ESAL Mixture | Test Procedures |
| , and the col | Low ESAL Mixture | for Materials |
| Aggregate | | |
| Gradation | 1 washed ignition | Illinois |
| | oven test on the mix | Procedure |
| | per half day of | |
| | production | |
| % passing sieves: | | |
| 1/2 in. (12.5 mm), | Note 3. | |
| No. 4 (4.75 mm), No. 8 (2.36 mm), | | |
| No. 30 (600 µm) | | |
| No. 200 (75 µm) | | |
| 1.0.200 (10 µm) | | |
| Asphalt Binder | | |
| Content by Ignition | 1 per half day of | Illinois-Modified |
| Oven | production | AASHTO T 308 |
| N1.4. 4 | | |
| Note 1. | | |
| VMA | Day's production | Illinois-Modified |
| N-4- 0 | ≥ 1200 tons: | AASHTO R 35 |
| Note 2. | 1 nor holf days of | |
| | 1 per half day of production | |
| | 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 | | Illinois-Modified |
| Gravity | 1 per half day of | AASHTO T 312 |
| of Gyratory Sample | production | |
| Note 4. | Day's production | |
| 1010 4. | < 1200 tons: | |
| | . , 200 10118, | |
| | 1 per half day of | |
| | production for first | |
| | 2 days and 1 per | |
| | day thereafter (first | |
| | sample of the day) | |

| | Frequency of Tests | Test Method See Manual of |
|----------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------|
| "Parameter | High ESAL Mixture | Test Procedures for Materials |
| Maximum Specific Gravity of Mixture | Day's production ≥ 1200 tons: 1 per half day of production | Illinois-Modified AASHTO T 209 |
| | 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) | |

- Note 1. 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 2. 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 3. The Engineer reserves the right to require additional hot bin gradations for batch plants if control problems are evident.
- Note 4. The WMA compaction temperature for mixture volumetric testing shall be 270 ± 5 °F (132 ± 3 °C) for quality control testing. The WMA compaction temperature for quality assurance testing will be 270 ± 5 °F (132 ± 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."

Revise the table in Article 1030.05(d)(2)b. of the Standard Specifications to read:

| "Parameter | High ESAL Mixture Low ESAL Mixture |
|------------------------------|---------------------------------------|
| Ratio Dust/Asphalt Binder | 0.6 to 1.2 |
| Moisture | 0.3 %" |

Revise the Article 1030.05(d)(4) of the Supplemental Specifications to read:

"(4) Control Limits. Target values shall be determined by applying adjustment factors to the AJMF where applicable. The target values shall be plotted on the control charts within the following control limits.

| | | "CONTR | OL LIMITS | | | |
|---------------------------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|
| | High ESAL | | SMA | | IL-4.75 | |
| Parameter | Individual Test | Moving Avg. of 4 | Test | Moving Avg. of 4 | Individual Test | Moving Avg. of 4 |
| % Passing: ^{1/} | | | | | | |
| 1/2 in. (12.5 mm) | ±6% | ±4% | ±6% | ±4% | | |
| 3/8 in. (9.5mm) | | | ±4% | ±3% | | |
| No. 4 (4.75 mm) | ±5% | ±4% | ±5% | ±4% | | |
| No. 8 (2.36 mm) | ±5% | ±3% | ±4% | ±2% | | |
| No. 16 (1.18 mm) | | | ±4% | ± 2 % | ±4% | ±3% |
| No. 30 (600 µm) | ±4% | ± 2.5 % | ±4% | ± 2.5 % | | |
| Total Dust Content No. 200 (75 μm) | ± 1.5 % | ± 1.0 % | | | ± 1.5 % | ± 1.0 % |
| Asphalt Binder Content | ± 0.3 % | ± 0.2 % | ± 0.2 % | ± 0.1 % | ± 0.3 % | ± 0.2 % |
| Voids | ± 1.2 % | ± 1.0 % | ± 1.2 % | ± 1.0 % | ± 1.2 % | ± 1.0 % |
| VMA | -0.7 % ^{2/} | -0.5 % 2/ | -0.7 % ^{2/} | -0.5 % ^{2/} | -0.7 % ^{2/} | -0.5 % ^{2/} |

1/ Based on washed ignition oven

2/ Allowable limit below minimum design VMA requirement

| DENSIT | Y CONTROL LIMITS | |
|---------------------|------------------|-----------------------------|
| Mixture Composition | Parameter | Individual Test |
| IL-4.75 | Ndesign = 50 | 93.0 - 97.4 % 1/ |
| IL-9.5 | Ndesign = 90 | 92.0 - 96.0 % |
| IL-9.5,IL-9.5L | Ndesign < 90 | 92.5 - 97.4 % |
| IL-19.0 | Ndesign = 90 | 93.0 - 96.0 % |
| IL-19.0, IL-19.0L | Ndesign < 90 | 93.0 ^{2/} - 97.4 % |
| SMA | Ndesign = 80 | 93.5 - 97.4 % |

- 1/ Density shall be determined by cores or by correlated, approved thin lift nuclear gauge.
- 2/ 92.0 % when placed as first lift on an unimproved subgrade."

Revise the table in Article 1030.05(d)(5) of the Supplemental Specifications to read:

| "CONTROL CHART REQUIREMENTS | High ESAL, Low ESAL, SMA & IL-4.75 | |
|----------------------------------|---------------------------------------------------------------------------------------------------------------|--|
| Gradation ^{1/3/} | % Passing Sieves: 1/2 in. (12.5 mm) ^{2/} No. 4 (4.75 mm) No. 8 (2.36 mm) No. 30 (600 μm) | |
| Total Dust Content ^{1/} | No. 200 (75 µm) | |
| | Asphalt Binder Content | |
| | Bulk Specific Gravity | |
| | Maximum Specific | |
| | Gravity of Mixture | |
| | Voids | |
| | Density | |
| | VMA | |

- 1/ Based on washed ignition oven.
- 2/ Does not apply to IL-4.75.
- 3/ SMA also requires the 3/8 in. (9.5 mm) sieve."

Delete Article 1030.05(d)(6)a.1.(b.) of the Standard Specifications.

Delete Article 1030.06(b) of the Standard Specifications.

Delete Article 1102.01(e) of the Standard Specifications.

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.

<u>Mix Design Testing</u>. Add the following below the referenced AASHTO standards in Article 1030.04 of the Standard Specifications:

AASHTO T 324 Hamburg Wheel Test

AASHTO T 283 Tensile Strength Test

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 and shall meet the following requirements:

(1)Hamburg Wheel Test criteria. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in. (12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the mix requirements table of the plans.

| 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 |

Illinois Modified AASHTO T 324 Requirements ^{1/}

1/ When produced at temperatures of 275 ± 5 °F (135 ± 3 °C) or less, loose Warm Mix Asphalt shall be oven aged at 270 ± 5 °F (132 ± 3 °C) for two hours prior to gyratory compaction of Hamburg Wheel specimens.

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

Production Testing. Revise Article 1030.06(a) of the Standard Specifications to read:

"(a) High ESAL, IL-4.75, WMA, and SMA Mixtures. For each contract, a 300 ton (275 metric tons) test strip, except for SMA mixtures 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".

Before start-up, target values shall be determined by applying gradation correction factors to the JMF when applicable. These correction factors shall be determined from previous experience. The target values, when approved by the Engineer, shall be used to control HMA production. Plant settings and control charts shall be set according to target values.

Before constructing the test strip, target values shall be determined by applying gradation correction factors to the JMF when applicable. After any JMF adjustment, the JMF shall become the Adjusted Job Mix Formula (AJMF). Upon completion of the first acceptable test strip, the JMF shall become the AJMF regardless of whether or not the JMF has been adjusted. If an adjustment/plant change is made, the Engineer may require a new test strip to be constructed. If the HMA placed during the initial test strip is determined to be unacceptable to remain in place by the Engineer, it shall be removed and replaced.

| Parameter | Adjustment |
|-------------------|------------|
| 1/2 in. (12.5 mm) | ± 5.0 % |
| No. 4 (4.75 mm) | ± 4.0 % |
| No. 8 (2.36 mm) | ± 3.0 % |
| No. 30 (600 µm) | * |
| No. 200 (75 µm) | * |
| Asphalt Binder | ± 0.3 % |
| Content | |

The limitations between the JMF and AJMF are as follows.

* In no case shall the target for the amount passing be greater than the JMF.

Any adjustments outside the above limitations will require a new mix design.

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).

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 is being met. No additional mixture shall be produced until the Engineer receives passing Hamburg Wheel tests.

The Department may conduct additional Hamburg Wheel tests on production material as determined by the Engineer."

Revise the title of Article 1030.06(b) of the Standard Specifications to read:

"(b) Low ESAL Mixtures."

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.

Method of Measurement:

Add the following after the fourth paragraph of Article 406.13 (b):

"The plan quantities of SMA mixtures shall be adjusted using the actual approved binder and surface Mix Design's G_{mb} ."

Basis of Payment.

Replace the seventh paragraph of Article 406.14 of the Standard Specifications with the following:

"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."

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 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| | | 1 |

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:

"(c) RAP Materials (Note 3)1031"

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.

HOT MIX ASPHALT - QUANTITY CORRECTION (BMPR)

Effective: October 1, 2014 Revised: October 2, 2014

Revise the fifth paragraph of Article 406.13(b) of the Standard Specifications to read as follows:

"HMA and Stone Matrix Asphalt (SMA) mixture in excess of 103 percent of the quantity shown on the plans or the plan quantity as specified by the Engineer will not be measured for payment. The "adjusted quantity to be placed" and the "adjusted pay quantity" for HMA and SMA mixtures will be calculated as follows.

Adjusted Quantity To Be Placed = C x quantity shown on the plans or the plan quantity as specified by the Engineer

where: C = English: $C = \frac{G_{mb} \times 46.8}{U}$ Metric: $C = \frac{G_{mb} \times 24.99}{U}$

and where: G_{mb} = average bulk specific gravity from approved mix design U = unit weight of HMA shown on the plans in lb/sq yd/in. (kg/sq m/25 mm), used to estimate plan quantity 46.8 = English constant 24.99 = metric constant

Adjusted Pay Quantity (not to exceed 103 percent of the quantity shown on the plans or the plan quantity as specified by the Engineer) = $B \times HMA$ tons actually placed

where: $B = \frac{1}{C}$

If project circumstances warrant a new mix design, the above equations shall be used to calculate the adjusted plan quantity and adjusted pay quantity for each mix design using its respective average bulk specific gravity."

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.

RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)

Effective: November 1, 2012 Revise: January 2, 2015

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.

40

(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_{mm}. 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 _{mm} | \pm 0.03 $^{1/}$ |

 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 Lir | nits 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 _{mm} | 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 is used alone or FRAP is used in conjunction with RAS, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

| HMA Mixtures ^{1/2/} | Maximum % ABR | | |
|------------------------------|---------------------------|---------|-----------------------------------|
| Ndesign | Binder/Leveling Binder | Surface | Polymer Modified ^{3/} |
| 30L | 50 | 40 | 10 |
| 50 | 40 | 35 | 10 |
| 70 | 40 | 30 | 10 |
| 90 | 40 | 30 | 104/ |
| 4.75 mm N-50 | | | 30 |
| SMA N-80 | | | 20 |

Max Asphalt Binder Replacement for FRAP with RAS Combination

- 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/ For polymerized surface mix used for overlays, with up to 10 percent ABR, an SBS PG70-22 will be required. However if used in full depth HMA, an SBS PG70-28 will be required.

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 2.300 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.

LH

- 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."

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 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 TRAINEES 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 1. 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, 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 | FAU 0118 & FAU 3870 | Marked Rte. | |
|---------|---------------------|--------------|-----------------------------|
| Section | 13-00012-00-BT | marked Me. | Lake Avenue & Lakewood Road |
| | 10 000 12-00-B1 | Project No. | M-4003(217) |
| County | McHenry | Contract No. | 61A78 |
| | | | |

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issued by the Illinois Environmental Protection Agency (IEPA) for storm water discharges from construction site activities.

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

| Catherine Peterson Print Name | _ Cittini Pitenmy |
|----------------------------------|-------------------|
| Village Manager Title | October 17, 2014. |
| Village of Lakewood | Date |
| Agency | |

I. Site Description:

A. Provide a description of the project location (include latitude and longitude):

The project is located on Lake Avenue, from the west Village limits to Huntley Road, In section 1 of T43N, R7E, Village of Lakewood, McHenry County (42.2331N,88.3667W) and on Lakewood Road, from Ackman Road to Haligus Road, in sections 10, 11, & 14 of T43N, R7E, Village of Lakewood, McHenry County (42.2121N, 88.3880W)

B. Provide a description of the construction activity which is the subject of this plan:

Pavement widening and resurfacing, regrading of ditches, excavation for compensatory storage, storm sewer and culvert installation, topsoil placement, seeding and hydraulic mulch or turf reinforcement mat for restoration.

C. Provide the estimated duration of this project:

6 months

D. The total area of the construction site is estimated to be 8.0 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 3.6 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

0.50

F. List all soils found within project boundaries. Include map unit name, slope information, and erosivity:

Black silt topsoil predominately on the surface of areas to excavated, very erosive on grades exceeding 2%, with most areas exceeding 2% up to 2H:1V. Stiff brown clay exists below the topsoil, very erosive on grades exceeding 4% and when saturated, most areas of the project exceed 4% up to 2:1. On Lake Avenue, below the clay is coarse sand, erosive only in concentrated flow conditions but also as grades exceed 10%, excavation in the sand will only be for storm sewer installation in trench walls. On Lakewood Road, in the area of wetlands, dark-brown/black loose silt fill existings below the hydric topsoil and is has erosivity similar to topsoil; below the fill is



G. Provide an aerial extent of wetland acreage at the site:

Existing high-quality wetlands exist on both sides of the road between Sta 34+00 and 41+00, impacts will be required, but shall be minimized. There is a wetland between Sta 46+00 LT and 47+00 LT that is to be avoided. There is a wetland adjacent to Turnburry Lake between Sta 54+00 RT and 54+50 RT that is outside the project limits and should be avoided. There is a small linear wetland at Sta 69+60 LT that extends from the existing culvert opening to a farm field; impacts shall be limited to extent necessary to extend the culvert and regrade the vacinity. The existing wetland between Sta 81+75 LT and 82+75 LT is outside the project limits and no excavation is proposed in the vacinity, so there are to be no impacts to this wetland.

H. Provide a description of potentially erosive areas associated with this project:

Trench walls will consist of highly erosive soils. Widening and ditch grading will be completed in highly erosive topsoil and clay. Excavation in wetlands will be in highly erosive topsoil and silt. Aggregate used as bases for widening, driveways and temporary trench cover will be erosive only in concentrated conditions.

The following is a description of soil disturbing activities by stages, their locations, and their erosive factors 1. (e.g. steepness of slopes, length of slopes, etc):

Trench excavation for storm sewer and culverts thru highly erosive soils on near vertical trench walls.

Stripping of existing vegetation thru areas to be re-graded thru highly erosive topsoil on grades that typically

Excavation for widening along slopes exceeding 10% thru some topsoil, but mostly clay.

Ditch grading will involve excavation in highly erosive topsoil and some clay, with sideslopes ranging from 4:1 to 2:1 and longitudinal grades from 0.5% to as high as 6%.

Placing highly erosive topsoil will be completed in re-graded ditches and foreslopes that will have sideslopes of 4:1 to 2:1 and longitudinal slopes of 0.5% to 6%. Topsoil will be stablized with seed and ersosion blanket (or mulch) as soon as practical after grading operations cease.

- See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, J. 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.
- Identify who owns the drainage system (municipality or agency) this project will drain into: K.

This drainage system is owned by the Village of Lakewood.

L. The following is a list of General NPDES ILR40 permittees within whose reporting jurisdiction this project is located.

Village of Lakewood

The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. The location of the M receiving waters can be found on the erosion and sediment control plans:

On Lake Avenue, the ultimate receiveing water is Crystal Lake. On Lakewood Road, the receiving water is Unnamed tributaries to the ultimate receiving water of the South Branch of the Kishwaukee River.

Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes, N. highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc.

Existing vegetation not directly impacted by construction activities shall be maintained and protected from harm. Anything outside the right-of-way (ROW) or outside the prescribed limits of the project is not to be touched without approval from the Engineer. Impacts to existing wetlands as described in Section G above shall be minimized as much as practical; impacts to wetlands outside the impact limits shown in the plans may result in fines levied on the Contractor by regulatory agencies as it exceed the permitted impacts.

- The following sensitive environmental resources are associated with this project, and may have the potential to be О. impacted by the proposed development:
 - Floodplain
 - \boxtimes Wetland Riparian
 - Threatened and Endangered Species



- **Historic Preservation** \Box
- 303(d) Listed receiving waters for suspended solids, turbidity, or siltation \boxtimes
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation \Box
- Π Applicable Federal, Tribal, State or Local Programs
- Other
- 303(d) Listed receiving waters (fill out this section if checked above): 1.

Kishwaukee River

The name(s) of the listed water body, and identification of all pollutants causing impairment: a.

Dissolved Oxygen, Sedimentation/Siltation

Provide a description of how erosion and sediment control practices will prevent a discharge of b. sediment resulting from a storm event equal to or greater than a twenty-five (25) year, twenty-four (24) hour rainfall event:

Silt fence will impede sediment from leaving the site overland, ground stabilization will reduce erosion, inlet filters, pipe protection, and ditch checks will slow water down and either trap sediment or allow it settle out. In addition, numerous wetlands between the project discharges and the river will filter much of if not all of the sediment before reaching the river.

c. Provide a description of the location(s) of direct discharge from the project site to the 303(d) water body:

There are no direct discharges to the Kishkwaukee River on this project.

Provide a description of the location(s) of any dewatering discharges to the MS4 and/or water body: d.

Dewatering operations will not discharge to the Kishwaukee River.

- TMDL (fill out this section if checked above) 2.
 - a. The name(s) of the listed water body:
 - b. Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:
 - If a specific numeric waste load allocation has been established that would apply to the project's C. discharges, provide a description of the necessary steps to meet that allocation:
- The following pollutants of concern will be associated with this construction project: Ρ.
 - \boxtimes Soil Sediment
 - \boxtimes Concrete
 - \boxtimes Concrete Truck Waste
 - \boxtimes Concrete Curing Compounds
 - \boxtimes Solid Waste Debris
 - \boxtimes Paints
 - Solvents
 - \boxtimes Fertilizers / Pesticides
- 11. Controls:

- Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) \boxtimes
- Antifreeze / Coolants
- \boxtimes Waste water from cleaning construction equipment
- Other (specify)
- Other (specify)
- Other (specify)
- Other (specify) \Box
- Other (specify)



This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the Contractor will be responsible for its implementation as indicated. The Contractor shall provide to the Resident Engineer a plan for the implementation of the measures indicated. The Contractor, and subcontractors, will notify the Resident Engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the Permit ILR10. Each such Contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

- A. Erosion and Sediment Controls: At a minimum, controls must be coordinated, installed and maintained to:
 - 1. Minimize the amount of soil exposed during construction activity;
 - 2. Minimize the disturbance of steep slopes;
 - Maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible;
 - 4. Minimize soil compaction and, unless infeasible, preserve topsoil.
- B. Stabilization Practices: Provided below is a description of interim and permanent stabilization practices, including site- specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(B)(1) and II(B)(2), stabilization measures shall be initiated immediately where construction activities have temporarily or permanently ceased, but in no case more than one (1) day after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of fourteen (14) or more calendar days.
 - 1. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
 - 2. On areas where construction activity has temporarily ceased and will resume after fourteen (14) days, a temporary stabilization method can be used.

The following stabilization practices will be used for this project:

| \boxtimes | Preservation of Mature Vegetation Vegetated Buffer Strips Protection of Trees Temporary Erosion Control Seeding Temporary Turf (Seeding, Class 7) Temporary Mulching Permanent Seeding | Erosion Control Blanket / Mulchin Sodding Geotextiles Other (specify) Other (specify) Other (specify) Other (specify) |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| | | caller (opcolly) |

Describe how the stabilization practices listed above will be utilized during construction:

Existing vegetation not directly impacted by construction will be maintained and protected from harm. Some existing vegetation will provide a natural buffer strip. Existing trees not indicated to be removed will be protected with tree trunk protection and root pruning as needed. Temporary erosion control seeding will used liberally over distrurbed areas not ready for permanent stabilization, and temporary blanket used as protection until temproary seed establishes. Permanent stabilization will consist of seeding and hydraulic mulch.

Describe how the stabilization practices listed above will be utilized after construction activities have been completed:

Permanent seeding and hydraulic mulch will provide vegetated stabilization.

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:

 \boxtimes Perimeter Erosion Barrier \Box Rock Outlet Protection \boxtimes Temporary Ditch Check \Box Riprap \boxtimes Storm Drain Inlet Protection Gabions Sediment Trap Slope Mattress \square Temporary Pipe Slope Drain \Box **Retaining Walls** Temporary Sediment Basin Slope Walls Temporary Stream Crossing **Concrete Revetment Mats** Stabilized Construction Exits Level Spreaders Turf Reinforcement Mats \boxtimes \boxtimes Other (specify) Pipe Culvert Inlet Protection \Box Permanent Check Dams Other (specify) Permanent Sediment Basin \Box Other (specify) Aggregate Ditch \square \Box Other (specify) Paved Ditch \square Other (specify)

Describe how the structural practices listed above will be utilized during construction:

Perimeter erosion barrier (or silt fence) will be installed in all locations were site stormwater sheet discharges offsite and to protect wetlands not to be disturbed. Temporary Ditch checks are provided for every 2' in elevation change and at limits of ditch grading to slow water and allow sediment to settle out. Inlet Filters are provided on all existing and proposed open-lid drainage structures to trap sediment before entering the storm sewer. Pipe culvert inlet protection utilizes silt fence in a half-circle configuration around the upstream culvert end of all proposed culverts and existing culverts to remain. Turf reinforcment is provided as ditch lining where ditch grades exceed 3% to provide stablization to vegetation.

Describe how the structural practices listed above will be utilized after construction activities have been completed:

Turf reinforcement Mat will provide permanent stablization to grassed ditch bottoms where ditch grades create water velocities that exceed grass turf stability.

D. Treatment Chemicals

Will polymer flocculants or treatment chemicals be utilized on this project:
Yes X No

If yes above, identify where and how polymer flocculants or treatment chemicals will be utilized on this project.

- E. **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.
 - 1. 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.

2. 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:

Turf Reinforcement will provide permanent stabilization to steeper ditch bottoms. Temporarily impacted wetlands will be restored to wetland conditions. Compensatory storage at a 1.5:1 ratio is provided where flood prone areas regulated by the McHenry County Stormwater Management Ordinance are filled.



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 erosion and sediment control practices shown on the plans or described in this document or the specifications meets or exceeds the McHenry County Stormwater Management Ordinance and the requirements of the McHenry-Lake Soil & Water Conservation District and the Village of Lakewood.

- 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.
 - 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.

Ш. 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.

Cleaning, replacement or repair, and proper disposal of accumulated sediment) of all erosion control measures every 2 weeks or after a 1/2-inch or more rainfall event in a 24-hour period is a requirement of the contract.

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: epa.swnoncomp@illinois.gov, 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

Additional Inspections Required:

Additional inspections may be required at the discretion of the Engineer.

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 | FAU 0118 & FAU 3870 | Marked Rte. | Lake Avenue & Lakewood Road |
|---------|---------------------|--------------|-----------------------------|
| Section | 13-00012-00-BT | Project No. | M-4003(217) |
| County | McHenry | Contract No. | 61A78 |

This certification statement is a part of SWPPP for the project described above, in accordance with the General NPDES Permit No. ILR10 issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the Permit No. ILR 10 that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in SWPPP for the above mentioned project; I have received copies of all appropriate maintenance procedures; and, I have provided all documentation required to be in compliance with the Permit ILR10 and SWPPP and will provide timely updates to these documents as necessary.

□ Contractor

□ Sub-Contractor

Print Name

Title

Name of Firm

Street Address

Telephone

Signature

Date

City/State/ZIP

Items which this Contractor/subcontractor will be responsible for as required in Section II.G. of SWPPP:



Illinois Environmental Protection Agency

| Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • 5 | Springfield A Illinois A 62704 0070 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Division of Water Pollution Contr Notice of Intent (NOI) for General Pe to Discharge Storm Water Associated with Constru | rol ermit |
| This fillable form may be completed online, a copy saved locally, printed and Section at the above address. | signed before it is submitted to the Permit |
| OWNER INFORMATION | For Office Use Only |
| Company/Owner Name: Village of Lakewood, IL | Permit No. ILR10 |
| Mailing Addresses 2500 Later A | |
| City: Lakewood State: IL Zip: 60014 | |
| Contact Person: Catherine Peterson, Village Manager E-mail: cp | Fax: 815-459-3156 |
| Owner Type (select one) <u>City</u> | eterson@village.lakewood.il.us |
| CONTRACTOR INFORMATION | /IS4 Community: 🗹 Yes 📋 No |
| | Phone: |
| City: State: Zip: CONSTRUCTION SITE INFORMATION | Fax: |
| Select One: New Change of information for: ILR10 Project Name: Lake Avenue and Lakewood Road Bike Lane Improvements Street Address: Lake Avenue & Lakewood Road City: Latitude: 42 13 00 | County: <u>McHenry</u> IL Zip: <u>60014</u> |
| (Deg) (Min) (Sec) (Deg) (Min) (Sec) | |
| Approximate Construction Start Date <u>Apr 1, 2015</u> Approximate Construct | Section Township Range |
| Total size of construction site in acres: 3.6 | F |
| If less than 1 acre, is the site part of a larger common plan of development? | Fee Schedule for Construction Sites: Less than 5 acres - \$250 5 or more acres - \$750 |
| STORM WATER POLLUTION PREVENTION PLAN (SWPPP) Has the SWPPP been submitted to the Agency? (Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov) | es 🗌 No |
| Location of SWPPP for viewing: Address: 2500 Lake Avenue SWPPP contact information: | City: Lakewood |
| | Inspector qualifications: |
| Contact Name: Jason Fluhr, P.E., Village Engineer Phone: 815-459-1260 Fax: 815-455-0450 | P.E. |
| Project inspector, if different from above E-mail: jflu | hr@baxterwoodman.com |
| Inspector's Name: <u>Craig D. Mitchell, P.E.</u> | Inspector qualifications: |
| Phone: 815-459-1260 | P.E. |
| Finite: 815-459-1260 Fax: 815-455-0450 E-mail: cmit | tchell@baxterwoodman.com |

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for the violation and an additional civil penalty of not to exceed \$10,000 for being denied. This form has been approved by the Forms Management Center.

TYPE OF CONSTRUCTION (select one)

Construction Type Transportation

SIC Code:

Type a detailed description of the project:

Lakewood Road and Lake Avenue will be resurfaced, and a 4-foot HMA shoulder with 2-foot earth shoulder will be

installed along both sides of the road to provide bike lanes. Project improvements include storm sewer installation,

ditch grading, and guardrail installation. Soil erosion and sediment control during construction consist of perimeter

erosion barrier (silt fence), temporary ditch checks, inlet filters, inlet and pipe protection, and temporary seeding and

mulch. Final stabilization will include turf reinforcement mat along steeply sloped ditches, and permanent

vegetation seed mixes with hydraulic mulch.

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on: Historic Preservation Agency

| Historic Preservation Agency | 🖌 Yes | 🗌 No | |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------|
| Endangered Species | ✓ Yes | No No | |
| RECEIVING WATER INFORMATI | ON | | |
| Does your storm water discharge dire | ctly to: | Waters of the S | State or Storm Sewer |
| Owner of storm sewer system: Villag | | | |
| Name of closest receiving water body | and the second se | | Crystal Lake & Trib. to S. Branch of Kishwaukee River |
| Mail completed form to: Illinois Enviror Division of Wa Attn: Permit S | ater Pollution | ection Agency Control | 1 |

Division of Water Pollution Control Attn: Permit Section Post Office Box 19276 Springfield, Illinois 62794-9276 or call (217) 782-0610 FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

stler, liten

Owner Signature:

Catherine Peterson

Printed Name:

Ditobur 17, 2014. Date:

Village Manager

Title:

Page 3 of 3

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the upper right hand corner of the first page.

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at:

Illinois Environmental Protection Agency Division of Water Pollution Control Permit Section Post Office Box 19276 Springfield, Illinois 62794-9276 or call (217) 782-0610 FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

| | Example | Format |
|----------|---------|------------------------------------------------|
| Section | 12 | 1 or 2 numerical digits |
| Township | 12N | 1 or 2 numerical digits followed by "N" or "S" |
| Range | 12W | 1 or 2 numerical digits followed by "E" or "W" |

For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."

Submission of initial fee and an electronic submission of Storm Water Pollution Prevention Plan (SWPPP) for Initial Permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA at the above address.

Construction sites with less than 5 acres of land disturbance - fee is \$250.

Construction sites with 5 or more acres of land disturbance - fee is \$750.

SWPPP should be submitted electronically to: <u>epa.constilr10swppp@illinois.gov</u> When submitting electronically, use Project Name and City as indicated on NOI form.



DEPARTMENT OF THE ARMY

CHICAGO DISTRICT, CORPS OF ENGINEERS 231 SOUTH LA SALLE STREET CHICAGO, ILLINOIS 60604-1437

September 4, 2014

Technical Services Division Regulatory Branch LRC-2014-00419

REPLY TO

SUBJECT: Authorization to Discharge of 0.10 Acres of Fill in Waters of the U.S for the Lakewood Road Improvements between Haligus and Ackman Roads in Lakewood, McHenry County, Illinois

Catherine Peterson Village of Lakewood 2500 Lake Avenue Lakewood, Illinois 60014

Dear Ms. Peterson:

This office has verified that your proposed activity complies with the terms and conditions of Regional Permit 3 (Transportation Projects) and 7 (Temporary Construction Activities) and the overall RPP under Category II of the Regional Permit Program.

This verification expires three (3) years from the date of this letter and covers only your activity as described in your notification and as shown on the plans entitled "F.A.U. 0118 (Lake Avenue) - West Village Limits to Huntley Road - F.A.U. 3870 (Lakewood Road) - Ackman Road to Haligus Road - Bicycle Lane Improvements - Section No. 13-00012-00-BT - Project No. M-4003(217) - Job No. C-91-393-13 - Village of Lakewood - McHenry County" dated June 6, 2014, prepared by Baxter and Woodman, Inc. Caution must be taken to prevent construction materials and activities from impacting waters of the United States beyond the scope of this authorization. If you anticipate changing the design or location of the activity, you should contact this office to determine the need for further authorization.

The activity may be completed without further authorization from this office provided the activity is conducted in compliance with the terms and conditions of the RPP, including conditions of water quality certification issued under Section 401 of the Clean Water Act by the Illinois Environmental Protection Agency (IEPA). If the design, location, or purpose of the project is changed, you should contact this office to determine the need for further authorization.

The following special conditions are a requirement of your authorization:

1. This authorization is contingent upon implementing and maintaining soil erosion and sediment controls in a serviceable condition throughout the duration of the project. You shall comply with the McHenry-Lake County Soil and Water Conservation District's (SWCD) written and verbal recommendations regarding the soil erosion and sediment control (SESC) plan and the installation and maintenance requirements of the SESC

- 2 -

practices on-site.

- a. You shall schedule a preconstruction meeting with SWCD to discuss the SESC plan and the installation and maintenance requirements of the SESC practices on the site.
- b. You shall notify the SWCD of any changes or modifications to the approved plan set. Field conditions during project construction may require the implementation of additional SESC measures. If you fail to implement corrective measures, this office may require more frequent site inspections to ensure the installed SESC measures are acceptable.
- c. Prior to commencement of any in-stream work, you shall submit constructions plans and a detailed narrative to the SWCD that disclose the contractor's preferred method of cofferdam and dewatering method. Work in the waterway shall NOT commence until the SWCD notifies you, in writing, that the plans have been approved.
- 2. You are responsible for all work authorized herein and for ensuring that all contractors are aware of the terms and conditions of this authorization.
- 3. A copy of this authorization must be present at the project site during all phases of construction.
- 4. You shall notify this office of any proposed modifications to the project, including revisions to any of the plans or documents cited in this authorization. You must receive approval from this office before work affected by the proposed modification is performed.
- 5. You shall notify this office prior to the transfer of this authorization and liabilities associated with compliance with its terms and conditions. The transferee must sign the authorization in the space provided and forward a copy of the authorization to this office.
- 6. Work in the unnamed tributary to the Kishwaukee River should be timed to take place during low or no-flow conditions. Low flow conditions are flow at or below the normal water elevation.
- 7. The plan will be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the cofferdam. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.
- 8. Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams are not permissible.
- 9. The cofferdam must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the cofferdam cannot be completed from shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the

water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.

- 10. If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.
- 11. During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymers systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must be identified in the plan. Discharge water is considered clean if it does not result in a visually identifiable degradation of water clarity.
- 12. The portion of the side slope that is above the observed water elevation shall be stabilized as specified in the plans prior to accepting flows. The substrate and toe of slope that has been disturbed due to construction activities shall be restored to proposed or preconstruction conditions and fully stabilized prior to accepting flows.

The authorization is without force and effect until all other permits or authorizations from local, state, or other Federal agencies are secured. Please note that IEPA has issued Section 401 Water Quality Certification for this RP. These conditions are included in the enclosed fact sheet. If you have any questions regarding Section 401 certification, please contact Mr. Dan Heacock at IEPA's Division of Water Pollution Control, Permit Section #15, by telephone at (217) 782-3362.

Once you have completed the authorized activity, please sign and return the enclosed compliance certification. If you have any questions, please contact Mr. Soren Hall of my staff by telephone at 312-846-5532, or email at Soren.G.Hall@usace.army.mil.

Sincerely,

Hung homae

Keith L. Wozniak Chief, West Section Regulatory Branch

Enclosures

Copy Furnished (with authorization): McHenry-Lake County SWCD (Ed Weskerna) Baxter & Woodman (David Hemmerich)

PERMIT COMPLIANCE



CERTIFICATION

| Permit Number: | LRC-2014-00419 |
|----------------|-------------------------------------------|
| Permittee: | Catherine Peterson Village of Lakewood |
| Date: | September 4, 2014 |

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of said permit and if applicable, compensatory wetland mitigation was completed in accordance with the approved mitigation plan.¹

PERMITTEE

DATE

Upon completion of the activity authorized by this permit and any mitigation required by the permit, this certification must be signed and returned to the following address:

U.S. Army Corps of Engineers Chicago District, Regulatory Branch 231 South LaSalle Street, Suite 1500 Chicago, Illinois 60604-1437

Please note that your permitted activity is subject to compliance inspections by Corps of Engineers representatives. If you fail to comply with this permit, you may be subject to permit suspension, modification, or revocation.

¹ If compensatory mitigation was required as part of your authorization, you are certifying that the mitigation area has been graded and planted in accordance with the approved plan. You are acknowledging that the maintenance and monitoring period will begin after a site inspection by a Corps of Engineers representative or after thirty days of the Corps' receipt of this certification. You agree to comply with all permit terms and conditions, including additional reporting requirements, for the duration of the maintenance and monitoring period.



office: 1-847-870-0544 fax:1-847-870-0661 www.soilandmaterialconsultants.com us@soilandmaterialconsultants.com

> July 10, 2013 File No. 21015

Mr. Jason J. Fluhr, P.E.,PTOE Baxter & Woodman, Inc. 8678 Ridgefield Road Crystal Lake, IL 60012

> Re: Geotechnical Investigation & Pavement Investigation Lakewood Road & Lake Avenue Lakewood, Illinois

Dear Mr. Fluhr:

We are submitting our report for the geotechnical and pavement investigation completed on portions of Lakewood Road and Lake Avenue located in the Village of Lakewood, Illinois.

The investigation was requested to determine the pavement sections and subsurface soil conditions in existing and proposed pavement areas. The information is intended to assist in design and construction of the proposed pavement widening for a new bike lane as well as a mill and surface overlay.

SCOPE OF THE INVESTIGATION

The field investigation included the visual examination of the pavement surface and the adjacent site conditions. A total of 28 test locations were established as shown on the enclosed sketches. The pavement section was cored to determine material types and thicknesses at locations C-101 to C-110. Additionally, the supporting soils were visually and texturally classified in the field to depths of 10.0 feet at locations B-1 to B-18.

Pavement materials and soil samples obtained during the field investigation were returned to our laboratory for engineering review. Soil testing included determination of moisture content. Cohesive soils obtained by split barrel sampling were further tested to determine dry unit weight and unconfined compressive strength. The results of all field and laboratory testing are included in summary with this report.

DISCUSSION

LAKE AVENUE

Cores C-101 to C-103 and borings B-1 to B-4 were performed on Lake Avenue between Edgewater Drive and Huntley Road. Visual examination of the pavement reveals some areas with minor distress. These include meandering cracks and some joint failures.

8 WEST COLLEGE DRIVE - ARLINGTON HEIGHTS, IL 60004

Coring operations noted that reflective crack control fabric was present beneath the most recent surface overlay at each location. The existing pavement section included 5.0 inches to 7.5 inches of bituminous concrete over 7.0 inches to 15.5 inches of base. The total pavement section was found to range in thickness from 12.0 inches to 23.0+ inches at these locations.

Soil borings were performed at 4 locations. Locations B-1 and B-3 were performed off of the pavement. Boring 1 encountered 3.0 feet of topsoil over 5.5 feet of very high moisture content and low strength organic silt, overlying a medium dense sand/gravel mixture. Boring 3 encountered medium dense sand/gravel and tough clay/silt mixtures. The subgrade soils beneath the base at borings B-2 and B-4 are found to vary between very tough clay/silt fill and very loose sand/gravel fill soil mixtures. Underlying natural soil conditions include medium dense sand/gravel mixtures at boring B-2.

The proposed widening areas should be prepared according to the recommendations in the Subgrade Preparation section of this report. These include the removal of topsoil as well as removal or aeration of underlying high moisture content soils. Unstable soil conditions can be expected in the areas of B-1 and B-4 which will require undercutting and replacement with a crushed granular bridging material. The placement of crushed aggregate bridging material, possibly in conjunction with the use of an appropriate geotextile fabric or geogrid, should only proceed after review of the proof-roll conditions by the Soil Engineer.

We believe the complete removal of all deep topsoil, organic silt, and low-strength fill soils would be cost prohibitive. These soils will remain below the new pavement sections. Their continued presence may reduce pavement life and result in earlier maintenance or replacement of the pavement surface.

We understand the existing pavement will have a grind and overlay form of rehabilitation. Generally, this would include milling of the existing bituminous surface as needed for overlaying. Areas with extensive pavement deterioration will require full depth patching with either bituminous concrete binder or a combination of crushed aggregate (CA06) and binder. A leveling binder should then be placed as needed. The use of a reflective crack control fabric can also be considered. The new design thickness of HMA surface can then be placed.

LAKEWOOD ROAD

Cores C-104 to C-110 and borings B-5 to B-18 were performed on Lakewood Road between Haligus Road and Ackman Road. Visual examination of the pavement reveals some areas with minor distress. These include meandering cracks and some joint failures.

Coring operations noted that reflective crack control fabric was present beneath the most recent surface overlay at location C-108. The existing pavement section included 3.75 inches to 10.5 inches of bituminous concrete over 5.5 inches to 19.25 inches of base. The total pavement section was found to range in thickness from 16.0 inches to 23.0+ inches at these locations.

Borings B-5 to B-18 were performed in the existing shoulder approximately 2.0 feet from the edge of pavement. Site surface conditions include the granular shoulder, vegetation, topsoil

Page 3

and fill soil conditions. The granular shoulder aggregate consists of 4.0 inches to 15.0 inches of crushed limestone sometimes contaminated with some silt, or sand and gravel.

Topsoil was present at the surface or directly underlying the granular shoulder at locations B-6, B-7, B-8, B-9, B-16, and B-17. The topsoil is classified as dark brown to black silt/clay mixtures with traces of roots usually present and was found extending to depths of 2.5 feet to 4.0 feet at these locations.

Fill soil conditions were encountered at the surface or underlying the granular shoulder at borings B-10, B-11, B-12, B-13, B-14, and B-18. The fill consists of very loose to loose silt/clay and sand/gravel mixtures along with tough to very tough clay/silt mixtures extending to depths of 1.5 feet to 5.0 feet. The limits of fill placement were not determined within the scope of this investigation. The fill soil conditions are found to overlie the apparent natural topsoil at borings B-12 and B-13 extending to depths of 6.0 feet to 6.5 feet.

Underlying natural soil conditions consist primarily of cohesive soils. These are classified as stiff to hard clay/silt mixtures with lesser portions of sand and gravel. The upper portions of these soils are sometimes high in moisture content with values in excess of 20.0 % determined at some locations.

Non-cohesive soils were also encountered as indicated. These include very loose to medium dense silt/clay, sand/gravel and sand/silt mixtures. The non-cohesive granular soils are often in a damp to very damp condition. Cobbles and boulders may be present within the site soils at any elevation, although none were encountered while drilling.

The proposed widening areas should be prepared according to the recommendations for Subgrade Preparation section in this report. These include the removal of topsoil as well as removal or aeration of underlying high moisture content soils. Unstable soil conditions can be expected in the areas of borings B-6 to B-10, B-12, B-13 and B-15 to B-17 which may require undercutting and replacement with a crushed granular bridging material. The placement of crushed aggregate bridging material, possibly in conjunction with the use of an appropriate geotextile fabric or geogrid, should only proceed after review of the proof-roll conditions by the Soil Engineer.

We believe the complete removal of all deep topsoil, loose fill soils, buried topsoil and high moisture content/low-strength natural soils would be cost prohibitive. These soils will remain below the new pavement sections. Their continued presence may reduce pavement life and result in earlier maintenance or replacement of the pavement surface.

We understand the existing pavement will have a grind and overlay form of rehabilitation. Generally, this would include milling of the existing bituminous surface as needed for overlaying. A leveling binder could then be placed as needed. The use of a reflective crack control fabric can also be considered. The new design thickness of HMA surface can then be placed.

SUBGRADE PREPARATION

Subgrade preparation should include the removal of unsuitable surface conditions including the existing shoulder material, vegetation, high organic content topsoil, root matter, organic silt, and other deleterious conditions which may be encountered. The existing uncontaminated granular shoulder materials could be stockpiled for reuse as needed. The unsuitable soil should be removed to a distance of at least 1.0 foot beyond the edge of the pavement. Additional overdigging equal to the depth of fill required below the widening should be considered. The soils in cut areas should be excavated to establish design subgrade elevations. After removal has been completed the exposed subgrade soils should be proof-rolled and the soils compacted to a minimum of 95% compaction based on the standard proctor, AASHTO T-99 or ASTM D-698, within 1.0 foot of the surface.

When proof-rolling reveals unstable soil conditions due to high moisture content these soils should be aerated or removed. Discing and aeration of the soil can be effective to depths of up to 1.0 foot depending upon the equipment used. If the high moisture content condition extends to depths greater than the effective depth of discing then removal of the unstable soils will be necessary.

Unstable soils are those which are found to excessively rut (about 0.5" or more) and/or deflect significantly under dynamic loading. These conditions often occur when high soil moisture contents are present. Undercuts that are recommended for subgrade remedial treatment do not require full depth removal of unstable soils. Soft or unstable soils can often be bridged by use of an effective depth of crushed granular material, possibly up to 2.0 feet. The extent and depth of subgrade treatment should be determined in the field based on the results of proof-rolling and cone penetrometer tests. The use of stockpiled aggregate or imported aggregate such as PGES in conjunction with an appropriate ground stabilization fabric or geogrid can be utilized to bridge unstable soil conditions.

Areas where fill is required to establish the design subgrade elevation should be prepared as indicated above. Properly prepared areas can then be filled using suitable onsite soils or stockpiled materials. Fill soil should be placed in lifts not to exceed 8.0 inches when uncompacted. Each lift should exceed the minimum compaction requirement prior to placement of the next lift. If high soil moisture content prevents achieving minimum compaction requirements then it will be necessary to disc and aerate the soil prior to final compaction. Compaction requirements also apply to backfill placement around structures and within trench excavations located beneath pavement areas. The moisture content of fill soils should be within approximately 3.0% of optimum moisture content as determined by the standard proctor test in order for the soils to meet or exceed minimum compaction requirements.

pH and ORGANIC CONTENT

The soils that were sampled at various locations and depths have been tested in accordance with ASTM D 4972-01 and have pH levels of:

| Boring | <u>Sample</u> | Depth | рH |
|--------|---------------|-------------|-----|
| 1 | 4 | 6.0' - 7.5' | 8.0 |
| 2 | 2 | 1.5' – 2.5' | 9.0 |
| 3 | 2 | 1.0' – 2.5' | 8.3 |
| 4 | 2 | 3.5' - 5.0' | 8.4 |
| 5 | 2 | 15" – 2.5 | 8.4 |
| 6 | 2 | 3.5' – 5.0' | 8.3 |
| 7 | 3 | 5.5' – 6.0' | 8.6 |
| 8 | 3 | 3.5' – 5.0' | 8.3 |
| 9 | 3 | 3.5' – 5.0' | 8.8 |
| 10 | 2 | 1.5' – 2.5' | 8.6 |
| 11 | 2 | 1.5' – 2.5' | 9.0 |
| 12 | 2 | 3.5' – 5.0' | 8.1 |
| 13 | 4 | 3.5' – 5.0' | 8.3 |
| 14 | 2 | 1.5' – 2.5' | 8.0 |
| 15 | 2 | 2.0' – 2.5' | 8.7 |
| 16 | 3 | 4.0' – 5.0' | 8.1 |
| 17 | 2 | 3.5' – 4.0' | 7.9 |
| 18 | 2 | 1.5' – 2.5' | 8.5 |

The topsoil was also tested at various locations and depths and has organic contents of:

| Boring | Sample | Depth | Organic Content |
|-----------------------------|-----------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------|
| 1 6 7 8 9 16 | 2 1 2 2 1 | 1.0' - 2.5' 1.0' - 2.5' 1.0' - 2.5' 1.0' - 2.5' 1.0' - 2.5' 1.25' - 2.5' | 8.4 % 3.6 % 4.3 % 4.5 % 3.0 % 4.8 % |
| 17 | 1 | 1.0' – 2.5' | 7.5 % |

CONCLUSION

The information within this report is intended to provide initial information concerning subsurface soil and water conditions on the site. Variations in subsurface conditions are expected to be present between boring locations due to naturally changing and filled soil conditions.

7.3

Our understanding of the proposed improvements is based on limited information available to us at the writing of this report. The findings of the investigation and the recommendations presented are not considered applicable to significant changes in the scope of the improvements or applicable to alternate site uses. We recommend that proposed pavement and grading plans be reviewed by our office to determine if additional considerations are necessary to address anticipated subsurface conditions. Obtaining additional soil borings may be warranted to further define the depth and limits of restrictive subsurface conditions.

The soils exposed in soil undercut areas and at subgrade elevations should be evaluated for suitability prior to placement of structural fill. Soils and aggregates placed as structural fill should be tested as the work progresses to verify that minimum compaction requirements have been met.

If you have any questions concerning the findings or recommendations presented in this report, please let me know.

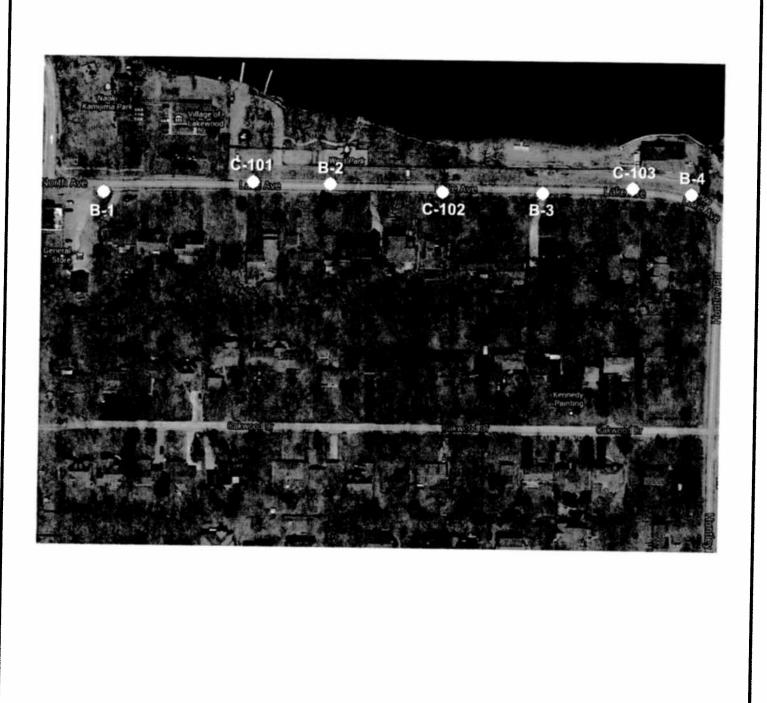
Very truly yours,

SOIL AND MATERIAL CONSULTANTS, INC.

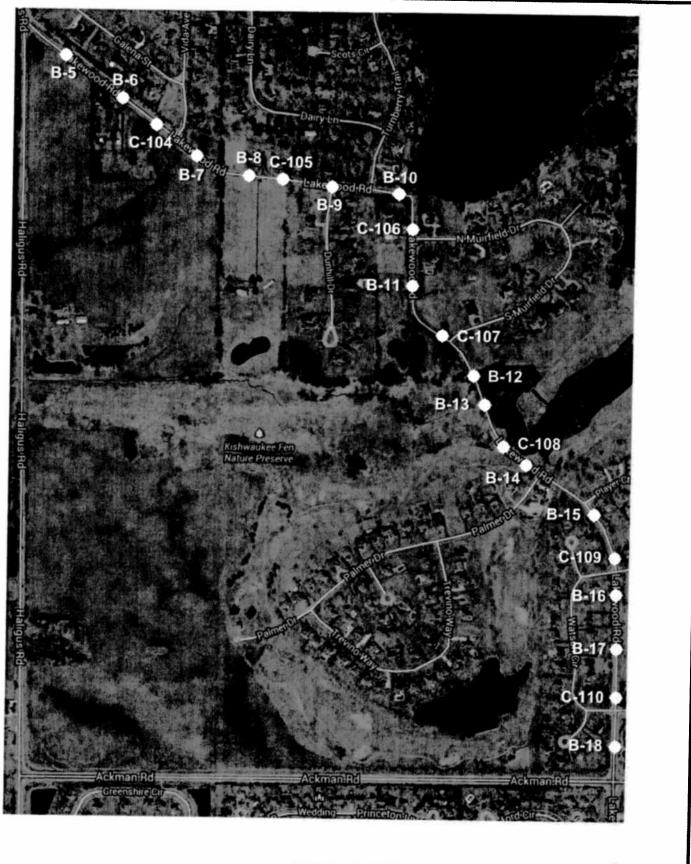
h.l. Htto

Joseph A. Klawitter, P.E. Project Engineer

JAK:jk Enc.



| SMC | | SOIL AND MATERIAL LOCATION CONSULTANTS, INC. SKETCH | | | | | |
|-----------|-------|--------------------------------------------------------|-----------------|--|--|--|--|
| Client: | | BAXTER & WO | DODMAN, INC. | | | | |
| Project: | LAK | LAKEWOOD ROAD & LAKE | | | | | |
| Location: | | LAKEWOO | | | | | |
| File No. | 21015 | Date: 06-18 | -13 Scale: NONE | | | | |



| N |
|----|
| A |
| AP |
| , |

| SMC | | | MATERIAL INTS, INC. | LOCATION SKETCH | | |
|-----------|-----------------------------|-------|------------------------|--------------------|--|--|
| Client: | BAXTER & WOODMAN, INC | | | | | |
| Project: | LAKEWOOD ROAD & LAKE AVENUE | | | | | |
| Location: | LAKEWOOD, ILLINOIS | | | | | |
| File No. | 21015 | Date: | 06-18-13 | Scale: NONE | | |

SOIL AND MATERIAL CONSULTANTS, INC.

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661
 Date:
 5/31/13

 File No.:
 21015

CORE LOG

| Client: Baxter & Woodman, Inc. | | | _Reference | Lakewood | Rd. | å | Lake | Ave., | Lakewood,IL | |
|--------------------------------|-----------|-----|---------------|----------|-----|---|------|-------|-------------|--|
| Core No | D: | 101 | Work Done By: | AC & DA | | | | | | |
| Locatior | n of Core | e: | See | Sketch | | | | | | |

Comments:_____

| () | Depth, In.) | | |
|----------------------------------------------------|-------------|--------------------------------------------------|-----------------|
| 0 | | Type of Material | <u>Recovery</u> |
| 1 | | 1-1/2" Bituminous concrete - surface PETROMAT | Full |
| 2 3 | | 2-0" Bituminous concrete - binder | Full |
| 4 5 | | 3-0" Bituminous concrete - binder | Full |
| 6 7 | | l-0" Built-up surface treatments | Partial |
| 8 9 10 11 | | 4-1/2" Crushed gravel with fines | Partial |
| 12 13 14 15 16 17 18 19 20 | | 11-0" Gravel, some large | Partial |
| | | Total 23-0"+ | |

 $\neg \neg$

SOIL AND MATERIAL CONSULTANTS, INC.

 Date:
 5/31/13

 File No.:
 21015

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661

CORE LOG

| Client: Ba | axter & Wood | lman, Inc. | _Reference_ | Lakewood | Rd. | å | Lake | Ave., | Lakewood,II |
|-------------|--------------|---------------|-------------|----------|-----|---|------|-------|-------------|
| Core No: | 102 | Work Done By: | AC & DA | | | | | | |
| Location of | Core: | See | Sketch | | | | | | |

Comments:_____

| (| Depth, In.) | | |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------|
| 0 | · · · · | Type of Material | Recovery |
| 1 | | 1-3/4" Bituminous concrete - surface PETROMAT | Full |
| 2 3 | | l-1/4" Bituminous concrete - binder | Ful1 |
| 4 | | 2-0" Bituminous concrete - binder | Full |
| 5 6 7 | | 2-0" Crushed gravel with fines | Partial |
| 8 9 | | | |
| 10 | | 5-0" Crushed & uncrushed gravel with fines | Partial |
| 11 | | | |
| 12 | E.O.C. | Total 12-0" | |
| 13 | | | |
| 14 | | | |
| 15 16 | | | |
| 17 | | | |
| 18 | And the second se | | |
| 19 | | | |
| 20 | | | |

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661
 Date:
 5/31/13

 File No.:
 21015

CORE LOG

| Client: | Baxter & Woodman | n, Inc. | _Reference_ | Lakewood | Rd. | & | Lake | Ave., | Lakewood,IL |
|----------|------------------|---------------|-------------|----------|-----|---|------|-------|-------------|
| Core No: | 103 | Work Done By: | AC & DA | | | | | | |
| Location | of Core: | See | Sketch | | | | | | |

Comments:_____

| (D | Depth, In.) | | | | <u> </u> | | | |
|----|-------------|----------|----------|--------------|----------|------------|-------|----------|
| 0 | | _ | Туре | e of Materia | al | | | Recovery |
| 0 | |] 1-1/4" | Bitumino | ous concr | ete - | surface | | Full |
| 1 | | PETROM | AT | | | | | |
| 2 | | 1-1/4" | Bitumino | ous concr | ete - | binder | | Full |
| 3 | | 2-0" | Bitumin | ous concr | ete - | binder | | Ful1 |
| 4 | | | Dredmin | da concr | | DIRCI | | LULI |
| 5 | | | | | | | | |
| 6 | | 3-0" | Bitumino | ous concr | ete - | binder | | Full |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | 10-1/2" | Crushed | & uncrus | hed gr | cavel with | fines | Partial |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | E.O.C. | Total l | 8-0" | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| L. | | | | | | | | |

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661
 Date:
 5/31/13

 File No.:
 21015

CORE LOG

| Client: | Baxter | & Woodma | n, Inc. | _Reference_ | Lakewood | Rd. | & | Lake | Ave., | Lakewood,IL |
|----------|-----------|----------|---------------|-------------|----------|-----|---|------|-------|-------------|
| Core No: | 1 | 04 | Work Done By: | AC & DA | | | | | | |
| Location | of Core:_ | | See | Sketch | | | | | | |

Comments:_____

| (Depth, In | | |
|------------|--------------------------------------|----------|
| 0 [| Type of Material | Recovery |
| 1 | 1-1/2" Bituminous concrete - surface | Full |
| 2 | | |
| 3 | | |
| 4 | 4-0" Bituminous concrete - binder | Full |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | 10-1/2" Unorushed gravel with fines | Partial |
| 11 | contaminated with clay | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 E.O.C | Total 16-0" | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| L | | |

X.

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661
 Date:
 5/31/13

 File No.:
 21015

CORE LOG

| Client:I | ent:Baxter & Woodman, Inc. | | | Lakewood | Rd. | & | Lake | Ave., | Lakewood,IL |
|-------------|----------------------------|---------------|---------|----------|-----|---|------|-------|-------------|
| Core No:_ | 105 | Work Done By: | AC & DA | | | | | | |
| Location of | of Core: | See | Sketch | | | | | | |

Comments:_____

| (D | epth, In.) | | | ······ | <u></u> | | |
|------|------------|---------|---------------|---------|----------------|-------------|----|
| 0 | r | 1 | Type of Ma | aterial | | Recover | У |
| 1 | | 1-1/2" | Bituminous co | oncrete | - surface | Full | |
| 2 | | 2-1/4" | Bituminous co | oncrete | - binder | Full | |
| 3 | | | | | | | |
| 4 | | t | | | | | |
| 5 | | | | | , | | |
| 6 — | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 — | | 19-1/4" | Crushed & unc | rushed | gravel, some 1 | arge Partia | al |
| 11 | | | | | · | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 — | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| L | J | Total 2 | 3-0"+ | | | | |

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661
 Date:
 5/31/13

 File No.:
 21015

CORE LOG

| Client: | Baxter & Woo | odman, Inc. | _Reference_ | Lakewood | Rd. | & | Lake | Ave., | Lakewood,IL |
|----------|--------------|---------------|-------------|----------|-----|---|----------------------------------------------------------------------------------------------------------------|-------|-------------|
| Core No: | 106 | Work Done By: | AC & DA | | | | e de constante de la constante | | |
| Location | of Core: | See | Sketch | | | | | | |

Comments:_____

| (Depth, In.) | | |
|------------------|--------------------------------------|----------|
| 0 | Type of Material | Recovery |
| 1 | 1-1/4" Bituminous concrete - surface | Full |
| 2 | | |
| 3 | 3-0" Bituminous concrete - binder | Full |
| 4 | - | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | 11-3/4" Crushed & uncrushed grave1 | Partial |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 <u>E.O.C.</u> | - Total 16-0" | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661
 Date:
 5/31/13

 File No.:
 21015

CORE LOG

| Client: | Baxter & Woodman | n, Inc. | _Reference | Lakewood | Rd. | & | Lake | Ave., | Lakewood,IL |
|----------|------------------|----------------|------------|------------------------------------------------|---------|-------------|------|-------|-------------|
| Core No: | 107 | Work Done By:_ | AC & DA | | | | | | |
| Location | of Core: | See | Sketch | an baar an | | | | | |

Comments:_____

| •••••••••••••••••••••••••••••••••••••• | | |
|----------------------------------------|------------------------------------------------------------------|----------|
| (Depth, In.) | Type of Material | Recovery |
| 0 [| | |
| 1 | 1-3/4" Bituminous concrete - surface | Full |
| 2 | | |
| 3 | 2-1/4" Bituminous concrete - binder | Full |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | 11-0" Crushed & uncrushed gravel with fines | Partial |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | Densis 1 |
| 18 | 8-0" Crushed stone with fines slightly contaminated with clay | Partial |
| 19 | | |
| 20 | | |
| | Total 23-0"+ | |

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661
 Date:
 5/31/13

 File No.:
 21015

CORE LOG

| Client: | Baxter & Woodma | an, Inc. | _Reference_ | Lakewood | Rd. | & | Lake | Ave., | Lakewood,IL |
|----------|-----------------|-----------------|-------------|----------|-----|---|------|-------|-----------------------------------------------------------|
| Core No | 108 | _ Work Done By: | AC & DA | | | | | | 11111111111111111111111111111111111111 |
| Location | of Core: | See | Sketch | | | | | | annan an ta Mataon an San San San San San San San San San |
| | | | | | | | | | |

Comments:_____

| (De | epth, In.) | | |
|-----|------------|--------------------------------------|----------|
| 0 r | ~~~···· | Type of Material | Recovery |
| 1 | | 1-1/2" Bituminous concrete - surface | Full |
| 2 | | PETROMAT | |
| 3 | | 2-1/2" Bituminous concrete - surface | Full |
| 4 | | - | |
| 5 | | 1-3/4" Bituminous concrete - surface | Full |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | 11-1/4" Crushed & uncrushed gravel | D |
| 12 | | ri i/4 orusneu a uncrusneu gravei | Partial |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | E.O.C. | Total 17-0" | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| L | | | |

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661 Date: 5/31/13

File No.: 21015

CORE LOG

| Client: | Baxter & Woodma | n, Inc. | _Reference_ | Lakewood | Rd. | & | Lake | Ave., | Lakewood,IL |
|----------|-----------------|----------------|-------------|----------|-----|---|------|-------|-------------|
| Core No: | 109 | Work Done By:_ | AC & DA | | | | | | |
| Location | of Core: | See | Sketch | | | | | | |

Comments:_____

| · <u></u> | | | | |
|-----------|-------------|---------|-------------------------------|----------|
| ([| Depth, In.) | | Type of Material | Recovery |
| 0 | [|] 1-0" | | |
| 1 | | | Bituminous concrete - surface | Full |
| 2 | | | | |
| 3 | | 3-1/2" | Bituminous concrete - binder | Full |
| 4 | | | | |
| 5 | | • | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | 18-1/2" | Crushed gravel | Partial |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |
| | | Total 2 | 3-0"+ | |

X

8 WEST COLLEGE DRIVE OFFICE: (847) 870-0544 ARLINGTON HEIGHTS, IL 60004 FAX: (847) 870-0661 Date: 5/31/13 File No.: 21015

CORE LOG

| Client: | Baxter & Woodma | n, Inc. | _Reference_ | Lakewood | Rd. | å | Lake | Ave., | Lakewood,IL |
|----------|-----------------|---------------|-------------|----------|-----|---|------|-------|-------------|
| Core No | . 110 | Work Done By: | AC & DA | | | | | | |
| Location | of Core: | See | Sketch | | | | | | |

Comments:_____

| (Depth, In. | | D = = = = = = = = = = = = = = = = = = = |
|-------------|--------------------------------------|------------------------------------------------|
| 0 [| Type of Material | Recovery |
| 1 | 2-1/4" Bituminous concrete - surface | Full |
| 2 | | |
| 3 | | |
| 4 | 3-1/2" Bituminous concrete - binder | Ful1 |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | 4-3/4" Bituminous concrete - binder | Full |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | 5-1/2" Crushed gravel with fines | Partial |
| 15 | | |
| 16 | Total 16-0" | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| | | |

| | SOIL AND MATERIAL CONSULTANTS, Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | y : DA | | Pa | age: 1 | 1 of 1 | I |
|--------|-----------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|--------------------------------|------------------------------------|----------|---------------------------------------|---------------------------------------|----------------------|---------|
| Clie | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | 1 | Date Dril | led: | 6/13/ | '13 |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL ments: Equipment: ⊠ CME 45B □ CME 55 □ Hand Auger □ Other | | 0 _ | dry unit weight Ibs./cu.ft. | unconfined compressive strength | | penetror | th, tons/ neter rea | /sq.ft. ading, to | |
| ŋ, fi. | | standard penetration | moisture content | hy uni bs./cu | unconfined compressiv | | standard | | | |
| depth, | CLASSIFICATION | X | | 8 | 0 | | moisture | content | , % | |
| | ElevationExisting SurfaceBrown silt, some fine sand, trace organicmatter, very damp, very loose (topsoil) | | 27.2 | | | | 10 2 | 20 3 | 30 | 40 |
| 1 | | | | | | | | | | |
| 2- | | 2 | 20.2 | | | X | | | | |
| 3- | Black organic silt,very damp,very loose | | | | | | · · · · · · · · · · · · · · · · · · · | | | |
| 4- | | | | | | | - | | | |
| 5 - | <u>₹</u> | 2 | 112.9 | | | X | - | | | |
| 6- | Gray organic silt,very damp-saturated, very loose | | | | | | | | | |
| 7 | | 1 | 94.2 | | | <u> </u> | | · · · · · · · · · · · · · · · · · · · | | 94 |
| 8 | Gray fine-medium sand,some coarse sand & gravel,saturated,medium dense | | | | - - - | | | | | |
| | | 17 | 12.1 | | | | $\wedge \checkmark$ | | | ******* |
| -303d | End of Boring Water encountered a Water recorded a | t 5.3 t 5.(| 5 feet du | uring drilling | n of drillin | g opera | ations (A. | | | (A.D |

| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | y: DA | | F | Page: | 1 of | 1 |
|------------|----------------------------------------------------------------------------|----------|---------------------|--------------------------------|------------------------------------|----------|---------------|----------------------------------|----------|----------|
| Client | : Baxter & Woodman, Inc. | | | File No. 2 | 21015 | D | ate Dr | illed: | 6/13 | /13 |
| | ence: Lakewood Rd. & Lake Ave. Lakewood, IL | | | dry unit weight Ibs./cu.ft. | unconfined compressive strength | | stren | ned con igth, ton ometer n | s/sq.ft. | |
| Τ | Equipment: 🖾 CME 45B 🗆 CME 55 🗔 Hand Auger 🗔 Other | ard | ure T | nit w u.ft. | nfinec | 1 | 1.0 | 2.0 | 3.0 | 4.0 |
| depth, ft. | CLASSIFICATION | standard | moisture content | dry u lbs./c | unconfined compressive | | | d penet e conter | | l", blow |
| ٦Г | Elevation Existing Surface | × | Δ | X | 0 | 1 | 10 | 20 | 30 | 40 |
| | Bituminous concrete - 3.0" | | 1 | | | | Τ | | Ι | T |
| | Brown sand & gravel,damp - 6.5" | | | | | | | | | |
| | Dark brown-brown clay & silt,trace sand & gravel,damp,very tough - Fill | | 19.2 | | | | | | | |
| 2 | Brown fine-medium sand,some coarse sand | | | | | | | | | |
| | & gravel,damp,medium dense | 13 | 8.4 | | | | X | | | |
| 3- | | | | | | <u>ب</u> | <u> ^ </u> | | | |
| ° T | Brown fine-medium sand,trace coarse sand | | | | | | | | | 1 |
| | & gravel,damp-saturated,medium dense | | | | | | \$-10-Addav-N | | • | |
| 4- | | | | | | | | | | |
| | y | | | | | | ****** | | | |
| 5 - | 3 | | | | | ~ | / | | | |
| <u> </u> | | 11 | 9.4 | | | 9 | | ********** | | . |
| - | | | | | | | | | | |
| 5- | | | | | ļ | | | | | |
| | | | | | | | | | - | |
| | | | | | | | ********** | | | |
| '- | | | | | ŀ | | | + | | + |
| | | 10 | 15.8 | | ľ | | $(\land$ | | | |
| - | | | | | | | <u> </u> | * | | |
| 5 | | | | | ŀ | | | | 1 | 1 |
| | | | | | Į. | | ***** | | | |
| | | | | | | | | 1 | 1 | |
| | | | | | - | | | ***** | **** | |
| - | | | | | ŀ | | **** | | | |
| | | 13 | 14.7 | | - | | | | L | |
| ~ | End of Boring Water encountered a | | | uring drilling | | | "سم | | | |

| | SOIL AND MATERIAL CONSULTANTS, Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | y: DA | | Ρ | age: | 1 of | 1 |
|---------|---------------------------------------------------------------------------------|-------------------------|----------|--------------------------------|------------------------------------|----------|---------------------------------------|----------|----------------------------------------|----------|
| Clie | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | 0 |)ate Dri | lled: | 6/13 | /13 |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL ments: | - Log | | dry unit weight Ibs./cu.ft. | unconfined compressive strength | • | penetro | gth, ton | s/sq.ft. | tons/sq. |
| , ft. | Equipment: CME 45B CME 55 Hand Auger Other | standard penetration | moisture | y unit s./cu.1 | iconfir mpres | | | | | 4.0 |
| depth, | CLASSIFICATION | | ľ | | | | moisture | | etration "N", bk ent, % | |
| | Elevation Existing Surface | × | | 8 | 0 | | 10 2 | 20 | 30 | 40 |
| 1_ | Dark brown fine-medium sand,trace coarse sand & gravel,damp | | 7.0 | | | Δ | | - | · · · · · · · · · · · · · · · · · · · | |
| | Brown clay & silt,trace sand & gravel, damp,tough | | | | | | · · · · · · · · · · · · · · · · · · · | | ······································ | |
| 2 | Prove fán - molt - | 5 | 26.7 | 90.8 | 1.1 | × | 0 | € | | |
| 3-1 | Brown fine-medium sand,some coarse sand & gravel,damp-saturated,medium dense | | | | | | | | | |
| I | | | | | | | | | | |
| | | 15 | 4.4 | | • | <u>-</u> | -X- | | | |
| | <u> </u> | | | | | | | | | |
| | Ţ. | | | | - - - - | | | ****** | | |
| | | 12 | 8.5 | | | | X | ····· | | |
| | | | | | | | | | ******** | |
| | | 11 | 11.9 | | 2 m | | $\left \right $ | | | |
| 03d | End of Boring Water encountered a Water recorded a Water recorded a | t 6.5 t 6.5 | feet du | ring drilling | | j opera | tions (A. | | | (4.5) |

| | SOIL AND MATERIAL CONSULTANTS, | INC. | | SOIL | BOR | RINC | G LC | G _ | 4 | |
|------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------|------------------------------------|------------------------------------------|--------------|--------------|----------------|---------------------------------|---------------|
| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | y: DA | | 1 | Page: | 1 of | 1 |
| Clie | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | | Date Dr | 6/13 | 3/13 | |
| | rence: Lakewood Rd. & Lake Ave. Lakewodd, IL | Variante de Vere - de Marie | | ght | unconfined compressive strength | • | strer | ngth, toi | mpressi ns/sq.ft. reading | |
| | ments: Equipment: ⊠ CME 45B □ CME 55 □ Hand Auger □ Other | ation | e + | it wei Lft. | ined essive | | 1.0 | 2.0 | 3.0 | 4.0 |
| depth, ft. | | standard penetration | moisture content | dry unit weight lbs./cu.ft. | unconfined compressiv | × | | | | 'N", blows/ft |
| -b | Elevation Existing Surface | × | | 8 | 0 | | moistu 10 | re conte 20 | ent, % 30 | 40 |
| | Bituminous concrete - 4.5" | | | | | | 1 | 1 | <u> </u> | |
| 1- | Brown-dark brown fine-medium sand,some coarse sand & gravel,trace silt,damp- saturated,very loose to loose - Fill | | | | | | | | ···· | |
| 3- | | 4 | 7.7 | | | X | <u>}</u> | | | |
| 4- | | | | | | | | | | ····· |
| 5 - | | 4 | 8.9 | | ч Ч | -X£ | | | •••• | ····· |
| b - | ₽ <u>₹</u> | | | | - - - | | | | ···· | |
| | | 2 | 5.9 | | | (| | | | |
| | | | | | | | | | | |
| | End of Boring | 6 | 11.8 | | | . | | | | |
| 303d | Water encountered a Water recorded a Water recorded a | t 6.5 | | ring drilling completion hou | operatior of drilling irs after co | g oper | ations (A | | peration | s (A.D.). |

G

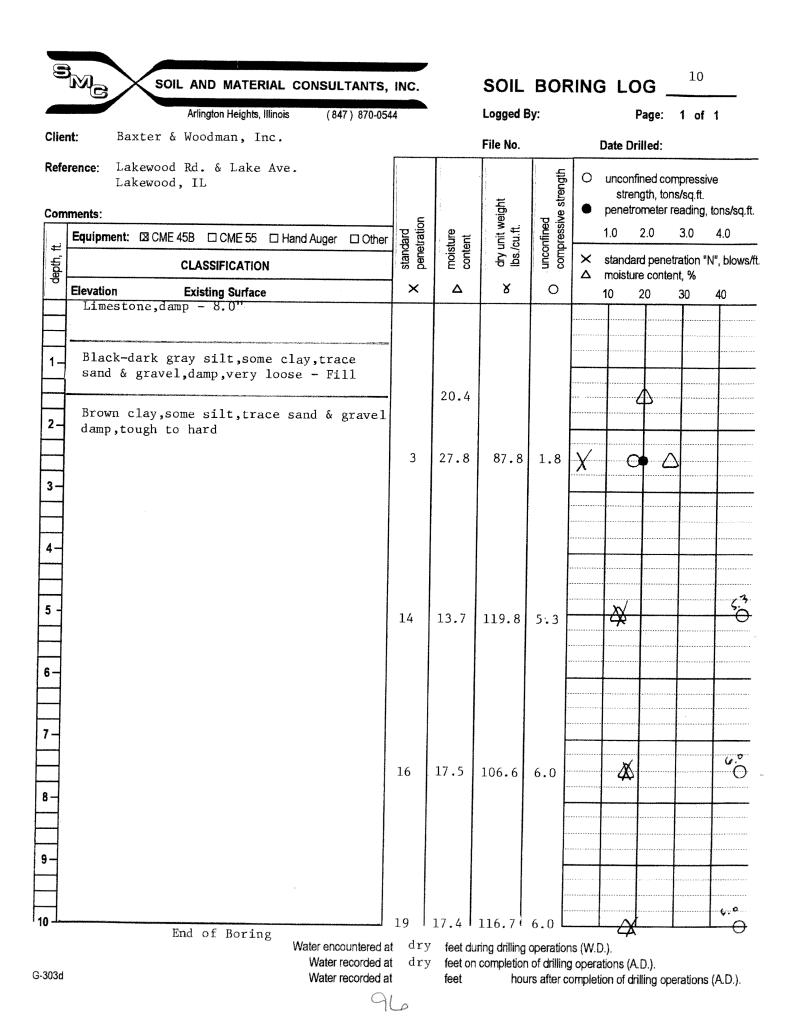
| (U) | SOIL AND MATERIAL CONSULTANTS, | INC. | | SOIL | BOR | | S LO | G _ | 5 | |
|-----------------------|------------------------------------------------------------------------------|-------------------------|---------------------|---------------------------------------|------------------------------------|--------|-------------------------------------|----------------------|---------------------------------------|---------------------|
| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | y: DA | | Pa | age: | 1 of | 1 |
| Clie | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | | Date Dril | led: | 6/13 | /13 |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL | 5 | | dry unit weight Ibs./cu.ft. | unconfined compressive strength | • | penetror | th, ton | s/sq.ft. | o ns/sq .ft. |
| ft. | Equipment: ICI CME 45B CME 55 Hand Auger Other | standard penetration | moisture content | dry unit w Ibs./cu.ft. | unconfined compressiv | | | | | 4.0 |
| depth, ft. | CLASSIFICATION | | | 10 | | | moisture | | | l", blows/ft. |
| | Elevation Existing Surface | × | | 8 | 0 | | 10 2 | 20 | 30 | 40 |
| | Limestone,damp - 6.0" | | | | | | | | | |
| 1- | Dark brown clay,some silt,trace sand & gravel,damp | | 16.2 | | | | | | | |
| 2- | Brown clay,some silt,trace sand & gravel, damp,hard | | | | | | | ** * * * * * * * * * | | |
| 3- | | 8 | 15.4 | 118.3 | 4.4 | 7 | $\langle \Delta$ | | • | 0 |
| 4 | | | | | | ***** | | ***** | | |
| | | | | | | | | | ••• | <u> </u> |
| 5 - | | 14 | 15.0 | 120.7 | 5.3 | | | | | |
| 6- | | | | | | | | | <u> </u> | |
| 7- | Brown silt, some clay, trace sand & gravel, damp, medium dense | | | | | | ••• ••• ••• ••• ••• ••• ••• ••• ••• | | · · · · · · · · · · · · · · · · · · · | |
| | | 12 | 10.8 | | | | x | ********** | | |
| 8- | | 16 | 10.0 | | | | | | | |
| - | | | | | - | | ** * *** | | | |
| | | | | | | ***** | | | | |
| 9- | | | | | - | ****** | | | | ***** |
| | | 10 | 12 0 | | | | | | | |
| 10 ⊥ 3-303d | End of Boring Water encountered a Water recorded a Water recorded a | at dry at dry | | uring drilling n completion hou | n of drillin | g oper | | | erations | (A.D.). |

| W | SOIL AND MATERIAL CONSULTANTS, | INC. | | SOIL | BOF | RING | G LO | G_ | 6 | |
|------------|------------------------------------------------------------------------------|-------------------------|----------|--------------------------------|------------------------------------|---------|--------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged E | y: DA | | F | Page: | 1 of | 1 |
| Clie | nt: Baxter & Woodman, Inc. | | | File No. 2 | 21015 | | Date Dri | illed: | 6/18 | /13 |
| | erence: Lakewood Rd. & Lake Ave. Lakewood, IL | S | | dry unit weight Ibs./cu.ft. | unconfined compressive strength | 0 • | stren penetro | igth, ton ometer n | eading, | e tons/sq.ft. |
| J. | Equipment: ⊠ CME 45B □ CME 55 □ Hand Auger □ Other | standard penetration | moisture | unit v /cu.ft | onfine | | 1.0 | 2.0 | 3.0 | 4.0 |
| depth, ft. | CLASSIFICATION | stan | noi | yb Sd | oun nuc | | standar moistur | | | l", blows/fi |
| ð | Elevation Existing Surface | × | | X | 0 | | | 20 | 30 | 40 |
| | Limestone,some black silt,damp - 4.0" | | 1 | 1 | | | | 1 | | |
| 1_ | Black silt,some clay,trace sand & roots, damp,loose (topsoil) | | | | | | | | | |
| 2- | | | | | | | | | | |
| | | 5 | 16.0 | | | X | | | | |
| 3- | | | | | | | | | | |
| 4- | Brown clay,some silt,trace sand & gravel, damp,very tough to hard | | | | | | ···· | · · · · · · · · · · · · · · · · · · · | | · · · · · · · · · · · · · · · · · · · |
| 5 - | | 9 | 15.7 | 112.5 | 2.6 | | X A | -0 | | · · · · · · · · · · · · · · · · · · · |
| 6- | | | | | | | | | | |
| 8- | | 19 | 13.7 | 116.4 | 6.8 | | Δχ | | · · · · · · · · · · · · · · · · · · · | 6.9 |
| 9- | | | | | | | | | | |
| | | 18 | 4.6 | 115.3 | 6.1 | | | | | 6.\ |
| -303d | End of Boring Water encountered a Water recorded a Water recorded a | t dry t dry | feet du | ring drilling completior | operatio of drillin | ig opei | | | erations | (A.D.). |

| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged I | By: DA | Page: | | | 1 of | 1 |
|------------|--------------------------------------------------------------------------|-------------------------|---------------------|--------------------------------|------------------------------------|--------|-----------|----------------------------------------|-----------|-------------------------------|
| lie | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | ſ | Date D | rilled: | 6/18 | /13 |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL ments: | | | dry unit weight Ibs./cu.ft. | unconfined compressive strength | | stre | ngth, toi | | ve tons/sq.ft |
| | Equipment: CME 45B CME 55 Hand Auger Other | standard penetration | moisture content | unit w cu.ft. | unconfined compressiv | ļ | 1.0 | 2.0 | 3.0 | 4.0 |
| depth, ft. | CLASSIFICATION | standard penetratio | mois | dry lbs./ | Doun Com | | | ard pene ire conte | | N", blows/ |
| ð | Elevation Existing Surface | × | | 8 | 0 | | 10 | 20 | 30 | 40 |
| | Limestone,brown sand & gravel,damp | | | | 1 | | 1 | | | |
| | Black silt, some clay, trace sand & roots, damp, very loose (topsoil) | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | 3 | 20.4 | | | X | | 4 | | |
| ┥ | | | | | | | | | | |
|] | | | | | | •••••• | | | | |
| | Brown-gray clay,some silt,trace sand & gravel,very damp,tough | | | | | | | | | |
| 4 | graver, very damp, cough | | | | | | | | | |
|] | | | | | | ***** | | •••••••••••••••••••••••••••••••••••••• | | |
| ╞ | Brown silt,some clay,trace sand & gravel, | 6 | 24.2 | | | | | $+\Delta$ | | + |
| - | vewy damp | | | | | | | | | |
|]- | | | 19.8 | | | | | <u> </u> | | |
| | Brown clay, some silt, trace sand & gravel, | | | | | | | | | |
| | damp,very tough to hard | | | | | | | | | |
| - | | | | | | | | | | |
| | | 9 | 17.5 | 113.4 | 2.8 | X | (Δ | |) | |
| - | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | ļ. | | ********* | | | 2 2 2 4 4 X X X X X X X X X X |
| | | | | | | | | | | |
| 1 | End of Boring | 19 I | 16.1 | 114.3 | 5.7 L | | -4 | <u>{</u> | 1 | <u> </u> |
| | Water encountered a Water recorded a | | | uring drilling n completio | | | | וחא | | |
| 03d | Water recorded a | | feet | | urs after d | | | | perations | (A.D.). |

| | SOIL AND MATERIAL CONSULTANTS, Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | ly: DA | | I | Page: | 1 of | 1 | |
|------------------|-----------------------------------------------------------------------------|-------------------------|---------------------|--------------------------------|------------------------------------|--------------|-------------|-----------------------------------|----------------------|-------------------|--|
| Clie | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | | Date Dr | illed: | 6/18 | /13 | |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL | | | ght | unconfined compressive strength | 0 | strer | ined cor ngth, ton ometer r | s/sq.ft. | /e tons/sq.ft. | |
| Con | ments: | ation | 9 t | dry unit weight lbs./cu.ft. | fined essive | | 1.0 | 2.0 | 3.0 | 4.0 | |
| , I I | Equipment: CME 45B CME 55 Hand Auger Other | standard penetration | moisture content | dry un bs./ct | Incon | × | standa | rd penel | etration "N", blows/ | | |
| depth, ft. | CLASSIFICATION | × | | 8 | 0 | | | noisture conte | | ent, % | |
| | Elevation Existing Surface | | | | | <u> </u> | 10 | 20 | 30 | 40 | |
| | Black silt,some clay,trace sand & roots, very damp,very loose (topsoil) | | 18.1 | | | | 2 | 2 | | | |
| 1- | | | | | | | | | | | |
| | | | | | | | | | | | |
| 2- | | | | | | | | | | | |
| | | 2 | 26.7 | | | \mathbf{X} | •••• | | | •••• | |
| 3- | | | | | | <u> </u> | | | 1 | | |
| | Brown clay,some silt,trace sand & gravel, | | | | | | | | | | |
| | damp,very tough to hard | | | | | | | | | | |
| 4- | | | | | | | | | | | |
| | | | | | | | | | | | |
| 5 - | | 10 | 15.6 | 117.6 | 2.8 | | XA | |) | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 6- | | | | | | | | | | | |
| | | | | | | | | | | | |
| 7- | | | | | | | | | | | |
| | | 13 | 14.9 | 117.1 | 4.8 | | $ \lambda $ | | | 4.8 | |
| 8- | | | | | | | | | | | |
| | | | | | | | | | | **** | |
| | | | | | | | | | | | |
| 9- | | | | | | | | | | | |
| | | | | | | | | | ** | . a | |
| 10 | End of Boring | 22 | 16.5 | 111.6 | 6.9 l | | | .ly | L | ⊥ <u>°</u> , | |

| 0 | SOIL AND MATERIAL CONSULTANTS, | ING | | SOIL | BOR | | | ÷ - | 9 |
|------------|-------------------------------------------------------------------------------------------|----------------|----------------------|----------------------------------------|------------------------------------|-----------|---------------|---------------|----------------------------------------|
| | Arlington Heights, Illinois (847) 870-054 | | | Logged B | | | | | of 1 |
| Clie | | 4 | | File No. | . | | | | |
| | Sancer a noounan, mer | | T: | | 1 | | Date Drille | | |
| | Lakewood, IL | h | | dry unit weight Ibs./cu.ft. | unconfined compressive strength | • | strengt | | |
| tt. | Equipment: 🖾 CME 45B 🗆 CME 55 🗆 Hand Auger 🗅 Other | standard | moisture content | y unit s./cu. | unconfined compressiv | | | | |
| depth, ft. | CLASSIFICATION | 1 | | 1 | | | | content, % | n "N", blows/ft |
| | Elevation Existing Surface | × | | 8 | 0 | | 10 20 |) 30 | 40 |
| 1 | Dark brown-black silt,some clay,trace sand,gravel & roots,damp,very loose (topsoil) | | 14.2 | | | | | | ······ |
| 2 | Brown clay,some silt,trace sand & gravel, | 3 | 20.7 | | | X | | Δ | |
| 3- | damp,hard | | | | | | | | |
| 5 - | | 13 | 14.8 | 115.0 | 4.7 | | × | | -, , , , , , , , , , , , , , , , , , , |
| 6- | Brown clay,some silt,trace sand & gravel, damp,very tough to hard | | | | | | | | |
| 8- | | 16 | 15.6 | 115.9 | 3.5 | | 28 | |) |
| 9- | | | | | | | | | |
| | | | | | | ********* | | | ٢. |
| 10 L | End of Boring Water encountered a Water recorded a | at dr at dr | y feet d y feet o | 122.3 uring drilling n completio | n operatio n of drillin | g oper | ations (A.E | | <u>``</u> |
| G-303 | d Water recorded a | at S | feet | ho | urs after o | comple | tion of drill | ing operation | ons (A.D.). |



| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | y: | | | Page: | 1 of | 1 |
|----------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------|------------------------------------|---------------|----------------|-----------------------|----------------------------------------|------------|
| Clie | nt: Baxter & Woodman, Inc. | | | File No. | | Date Drilled: | | | | |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL | U | | dry unit weight Ibs./cu.ft. | unconfined compressive strength | • | stre penetr | ngth, tor ometer i | reading, I | tons/sq.ft |
| ft | Equipment: 🖾 CME 45B 🗆 CME 55 🗆 Hand Auger 🖾 Other | standard penetration | moisture | unit v /cu.ft. | onfine | | 1.0 | 2.0 | 3.0 | 4.0 |
| depth, f | CLASSIFICATION | stan | cont | d d | com co | × | | rd pene re conte | | v", blows |
| 8 | Elevation Existing Surface | × | | 8 | 0 | | 10 | 20 | 30 | 40 |
| | Limestone,brown sand & gravel,damp | | 1 | | | | 1 | | <u> </u> | <u> </u> |
| 1_ | Brown-dark brown clay & silt,trace sand & gravel,damp,very tough - Fill | | | | | | | | | |
| 2- | Brown clay,some silt,trace sand & gravel, damp,very tough | | 11.4 | | | | | | ····· | |
| 3- | | 7 | 15.5 | 113.7 | 3.4 | X | | 2 | 0 | • |
| | | | | | | | | | | |
| 4- | Brown fine-medium sand,trace coarse sand & gravel,damp,loose to medium dense | | | | | | | | •••• | |
| 5 - | | 9 | 8.6 | | | 2 | × | | | |
| 6 - | | | | | | | | | | |
| 7- | | | | | | | | | | |
| | | 18 | 4.9 | | | Δ | | | ······································ | |
| 8- | | | | | | | *** | | ••• | |
| 9 | | A . <u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u> | | | * | ********* | | - | | |
| 0 | End of Boring | 23 | 4.2 | | | \triangle | | Ι <u>χ</u> | | L |
| -3030 | Water encountered a Water recorded a | lt dry | | uning drilling n completior | n of drillin | g opei | ations (/ | 4.D.). Irilling op | | |

| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged E | By: DA | | I | Page: | 1 of 1 | |
|----------|--------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------|---------------------------------------|-----------------------|------------|---------------------------------------|
| Clier | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | 5 Date Drilled: 6/18/13 | | | | /13 |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL ments: | u | A Contraction of the second seco | dry unit weight Ibs./cu.ft. | unconfined compressive strength | 0 • | strer penetro | ngth, ton Smeter n | eading, t | ons/sq. |
| ft | Equipment: ID CME 45B CME 55 Hand Auger Other | standard penetration | moisture content | /cu.ft | onfine | ļ | 1.0 | 2.0 | 3.0 | 4.0 |
| depth, 1 | CLASSIFICATION | stan pen | moi | dr Ss. | | | standa moistur | | tration "N | ", blows |
| 8 | Elevation Existing Surface | × | Δ | 8 | 0 | 1 | | 20 | | 40 |
| | Limestone & black silt,damp | | | | 1 | | | | | . |
| 1 | Black-dark gray-brown silt,some clay, trace sand & gravel,damp-very damp,very loose - Fill | | | | | | | | | |
| 3- | | 3 | 22.2 | | | X | · · · · · · · · · · · · · · · · · · · | | | |
| 4- | Brown-dark brown clay & silt,trace sand, very damp,tough - Fill | ٣ | 10.2 | 100.0 | | | | | | · · · · · · · · · · · · · · · · · · · |
| 5 - | Black silt,some clay,trace sand,damp- very damp (topsoil) | 5 | 19.3 20.8 | 108.2 | 1,2 | - X | •• - | | • | |
| 7 | Dark gray to brown-gray clay,some silt, trace sand & gravel,damp,very tough | | 20.0 | | | | | | | |
| | | 9 | 17.8 | 114.7 | 3.2 |) | | | 0 | |
| | | | | | | | | | | |
| | | 9 | 17.5 | 115.0 | 3.0 | | | | | |
| 303d | End of Boring Water encountered a Water recorded a Water recorded a | t dr t dr | y feetd | uring drilling n completio | g operatio n of drillin | g open | ations (A | | berations | |

| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged E | By: DA | | | Page: | 1 of | 1 |
|--------------|----------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------------|------------------------------------|-----------------|---------------|------------------------|----------------------|-----------|
| Clier | , , , | | | File No. | - | | Date D | | 6/18 | |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL | n onennon waaroo o mar V | | sight | unconfined compressive strength | 1 | uncon stre | fined cor ngth, ton | npressiv s/sq.ft. | |
| | Equipment: I CME 45B CME 55 Hand Auger Other | standard | ure n | nit we | nfined | | 1.0 | 2.0 | 3.0 | 4.0 |
| depth, ft. | CLASSIFICATION | standard | moisture content | dry unit weight lbs./cu.ft. | nncol | × | | | | l", blows |
| g | Elevation Existing Surface | × | | 8 | 0 | | moistu 10 | re conte 20 | nt, % 30 | 40 |
| | Black silt,some clay,trace sand,lime- | | 1 | 1 | | | | | | |
| | stone & roots,very damp - Fill | | | | | | | | | |
| 1_ | | | 21.4 | | | | | A | | |
| | Brown-dark brown sand & gravel,damp, loose - Fill | | | | | | | | | |
| 2_ | | | 6.6 | | | -2 | <u></u> | | | |
| | Black-dark gray-brown silt,some clay. trace sand & gravel,damp-very damp,very | 3 | 19.6 | | | $\mathbf{\chi}$ | | | | |
| 3- | loose - Fill | | | | | <u></u> | | 4 | | |
| | | | | | | | | | | - |
| | | | | | | | | | | - |
| 4- | | | | | | | | | | |
| | | | | | | | | | | |
| 5 - | | 3 | 16.9 | | ÷ | X | 1-2 | <u></u> | | |
| | Black silt, some clay, trace sand, damp- very damp, loose (topsoil) | | | | | | | | *** | |
| 3 | | | | | | | | | | |
| | | | 32.4 | | | | | | $ \Delta $ | |
| - | Gray-brown clay,some silt,trace sand & gravel,very damp-damp,stiff to very | | | | | | | | | |
| | tough | 5 | 24.1 | 101.6 | 0.7 | X | | | | |
| | | | | | | | | | | |
| | | | | | | ******* | | *** | | |
| 4 | | | | | | ******* | | | | |
| | | | | | ŀ | | | | | |
| | | | | | | | | | | |
| ,上 | End of Boring | 10 | 18.7 | 114.2 | 2.1 | \rightarrow | (2 | | | |
| | Water encountered a Water recorded a | | | uring drilling n completio | | | | | | |

| _ | Soil and material consultants, | | | SOIL | | (INC | | | 14 | |
|------------|----------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|--------------------------------|------------------------------------|--------|---------------------------|----------------------------|---------------------------------------|----------------------------------------|
| | Arlington Heights, Illinois (847) 870-054 | 4 | | Logged B | | | | age: | 1 of | |
| Clier | | | r | File No. 2 | 1015 | 1 | Date Dril | led: | 6/18/ | 13 |
| Com | rence: Lakewood Rd. & Lake Ave. Lakewood, IL ments: Equipment: ⊠CME 45B □CME 55 □ Hand Auger □Other | standard penetration | moisture content | dry unit weight lbs./cu.ft. | unconfined compressive strength | • • | strenç penetroi 1.0 | gth, tor meter i 2.0 | 3.0 | e ions/sq.ft. 4.0 I", blows/f |
| depth, ft. | CLASSIFICATION | CO CO CO | | | | | moisture | | | , DiOW5/1 |
| _ | Elevation Existing Surface | × | | 8 | 0 | ļ | 10 2 | 20 | 30 | 40 |
| 1- | Limestone,brown sand & gravel,damp Brown-dark brown silt,some clay,trace sand & gravel,damp,loose - Fill | | 15 0 | | | | | | · · · · · · · · · · · · · · · · · · · | |
| 2- | Brown clay,some silt,trace sand & gravel, damp,hard to very tough | 7 | 15.8 | 117.7 | 6.7 |) | | | | , , , |
| 3- | | | | | | | | | | |
| 5 - | | 13 | 17.0 | 118.4 | 4.9 | | XA | | | |
| 7- | | 12 | 17.3 | 117.4 | 7.3 | | ХΔ | | | 1:3 |
| 9- | | 16 | 18.2 | 113.1 | 3.8 | | | | | |
| -303c | End of Boring Water encountered a Water recorded a Water recorded a | t dry t dry | 7 feet du | uring drilling n completio |) operatio n of drillin | g ope | .D.). | | perations | (A.D.). |

| | SOIL AND MATERIAL CONSULTANTS, Arlington Heights, Illinois (847) 870-0544 | 4 | | Logged E | By: DA | | P | age: | 1 of | 1 |
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| lie | nt: Baxter & Woodman, Inc. | | | File No. | 21015 | Date Drilled: 6/18/13 | | | | |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL ments: | u | | dry unit weight bs./cu.ft. | unconfined compressive strength | | stren | gth, ton | | ve tons/sq.1 |
| ft | Equipment: *D CME 45B CME 55 Hand Auger CME of ther | standard penetration | moisture content | unit w /cu.ft. | unconfined | 1 | .0 | 2.0 | 3.0 | 4.0 |
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| ð | Elevation Existing Surface | × | | 8 | 0 | | | 20 | 30 | 40 |
| | Limestone,damp | | <u>†</u> | | 1 | | <u> </u> | 1 | | Т |
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| _ | Brown sand & gravel,damp,loose | | | | | | | | | |
| \neg | Second Cana a Braver, camp, 10000 | | | | | | | | •••• | |
| | | | 7.5 | | | | | | | |
| \neg | Brown clay, some silt, trace sand & gravel, | | | | | | | | | |
| | very damp-damp,stiff to hard | 3 | 21.2 | | | •X•••• | ******* | \square | - | |
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| 4 | | 21 | 13.3 | 125.2 | 6.9 | | \wedge | (| | V'O |
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| - | | | | | | | | | | |
| 1 | | | | | ». | | | | | |
| 4 | Gray clay, some silt, trace sand & gravel, | | | | F | | | | ***** | |
| | damp,hard | | | | | | | | | |
|] | | 21 | 14.1 | 125.9 | 7.4 | | Δ | (| | 1.4 |
| | End of Boring Water encountered at | | | ining drilling | | ne /\N/ D | \sim / | ` | | \cup |

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| lier | , | | | File No. | | | Date Dri | - | 6/18 | |
| | rence: Lakewood Rd. & Lake Ave. Lakewood, IL ments: Equipment: ⊠ CME 45B □ CME 55 □ Hand Auger □ Other | rd ation | tt ee | dry unit weight Ibs./cu.ft. | unconfined compressive strength | • | penetro | gth, tons meter re | s/sq.ft. | |
| ≓ G | | standard penetration | moisture content | dry un Ibs./ct | unconfined compressiv | × | standar | | | ", blows |
| aepu' | Elevation Existing Surface | × | | × | 0 | | moisture | | nt, % 30 | 40 |
| | Limestone,brown sand & gravel,damp | | | | | | | | 1 | |
| | Black silt,some clay,trace sand,damp- | | | | | | ····· | | | •• |
| | very damp, very loose (topsoil) | , | | | | | | | | |
| | | 4 | 22.9 | | | × | | | | |
| | | | 25.3 | | | | | | | |
| | Brown silt,some clay,trace sand,very damp,very loose | 4 | 19.2 | | | \checkmark | | | | • |
| | | 4 | 17.2 | | · | ~ | | | | |
| | | | | | | **** | | | | · · · · · · · · · · · · · · · · · · · |
| | Brown fine sand,trace silt,very damp, loose | 5 | 16.4 | | | | | **** | | |
| | Brown-gray clay,some silt,trace sand, very damp,stiff | 2 | 10.4 | | | ~ | | | | |
| | | | | | | | | | | |
| | | 4 | 07.0 | 100.7 | 0.6 | <i>5</i> | | ~ | | |
|)3d | End of Boring Water encountered a Water recorded a Water recorded a | t dry t dry | feet d | 100.7 l uring drilling completio | ; operation n of drillir | ig oper | | | erations | (AD) |

| ent: Baxter & Woodman, Inc. ference: Lakewood Rd. & Lake Ave. Lakewood, IL mments: Equipment: ACME 45B □ CME 55 □ Hand Auger □ Othe CLASSIFICATION Elevation Existing Surface Limestone,brown sand & gravel,damp Black silt,some clay,trace sand,damp, very loose (topsoil) Brown clay,some sand,trace sand,very damp,tough | t standard | Content 53.8 | File No. the init weight the formation of the formation o | 21015 unconfined Compressive strength | • | penetro 1.0 standar moistur | ned cor gth, ton meter r 2.0 d penet | s/sq.ft. eading, 3.0 ration "N | re tons/sq.: 4.0 |
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| Image: Barcewood Rd. & Barce Ave. Lakewood, IL mments: Equipment: CLASSIFICATION Elevation Existing Surface Limestone,brown sand & gravel,damp Black silt,some clay,trace sand,damp, very loose (topsoil) Brown clay,some sand,trace sand,very | - × | | | | • | stren penetro 1.0 standar moistur | gth, ton meter r 2.0 d penet e conter 20 | s/sq.ft. eading, 3.0 ration "N nt, % | tons/sq. 4.0 J", blow |
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| Black silt, some clay, trace sand, damp, very loose (topsoil) Brown clay, some sand, trace sand, very | - 4 | 23.8 | | | × | | | | |
| very loose (topsoil) Brown clay,some sand,trace sand,very | - 4 | 23.8 | | | × | | | | |
| | 4 | 23.8 | | | X | | \wedge | | |
| | | | | | | | | | ••• |
| Brown silt,some clay,trace sand & gravel very damp,loose | | 18.8 | 111.8 | 1.3 | | • 02 | | | |
| | 5 | 15.8 | | , | -X | | | | |
| Brown clay,some silt,trace sand & gravel damp,very tough to hard | 3 | | | | | | | - | |
| | 11 | 15.3 | 119.2 | 3.6 | | X | | | |
| | | | | ۳ ۳ ۳ | | · · · · · · · · · · · · · · · · · · · | *** | | |
| End of Boring Water encountered | 15 l | | 114.6 ¹ Uring drilling | | | - X | | | C |

| | SOIL AND MATERIAL CONSULTANTS, Arlington Heights, Illinois (847) 870-054 | 4 | | Logged E | By: DA | | | Page: | 1 of | 1 |
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| ient: | Baxter & Woodman, Inc. | | | File No. | 21015 | I | Date Di | illed: | 6/18 | /13 |
| | nce: Lakewood Rd. & Lake Awe. Lakewood, IL ents: | G | randon a constant a | dry unit weight Ibs./cu.ft. | unconfined compressive strength | 0 • | stre | ngth, tor | mpressiv ns/sq.ft. reading, l | |
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| | CLASSIFICATION | stan | mois | d Ss | nncc | | | rd pene re conte | tration "N | l", blows |
| E | levation Existing Surface | × | | 8 | 0 | | 10 | 20 | 30 | 40 |
| - | Brown-dark brown-black silt,some clay, trace sand & gravel,damp,loose - Fill | | | | | | | | | |
| | | | 11.6 | | | **** | | | | |
| | Brown clay, some silt, trace sand & gravel, damp, very tough to hard | | | | | | | | | |
| | | 6 | 13.4 | | | X | $ \Delta $ | • | | |
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| | | 12 | 16.6 | 118.9 | 5,5 | | XA | | | <u> </u> |
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| | | 16 | 17.0 | 115.8 | 6.1 | | - 28 | | | 6.`C |
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| l | End of Boring Water encountered a | 21 I t dry | | 119.3 l uring drilling | 7.3 L operation | ns (W.E | <u></u>),). | <u>X</u> | L | —е |



General Notes

SAMPLE CLASSIFICATION

Soil sample classification is based on the Unified Soil Classification System, the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), ASTM D-2488, the Standard Test Method for Classification of Soils for Engineering Purposes, ASTM D-2487(when applicable), and the modifiers noted below.

| CONSISTENC | Y OF COHESIVE | SOILS | RELATIVE DE | ENSITY OF GRANULAR SOILS |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Term | <u>Qu -tons/sq. ft</u> . | N (unreliable) | Term | N - blows/foot |
| Very Soft Soft Stiff Tough Very Tough Hard Very Hard | 0.00 - 0.25 0.26 - 0.49 0.50 - 0.99 1.00 - 1.99 2.00 - 3.99 4.00 - 7.99 8.00 + | 0 - 2 3 - 4 5 - 8 9 - 15 16 - 30 30 + | Very Loose Loose Medium Dense Dense Very Dense | 0 - 4 5 - 9 10 - 29 30 - 49 50 + |
| - - | | DLOGY | DRILLING, SA | MPLING & SOIL PROPERTY SYMBOLS |
| Term Boulder Cobble Gravel -coars -mediu -fine Sand -coars -mediu -fine Silt Clay <u>Modifying Term</u> Trace Little Some And <u>Mois</u> | <u>Size</u> ov 3 in. e 1 in. im 3/8 in. #4 sieve e #10 sieve #200 sieve #200 sieve 0.002 mm smaller tha <u>Percent</u> | e Range ver 8 in. to 8 in. to 3 in. to 1 in. to 3/8 in. to #4 sieve to #10 sieve to #200 sieve n 0.002 mm by Weight 10 20 35 | CF - Continuc HS - Hollow S HA - Hand Au RD - Rotary D AX - Rock Col BX - Rock Col BX - Rock Col S - Rock Col S - Sample N T - Type of S J - Jar AS - Auger Sa SS - Split-spoo ST - Shelby Tr R - Recovery B - Blows/ 6 N - Core WCI - Wet Cave UL - Liquid Lim PL - Plastic lim Pl - Plasticity I | Pus Flight Auger tem Auger ger rilling re, 1-3/16 in. diameter re, 1-5/8 in. diameter re, 2-1/8 in. diameter Number Sample on (2 in. O.D. with 1-3/8 in. I.D.) ube (2 in. O.D. with 1-7/8 in. I.D.) Length, in. in. interval, Standard Penetration Test (SPT) ot to drive 2 in. O.D. split-spoon sampler Ib. hammer falling 30 in., (STP) enetrometer reading, tons/ sq. ft. ntent, % of dry weight Veight of soil, Ibs./ cu. ft. ed Compressive Strength, tons/ sq. ft. at Qu. vel ling ng in -in it, % it, % it, % |
| | | | PI - Plasticity I | • |

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 general liability insurance policy in accordance with Article 107.27:

Village of Lakewood

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.

CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH (BDE)

Effective: April 1, 2014 Revised: August 1, 2014

Add the following to Article 606.02 of the Standard Specifications:

Revise the fifth paragraph of Article 606.07 of the Standard Specifications to read:

110

"Transverse contraction and longitudinal construction joints shall be sealed according to Article 420.12, except transverse joints in concrete curb and gutter shall be sealed with polysulfide or polyurethane joint sealant."

Add the following to Section 1050 of the Standard Specifications:

"1050.04 Polyurethane Joint Sealant. The joint sealant shall be a polyurethane sealant, Type S, Grade NS, Class 25 or better, Use T (T_1 or T_2), according to ASTM C 920."

CONSTRUCTION AIR QUALITY – DIESEL RETROFIT (BDE)

Effective: June 1, 2010

Revised: November 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 ^{1/} | 600-749 | 2002 |
| | 750 and up | 2002 |
| June 1, 2011 ^{2/} | 100-299 | 2003 |
| | 300-599 | 2003 |
| | 600-749 | 2002 |
| | 750 and up | 2006 |
| June 1, 2012 ^{2/} | 50-99 | 2004 |
| | 100-299 | 2003 |
| | 300-599 | 2001 |
| | 600-749 | 2002 |
| | 750 and up | 2006 |

1/ Effective dates apply to Contractor diesel powered off-road equipment assigned to the contract.

2/ Effective dates apply to Contractor and subcontractor 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* (<u>http://www.epa.gov/cleandiesel/verification/verif-list.htm</u>), or verified by the California Air Resources Board (CARB) (<u>http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm</u>); 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

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: January 2, 2015

<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.

<u>STATE OBLIGATION</u>. 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, which may include, but is not limited to:

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

<u>OVERALL GOAL SET FOR THE DEPARTMENT</u>. 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 17.00 % 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 to meet this goal of DBE participation 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.

<u>DBE LOCATOR REFERENCES</u>. 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 <u>www.dot.il.gov</u>.

<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:
 - (1) 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 is not met, evidence of good faith efforts; the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract.

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. In accordance with Section 6 of the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

- (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 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 owneroperator. 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.

<u>CONTRACT COMPLIANCE</u>. 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>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.

- (c) <u>SUBCONTRACT</u>. The Contractor must provide DBE subcontracts to IDOT upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (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) <u>TERMINATION AND REPLACEMENT PROCEDURES</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 this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a). Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment. for work or material unless it is performed or supplied by the listed DBE listed in the Utilization Plan.

As stated above, 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. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department shall provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (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 DBE 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.

FRICTION AGGREGATE (BDE)

Effective: January 1, 2011 Revised: November 1, 2014

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.

| Use | Mixture | Aggregates Allowed |
|---------|---------------|-------------------------------------------------|
| Class A | Seal or Cover | Allowed Alone or in Combination ^{5/} : |
| | | Gravel |
| | | Crushed Gravel |
| | | Carbonate Crushed Stone |
| | | Crystalline Crushed Stone |
| | | Crushed Sandstone |
| | | Crushed Slag (ACBF) |
| | | Crushed Steel Slag |
| | | Crushed Concrete |

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

| Use | Mixture | Aggregates Allowed |
|----------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HMA Stabilized Low ESAL Subbase or Shoulders | | Allowed Alone or in Combination ^{5/} : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{1/} Crushed Concrete |
| HMA High ESAL Low ESAL | Binder IL-19.0 or IL-19.0L SMA Binder | Allowed Alone or in Combination ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete ^{3/} |
| HMA High ESAL Low ESAL | C Surface and Leveling Binder IL-9.5 or IL-9.5L SMA Ndesign 50 Surface | Allowed Alone or in Combination ^{5/} : Crushed Gravel Carbonate Crushed Stone ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/} |
| HMA High ESAL | D Surface and Leveling Binder IL-9.5 SMA Ndesign 50 Surface | Allowed Alone or in Combination ^{5/} : Crushed Gravel Carbonate Crushed Stone (other than Limestone) ^{2/} Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag ^{4/} Crushed Concrete ^{3/} |
| | | Other Combinations Allowed:Up toWith |
| | | 25% Limestone Dolomite |

| Use | Mixture | Aggregates Allowed | d | |
|-----------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--|
| | | 50% Limestone | Any Mixture D aggregate other than Dolomite | |
| | | 75% Limestone | Crushed Slag (ACBF) or Crushed Sandstone | |
| HMA | E Surface IL-9.5 | Allowed Alone or in | Combination ^{5/} : | |
| High ESAL | SMA Ndesign 80 Surface | Crushed Gravel Crystalline Crushed Crushed Sandstone Crushed Slag (ACB Crushed Steel Slag Crushed Concrete ^{3/} No Limestone. |) | |
| | | Other Combinations Allowed: | | |
| | | Up to | With | |
| | | 50% Dolomite ^{2/} | Any Mixture E aggregate | |
| | | 75% Dolomite ^{2/} | Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone | |
| | | 75% Crushed Gravel or Crushed Concrete ^{3/} | Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag | |
| | F Surface IL-9.5 | Allowed Alone or in Combination ^{5/} : | | |
| | SMA Ndesign 80 Surface | Crystalline Crushed S Crushed Sandstone Crushed Slag (ACBF Crushed Steel Slag No Limestone. | | |
| | | Other Combinations | Allowed | |

| Use | Mixture | Aggregates Allowed | d | |
|-----|---------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--|
| | | Up to | With | |
| | | 50% Crushed Gravel, Crushed Concrete ^{3/} , or Dolomite ^{2/} | Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone | |

- 1/ Crushed steel slag allowed in shoulder surface only.
- 2/ Carbonate crushed stone shall not be used in SMA Ndesign 80. In SMA Ndesign 50, carbonate crushed stone shall not be blended with any of the other aggregates allowed alone in Ndesign 50 SMA binder or Ndesign 50 SMA surface.
- 3/ Crushed concrete will not be permitted in SMA mixes.
- 4/ Crushed steel slag shall not be used as leveling binder.
- 5/ When combinations of aggregates are used, the blend percent measurements shall be by volume."

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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.

<u>Quality Control/Quality Assurance (QC/QA)</u>. 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 oneminute 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 edges) | Unconfined Edge Joint Density 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% |
| and the second | 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%" |

HOT MIX ASPHALT – PRIME COAT (BDE)

Effective: November 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 HMA Bases | SS-1, SS-1h, SS-1hP, SS-1vh, RS-1, RS-2, CSS-1, CSS-1h, CSS-1hp, CRS-1, CRS-2, HFE-90, RC-70 |
| Prime Coat on Aggregate Bases | MC-30, PEP" |

Add the following to Article 406.03 of the Standard Specifications.

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 alternative to air blasting, a vacuum sweeper may be used to accomplish the dust removal. 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 | |
|---------------------------------------------------|-----------------------|
| rype of Surface to be Primed | Residual Asphalt Rate |
| | lb/sa ft (ka/sa m) |
| Milled HMA, Aged Non-Milled HMA, Milled Concrete, | 0.05 (0.244) |
| Non-Milled Concrete & Tined Concrete | 0.00 (0.2 14) |
| 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. If a spray paver is not used, 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 pickup under traffic.

The residual asphalt rate will be verified a minimum of once per type of surface to be primed as specified herein for which at least 2000 tons (1800 metric 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, and all areas where the pickup occurred shall be repaired.

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

"Water added to emulsified asphalt, 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 of the Standard Specifications to read:

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

Revise Article 407.02 of the Standard Specifications to read:

"407.02 Materials. Materials shall be according to Article 406.02, except as follows.

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

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

Delete the second paragraph of Article 407.12 of the Standard Specifications.

Revise the first paragraph of Article 408.04 of the Standard Specifications to read:

"**408.04 Method of Measurement.** Bituminous priming material will be measured for payment according to Article 406.13."

Revise the first paragraph of Article 408.05 of the Standard Specifications to read:

"408.05 Basis of Payment. This work will be paid for at the contract unit price per pound (kilogram) of residual asphalt applied for BITUMINOUS MATERIALS (PRIME COAT) or POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT) and at the contract unit price per ton (metric ton) for INCIDENTAL HOT-MIX ASPHALT SURFACING."

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 1 I | | |
|-------------|---------|--------|
| | 160-180 | 70-80 |
| RS-1, CRS-1 | 75-130 | 25-55" |

Add the following to Article 1032.06 of the Standard Specifications.

"(g) Non Tracking Emulsified Asphalt SS-1vh shall be according to the following.

| 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. | Т 59 | | |
| Sieve Test, | % | 0.3 max. | Т 59 | | |
| Tests on Residue from Evaporation | | | | | |
| 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 in Article 1032.06(f)(2)d. of the Standard Specifications to read:

| "Grade | Use |
|---------------------------------------------------------------------------------------------|------------------------------------|
| SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, SS-1vh | Prime or fog seal |
| PEP | Bituminous surface treatment prime |
| 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 Vacuum Sweeper.** The vacuum sweeper shall have a minimum sweeping path of 52 in. (1.3 m) and a minimum blower rating of 20,000 cu ft per minute (566 cu m per minute)."

Add the following to Article 1102 of the Standard Specifications:

"1102.06 Spray Paver. The spreading and finishing machine shall be capable of spraying a rapid setting emulsion tack coat, paving a layer of HMA, and providing a smooth HMA mat in one pass. The HMA shall be spread over the tack coat in less than five seconds after the

application of the tack coat during normal paving speeds. No wheel or other part of the paving machine shall come into contact with the tack coat before the HMA is applied. In addition to meeting the requirements of Article 1102.03, the spray paver shall also meet the requirements of Article 1102.05 for the tank, heating system, pump, thermometer, tachometer or synchronizer, and calibration. The spray bar shall be equipped with properly sized and spaced nozzles to apply a uniform application of tack coat at the specified rate for the full width of the mat being placed."

LRFD PIPE CULVERT BURIAL TABLES (BDE)

Effective: November 1, 2013 Revised: November 1, 2014

Revise Article 542.02 of the Standard Specifications to read as follows:

| "Item | Article/Section |
|----------------------------------------------------------------------------|-----------------|
| (a) Galvanized Corrugated Steel Pipe | 1006 01 |
| (b) Galvanized Corrugated Steel Pipe Arch | 1006.01 |
| (C) Bituminous Coated Corrugated Steel Pipe | 1006.01 |
| (d) Bituminous Coated Corrugated Steel Pipe Arch | 1006.01 |
| (e) Reserved | |
| (f) Aluminized Steel Type 2 Corrugated Pipe | 1006.01 |
| (g) Aluminized Steel Type 2 Corrugated Pipe Arch | 1006.01 |
| (ii) Frecoaled Galvanized Corrugated Steel Pipe | 1006.01 |
| (i) Frecoaled Galvanized Corrugated Steel Pipe Arch | 1006.01 |
| () Corrugated Aluminum Alloy Pipe | 1006 02 |
| (K) Corrugated Aluminum Alloy Pipe Arch | 1006.03 |
| (1) Extra Strength Clay Pipe | 1040.02 |
| (III) Concrete Sewer, Storm Drain, and Culvert Pipe | 1042 |
| (ii) Reinforced Concrete Culvert, Storm Drain, and Sewer Pine | 1042 |
| (0) Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe | 1040 |
| (p) Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pine | 1042 |
| (q) Polyvinyi Chioride (PVC) Pipe | 1040.02 |
| (1) Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior | 1040.02 |
| (s) Corrugated Polypropylene (CPP) pipe with smooth Interior | 1040.07 |
| (1) Conjugated Polyethylene (PE) Pipe with a Smooth Interior | 1040.04 |
| (d) Folyetilylene (PE) Pipe with a Smooth Interior | 1040 04 |
| (v) Rubber Gaskets and Preformed Flexible Joint Sealants for Concrete Pine | 1056 |
| (W) Mastic Joint Sealer for Pipe | 1055 |
| (x) External Sealing Band | 1057 |
| (y) Fine Aggregate (Note 1) | 1002.04 |
| (2) Coarse Aggregate (Note 2) | 1004.05 |
| (aa) Fackayeu Rapid Hardening Mortar or Concrete | 1010 |
| (DD) Nonshrink Grout | 1024 02 |
| (CC) Reinforcement Bars and Welded Wire Fabric | 1006 10 |
| (dd) Handling Hole Plugs | 1042.16 |

Note 1. The fine aggregate shall be moist.

Note 2. The coarse aggregate shall be wet."

Revise the table for permitted materials in Article 542.03 of the Standard Specifications as follows:

| Class | Materials |
|-------|---------------------------------------------------------------------|
| A | Rigid Pipes: |
| | Extra Strength Clay Pipe |
| | Concrete Sewer Storm Drain and Culvert Pipe, Class 3 |
| | 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 |
| С | Rigid Pipes: |
| | Extra Strength Clay Pipe |
| | Concrete Sewer Storm Drain and Culvert Pipe, Class 3 |
| | 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: |
| | Aluminized Steel Type 2 Corrugated Pipe |
| | Aluminized Steel Type 2 Corrugated Pipe Arch |
| | Precoated Galvanized Corrugated Steel Pipe |
| | Precoated Galvanized Corrugated Steel Pipe Arch |
| | Corrugated Aluminum Alloy Pipe |
| | Corrugated Aluminum Alloy Pipe Arch |
| | Polyvinyl Chloride (PVC) Pipe |
| | Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior |
| | Polyethylene (PE) Pipe with a Smooth Interior |
| | Corrugated Polypropylene (CPP) Pipe with Smooth Interior |
| D | Rigid Pipes: |
| | Extra Strength Clay Pipe |
| | Concrete Sewer Storm Drain and Culvert Pipe, Class 3 |
| | Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe |
| | Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pine |
| | Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe |
| F | -lexible Pipes: |
| | Galvanized Corrugated Steel Pipe |
| | Galvanized Corrugated Steel Pipe Arch |
| | Bituminous Coated Corrugated Steel Pipe |
| | Bituminous Coated Corrugated Steel Pipe Arch |
| | Aluminized Steel Type 2 Corrugated Pipe |
| | Aluminized Steel Type 2 Corrugated Pipe Arch |
| | Precoated Galvanized Corrugated Steel Pipe |
| | Precoated Galvanized Corrugated Steel Pipe Arch |
| | Corrugated Aluminum Alloy Pipe |
| | Corrugated Aluminum Alloy Pipe Arch |
| | Polyvinyl Chloride (PVC) Pipe |
| | Corrugated Polyvinyl Chloride (PVC) Pipe with a Smooth Interior |
| | Corrugated Polyethylene (PE) Pipe with a Smooth Interior |
| | Polyethylene (PE) Pipe with a Smooth Interior" |
| | Corrugated Polypropylene (CPP) Pipe with Smooth Interior |

Revise Articles 542.03(b) and (c) of the Standard Specifications to read:

- "(b) Extra strength clay pipe will only be permitted for pipe culverts Type 1, for 10 in., 12 in., 42 in. and 48 in. (250 mm, 300 mm, 1050 mm and 1200 mm), Types 2, up to and including 48 in. (1200 mm), Type 3, up to and including 18 in. (450 mm), Type 4 up to and including 10 in. (250 mm), for all pipe classes.
- (c) Concrete sewer, storm drain, and culvert pipe Class 3 will only be permitted for pipe culverts Type 1, up to and including 10 in (250 mm), Type 2, up to and including 30 in. (750 mm), Type 3, up to and including 15 in. (375 mm); Type 4, up to and including 10 in. (250 mm), for all pipe classes."

Replace the pipe tables in Article 542.03 of the Standard Specifications with the following:

| | T.00.1 | - | | | | 2 | |
|----------|--------------|-----------------|------------------|------------------|------------------|-------------------|-------------------|
| | 1 Jhe 1 | 1 ype z | I ype 3 | Type 4 | Type 5 | Tvpe 6 | Tvne 7 |
| Diameter | Fill Height: | Fill Height: | Fill Height: | Fill Height: | Fill Height: | Fill Heicht | Eill Heicht- |
| cian cie | 3' and less | Greater than 3' | Greater than 10' | Greater than 15' | Greater than 20' | | |
| <u>.</u> | 1' min cover | not exceeding | not exceeding | not exceeding | not exceeding | Greater than 25' | Greater than 30' |
| 12 | 1/1 | 2 = | 15' | 20' | 25' | not exceeding 30. | not exceeding 35' |
| 1 L(| 2 2 | | | 2 | 2 | <u>۸</u> | \ \ |
| 2 0 | 2 2 | = : | | 2 | 2 | > | . > |
| 0 | <u>></u> | | = | 2 | 2 | • > | > > |
| N C | = : | = | | N | 2 | · ^ | ^ |
| 24 | | | | 2 | : 2 | > 2 | > ; |
| 30 | 2 | | | : 2 | 2 2 | > ; | > |
| 36 | | | | 11 | > | > | > |
| 42 | = | | | 2 2 | 2 | > | > |
| 48 | = | : == | | 2 2 | 2 | > | > |
| 54 | | | 141 | | N | > | > |
| 60 | : = | = | | 2 | 2 | > | > |
| 66 | - | | | 2 | 2 | > | > |
| 72 | | - | | 2 | 2 | > | > |
| 78 | : == | | = = | 2 | > | > | > |
| 84 | - == | = = | | 2 | 2020 | 2370 | 2730 |
| 06 | | | | N | 2020 | 2380 | 2740 |
| 96 | = == | = = | | 1680 | 2030 | 2390 | 2750 |
| 102 | = = | | | 1690 | 2040 | 2400 | 2750 |
| 100 | | | | 1700 | 2050 | 2410 | 2760 |
| 001 | | | 1360 | 1710 | 2060 | 2410 | 0770 |

A number indicates the D-Load for the diameter and depth of fill and that a special design is required. Design assumptions; Water filled pipe, Type 2 bedding and Class C Walls

| | | for the R | Table IA: Classe espective Diameters of | Table IA: Classes of Reinforced Concrete Pipe for the Respective Diameters of Pipe and Fill Heights over the Top of the Pipe (Metric) | e Pipe er the Top of the Pipe | | |
|---------------------|----------------------------------------------|---------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------|----------------------|
| | Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | Tvpe 6 | Tyne 7 |
| Nominaf Diameter | Fill Height: | Fill Height: | Fill Height: | Fill Height: | Fill Height: | Fill Height: | Fill Height: |
| | 1 m and less 0.3 m min cover | Greater than 1 m not exceeding 3 m | Greater than 3 m not exceeding 4.5 m | Gre | Greater than 6 m not | Greater than 6 m not Greater than 7.5 m not | Greater than 9 m not |
| 300 | N | | III O'L BIIRDOOM | exceeding o m | exceeding /.5 m | exceeding 9 m | exceeding 10.5 m |
| 375 | 2 | : == | - | 2 2 | 2 : | > | > |
| 450 | 2 | | | 2 2 | 2 | > | > |
| 525 | | | 11 | | 2 | > | > |
| 600 | Ξ | | | 2 2 | 2 | > | > |
| 750 | 2 | : | | 2 2 | 2 : | > | > |
| 906 | | | - | <u> </u> | > | > | > |
| 1050 | = | | | 2 2 | 2 | > | > |
| 1200 | | | | 2 2 | 2 2 | > | > |
| 1350 | | | | | > | > | > |
| 1500 | | | = = | 2 2 | 2 | > | > |
| 1650 | = | : | 5 12 | 2 2 | 2 | > | > |
| 1800 | | | | | 2 | > | > |
| 1950 | = | | - | 2 2 | > | > | > |
| 2100 | | | | 2 2 | 100 | 110 | 130 |
| 2250 | | | 11 | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 100 | 110 | 130 |
| 2400 | | = == | | 80 | 100 | 110 | 130 |
| 2550 | | | = = | 80 | 100 | 110 | 130 |
| 2700 | | | | 00 | 100 | 120 | 130 |
| Notes: | | | | 90 | 100 | 120 | 130 |
| A number in | A number indicates the D Local facilities at | | | | | | |

A number indicates the D-Load for the diameter and depth of fill and that a special design is required. Design assumptions; Water filled pipe, Type 2 bedding and Class C Walls

| nətur | - | Type 1 | | | Type 2 | | | Type 3 | 3 | | Type 4 | 34 | | Type 5 | 95 | \vdash | | Tvne 6 | | | Tuno 7 | |
|-------------------|------------------|------------------------------|---------|------------------|-------------------------------------|----------------|---------|---------------------------------------|-------------------|---------|---------------------------------------|--------------------|----------------|---------------------------------------|---------------------|----------|------------|------------------|----------|-----------------|-------------------|----------|
| | Fill | Fill Height: | | . baka | Fill Height: | ıt: | | Fill Height: | ght: | | Fill Height: | ight: | | Fill Height: | ight: | | ľ | Fill Height: | | | Fill Height: | |
| IQ Ienimo *.ni | t 3. m | 3' and less 1' min. cover | | not 6 | Greater than 3' not exceeding 10 | m 3' 19 10' | σĝ | Greater than 10' not exceeding 15' | an 10' ing 15' | e | Greater than 15' not exceeding 20' | han 15' ding 20 | | Greater than 20' not exceeding 25' | han 20' ding 25' | | Grei | Greater than 25' | 25' | ` ق | Greater than 30' | 30' |
| L | 2 2/3" x 1/2" | 3"×1" | 5"×1" | 2 2/3" × 1/2" | 3"×1" | 5"x1" | 22/ | x 3"x1" | " 5"×1" | 2 2/ | " x 3"x1" | 1" 5" | 5"x1" 2 2/3" x | 3" X 3"~1" | | | 2 2/3" X | arran li | | not 2 2/3" x | not exceeding 35' | 9 35' |
| 12 | 0.064 | | | 0.064 | | | 0.064 | | _ | | 1 | | | | | + | 1/2" | 1× c | LX C | 1/2" | 3"×1" | 5"×1" |
| 15 | 0.064 | | | 0.064 | | • | 0.064 | | | 0.004 | 4 • | | 0.064 | 4 | | | 0.064 | | | 0.064 | | |
| 18 (| (0.079) | | | 0.064 | Non-March 1 | | 0.064 | | | 0.064 | 4 ~ | | 0.064 | 4 : | | | 0.064 | | | (0.079) | | |
| 21 (| (0.079) | | | 0.064 | | | 0.064 | | | 100.0 | | - | 50 | 4 <u>6</u> | | | (0.079) | | | (0.079) | | |
| 24 | (0.079) | | | 0.064 | | | 0.064 | | | 100.0 | t \ | | (6/0'0) | (n (c | | 0 | (0.079) | | | (0.079) | | |
| 30 (C | (0.109E) | | | 0.064 | | | 0.064 | | | 10.0701 | t ć | - | (0.0/9) | (A) | | 9 | (0.079) | | | (0.109) | | |
| 36 (C | (0.109E) | | | 0.064 | | | (0.079) | - | | 10.0701 | 10 | - | (610.0) | (6) | | 0 | (0.109) | | | 0.109 | | |
| 42 | 0.079 | | | 0.064 | | | (0 079) | | | (0.0.0) | 5 6 | | (0.109) | 6 | | | 0.109 | | | (0.138E) | | |
| 48 | 0.109 (| (0.109) C | 0.109 | (0.109) | 0.079 | 0.079 | | 0 0 079 | 10 1001 | | 9) 0 100 | | | | | | (0.109E) | | | (0.109E) | | |
| 54 | 0.109 (| (0.109) 0 | 0.109 | (0.109) | 0.079 | 0.079 | + | - | | | - | - | | - | | | | 0.109 | 0.109 | (0.138E) | 0.109 | (0.138) |
| 60 (| 0.109 | 0.109 0 | 0.109 | 0.109 | 0.079 | (0.109) | | | | | | | | | | | | 0.109 | (0.138) | (0.138E) | 0.138 | 0.138 |
| 66 ((| (0.138) | 0.109 0 | 0.109 | 0.109 | 0.079 | (0.109) | ******* | | | | | | | | | | | (0.138) | (0.138) | 0.138E | (0.138E) | (0.138E) |
| 72 (| 0.138 | 0.109 (0 | (0.138) | 0.138 | | | + | + | + | | | -+ | | | | | | 0.138 | 0.138 | 0.138E | (0.138E) | 0.138E |
| 78 (| 0,168 | | (0.138) | | (0.109) | <u> </u> | | | 0,109 | 0.138 | | | | | | | (0.168E) | (0.138E) | 0.138E | (0.168E) | (0.138E) | 0.138E |
| 84 | 0.168 ((| (0.138) (0.138) | (138) | | (0.109) | | | ······ | | | | | | | | | | (0.138E) | 0.138E | H0.168E | 0.138E | (0.168E) |
| 90 | Ē | (0.138) (0.138) | (.138) | - | (0.109) | c | + | | | | | | 38) 0.168 | | | | H0.168E ((| (0.138E) | 0.138E | H0.168E | (0.168E) | (0.168E) |
| 96 | | (0.138) (0.138) | (138) | | (0.109) | | | 0 100 | | | (0.136) (0.136) | | 38) | (0.138) | | 38 | | | (0.168E) | | (0.168E) | (0.168E) |
| 102 | 0 | 0.109Z 0.109Z | 109Z | | (0.109) | 0 | | 0.100 | | | (001.00) | | 20) | (U. 138) | | 38 | <u> </u> | | (0.168E) | | (0.168E) | (0.168E) |
| 108 | 0 | 0.109Z (0.138Z | 138Z) | | 0.109 | 0 | | 0 100 | ~~~~~~~ | | (001.0) | 0) (U. 130) | 30) | (0.138) | | 38 | <u> </u> | | (0.168E) | | H0.138E | H0.168E |
| 114 | 0 | 0.109Z (0.138Z | 138Z) | | 0.109 | | | 0.109 | - | 200 | (0.138) | | 02 02 | 0.138 | | 68) | <u> </u> | (0.168E) (| (0.168E) | | H0.138E | H0.168E |
| 120 | 0 | 0.109Z (0.138Z | 138Z) | | 0.109 | 0.109 | | (0.138) | | ~ ~ | (0.138) | | 2 2 | 0.100 | | (00) | = | (U.168E) 0.168E | 0.168E | | H0.138E H0.168E | H0.168 |
| 126 | 0 | 0.138Z 0.138Z | 138Z | | 0.138 | 0.138 | | 0.138 | | | 0 138 | ~ | 185 | (0.100) (0.160) | (0.168) (0.168) | (20) | I : | H0.138E H0.168E | 10.168E | | H0.168E H0.168E | H0.168 |
| 132 | 0 | 0.138Z 0.138Z | 138Z | | 0.138 | 0.138 | | 0.138 | 0.138 | | (0.168) | 1 | 381 | 0.168 | | 100 | | HU.138E HU.168E | 10.1685 | | H0.168E H0.168E | H0.168 |
| 138 | 0 | 0.138Z 0.138Z | 138Z | | 0.138 | 0.138 | | 0.138 | | | (0.168) | | (8) | 0.100 | 4 | | | HU.138E HU.168E | 10.168E | | H0.168E H0.168E | H0.168 |
| 144 | <u> </u> | 0.168Z 0. | 0.168Z | | 0.168 | 0.168 | | 0.168 | 0.168 | | 0.168 | | 8 | HO 168E | | | | HO 1685 HO. 1085 | 10.100 | | H0.168E | |

ced by one gage thickness if helical seam fabrication is utilized. A thickness preceded by "H" indicates only helical seam fabrication is allowed. E Elongation according to Article 542.04(e) Z 11-6" Minimum fill

 $|\mathcal{H}|$

| 19 | | Type 1 | | | TVDA 2 | | | ŀ | | | | | | | | | | | | | |
|---------------|---------------|----------------------------------|----------------|---------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------|------------------|--------|-----------------------------------------|--------------|-----------------|--------------------|-------------|-----------------|--------------------|----------|-----------|------------------|-----------------|
| 1911 | H - | Fill Height: | t t | | Fill Height: | | | Fill Height- | 5 Pt- | | Type 4 | | | Type 5 | | | Type 6 | ſ | ĺ | Tvna 7 | |
| | | | | | , | | | n | - | | rili Height: | | LL. | Fill Height: | | <u>L</u> | Fill Height: | | Ē | Fill Height | |
|) lenir mm | 0.3 | 1 m and less 0.3 m min. cover | ss Dver | Grei not e | Greater than 1 m not exceeding 3 m | 1 m 1 3 m | not e | Greater than 3 m not exceeding 4.5 m | n 3 m 3 4.5 m | Gre | Greater than 4.5 m not exceeding 6 m | 5 m 9 m | Gree | Greater than 6 m | 6 1 2 | Great | Greater than 7.5 m | .5 m | Great | Greater than 9 m | , E , 6 |
| 10N | 68 x 13 mm | 75 x 25 mm | 125 x 25 mm | 68 x 13 | 75 × 25 | 125 x 25 | ö | 75 x 25 | 12 | 68) | 75 x 25 | 25 | 68 x 13 7 | x 13 75 x 25 125 x | AC V 201 | not e) | xceeding | | not exce | - E | 10.5 m |
| 300 | 1.63 | | | 101 | | E | Ē | шш | mm | шш | шш | | | | mm mm | | | 125 X 25 | 2 2 | | 125 x 25 |
| 375 | 1.63 | | | 1.03 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1.63 | | | 1 6.9 | | Ē |
| 450 | (2.01) | | | | | | 1.63 | | | 1.63 | | | 1.63 | | | 163 | | | 1.00 | | |
| 525 | (2.01) | | | 1.03 | | | 1.63 | | | 1.63 | | | 1.63 | | | (2.01) | | | (2.01) | | |
| 600 | (2.01) | | | 1.63 | | | 1.03 | | | 1.63 | | | (2.01) | | | (2.01) | | | (2.01) | - | |
| 750 | (2.77E) | | | 1.63 | | | 02 | | | 1.63 | | | (2.01) | | | (2.01) | | | (2 77) | | |
| 900 | (2.77E) | | | 1.63 | | The second s | CO.1 | | | (2.01) | | | (2.01) | | | (2.77) | | | 2.77 | | |
| 1050 | 2.01 | | | 1.63 | | | (10.2) | | | (2.01) | | | (2.77) | | | 2.77 | | + | (3 51E) | | |
| 1200 | 2.77 | (2.77) | 2.77 | (2.77) | 2 01 | 2 01 | (10.2) | 2 | | (2.01) | | | (2.77) | | | (2.77E) | | | (2 77E) | | |
| 1350 | 2.77 | (2.77) | 2.77 | (2.77) | 2.01 | 2.01 | 2 77 | 10.2 | (11.2) | 2.77 | | + | | (2.77) | 2.77 (| (3.51E) | 2.77 | 2.77 | | 2 77 | (3 51) |
| 1500 | 2.77 | 2.77 | 2.77 | 2.77 | 2.01 | (77.0) | 2 7 7 | (11.7) | 1.7 | 2.11 | | | | 2.77 | 2.77 ((| (3.51E) | 2.77 (| (3.51) (| 1 | - | 2 5.1 |
| 1650 | (3.51) | 2.77 | 2.77 | 2.77 | 2.01 | (2.77) | 27.7 | (11.2) | 7.17 | 2.77 | ~ | | | 2.77 | 2.77 ((| | | | | 6 | 0.01 (3 51E) |
| 1800 | 3.51 | 2.77 | (3.51) | 3.51 | (2.77) | 0 77) | 2 27.2 | (11.7) | 2.11 | 2.17 | | | $ \rightarrow $ | 2.77 (| (3.51) (| (3.51E) | 3.51 | | | | а <u>5</u> 1 |
| 1950 | 4.27 | 2.77 | (3.51) | 4.27 | (2.77) | 0 77 | 20.0 | (11.2) | 11.7 | 3.51 | | | | (3.51) (| (3.51) (| (4.27E) (3 | (3.51E) 3 | 3.51E (4 | | | 2 71 |
| 2100 | 4.27 | (3.51) | (3.51) | | (2.77) | 277 | 72.4 | 2 77 | 71.2 | 4.27 | | | | (3.51) (| (3.51) H | | | | H 4.27E 3 | | 0.01E |
| 2250 | | (3.51) | (3.51) | | (2.77) | 2.77 | 17.1 | 2 77 0 | 0 77 | 4.27 | | | 4.27 (| (3.51) | 3.51 H | H 4.27E (3.51E) | | 3.51E H | | | (4.27F) |
| 2400 | | (3.51) | (3.51) | | (2.77) | 2.77 | | 2 77 | 11.2 | | | (3.51) | | ~~~~~ | 3.51 | ю — | 3.51E (4 | (4.27E) | (4.) | 1 | (4 27E) |
| 2550 | | 2.77Z | 2.772 | | (2.77) | 2.77 | | 2 77 | 12 841 | | | (3.51) | <u>ت</u> | | 3.51 | (4 | (4.27E) (4 | (4.27E) | (4.1 | | (4.27F) |
| 2700 | | 2.77Z | (3.51Z) | | 2.77 | 2.77 | | 2 77 | (10.0) | | (2.01) (3.01) | (3.51) | <u>ت</u> | | 3.51 | (4 | (4.27E) (4 | (4.27E) | H 3 | | H 4.27E |
| 2850 | - | 2.77Z | (3.51Z) | | 2.77 | 2.77 | | 2 77 | (3.5.1) | | | 0.01 2.01 | | | (4.27) | (4 | (4.27E) (4 | (4.27E) | H 3 | H 3.51E H | H 4.27E |
| 3000 | | ******* | (3.51Z) | | 2.77 | 2.77 | | (3.51) | (351) | | | 3.51 | 7) | | (4.27) | (4. | (4.27E) 4 | 4.27E | нз | H 3.51E H | H 4.27E |
| 3150 | | 3.51Z | 3.51Z | | 3.51 | 3.51 | | 3.51 | 3 51 | | (10.0) 2 | 3.51 | 4 | | (4.27) | I | H 3.51E H | H 4.27E | H 4 | | H 4.27E |
| 3300 | | 3.51Z | 3.51Z | | 3.51 | 3.51 | | 351 | 3 5.1 | | | (4.21) | (4 | + | (4.27) | I | H 3.51E H | H 4.27E | H 4 | H 4.27E H | H 4.27E |
| 3450 | • / | 3.51Z | 3.51Z | | 3.51 | 3.51 | | 25.0 | 2 K1 | | | (4.27) | 4 | | 4.27 | Ï | H 3.51E H | H 4.27E | H 4. | | H 4.27F |
| 3600 | | 4.27Z | 4.27Z | | 4.27 | 4.27 | | 10.0 | 10.0 | - | (17 | (4.27) | 4 | (4.27E) H - | H 4.27E | Ĭ | H 4.27E H 4 | H 4.27E | H 4 | | |
| Notes | | | | | | | | | 17.4 | | 4.2/ | 4 27 | - I | H A 27EL U A 27F | 1 275 | | | i | | | |

be used for diameters less ī 3 Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized. A thickness preceded by an "H" indicates only helical seam fabrication is allowed. E Elongation according to Article 542.04(e) 2 450 mm Minimum Fill

| | SNO | + | 1 ype / | rin neignt: Graater then and | not exceeding 35' | | | 0.075) | H 0.060 | H 0 060F | (0.105E) | H 0 075F H 0 060 | + | - | | + | | | + | | (0.164E) | (0,164E) | H 0.135E | H 0.135F | H 0.164E | H 0 164F | |
|--------------------------------------------------------------------------------------------------------------------|--------------|---------|--------------|--------------------------------------|-------------------|-------------|---------|---------|----------|----------|----------|------------------|-----------|---------|------------|---------|---------|---------|--------------------|---------|----------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|------------------|
| TABLE IC: THICKNESS OF CORRUGATED ALUMINUM ALLOY PIPE | CORRUGATI | Time 6 | Fill Height | Greater than 25' | not exceeding 30' | 3"x1" 2 | | | | I | | H 0.060 H | H 0.060 H | | (0.105E) C | - | | | (0.135E) H | | (0.164E) | (0.164E) | (0.164E) | (0.164E) | (0.164E) | H 0.164E | H 0.164E |
| | z" ANU 3"x1" | | | Greater | not exce | 2 2/3"×1/2" | 0.060 | 0.060 | (0.075) | H 0.060 | (0.105) | H 0.075E | H 0.075E | 0.105E | 0.105E | 0.105E | 0.135E | 0.164E | H 0.164E | | | | | | | | |
| oY PIPE | UN 2 2/3 X1/ | Type 5 | Fill Height: | Greater than 20' | not exceeding 25' | ' 3"x1" | | | | | | H 0.060 | H 0.060 | (0.075) | (0.105) | (0.105) | (0.105) | (0.135) | (0.135) | (0.135) | (0.135) | (0.135) | (0.135) | (0.164) | (0.164) | 0.164 | 0.164 |
| TABLE IC: THICKNESS OF CORRUGATED ALUMINUM ALLOY PIPE OF PIPE AND FILL HEIGHTS OVER THF TOP OF THE PIPE FOR 500 | | £ | | Greate | not exce | 2 2/3"×1/2" | 0.060 | 0.060 | 0.060 | (0.075) | (0.105) | (0.105) | (0.135) | 0.105 | 0.105 | 0.105 | 0.135 | 0.164 | 0.164 | | | | | | | | |
| ATED ALUN | 5 | Type 4 | Fill Height: | Greater than 15' | edin | " 3"×1" | | | | | | H 0.060 | H 0.060 | 0.060 | (0.075) | (0.075) | (0.105) | (0.105) | (0.105) | (0.105) | (0,135) | (0.135) | (0.135) | 0.133 | 0,135 | 0.164 | 0.164 |
| DF CORRUG | | | Ē | Greate | not exce | 2 2/3"x1/2" | 0.060 | 0.060 | 0.060 | 0.060 | (0.075) | (0.10) | (0.105) | 0.105 | 0.105 | 0.105 | 0.135 | 0.164 | 0.164 | | | | | | | | |
| IICKNESS C | | Type 3 | Fill Height: | Greater than 10' | <u>-</u> | 3.X1" | | | | | H D DED | | п и.иbu | 0.060 | 00000 | 00000 | (9/0'0) | (0.0.0) | (0.0/5) (0.10E) | 0.105 | 0 105 | 0.105 | 0.135 | 0 135 | 0 164 | 0.101 | ±01 '> |
| BLE IC: TH | | | Ē | Greater not exce | "U Priloto C | 7/1 X C/7 7 | 0.060 | 0.000 | 0.060 | 0.000 | 0.075 | 10.105 | 0.105 | 0 105 | 0.105 | 0.100 | 0.164 | 0.104 | | | and a second | | | | | | |
| TA AMETER OF | | I ype Z | Fill Height: | Greater than 3' not exceeding 10' | 3"~1" | _ | | | | | H 0.060 | H D DED | 0.060 | 0.060 | 0.060 | 0.060 | 0.060 | 0.060 | 0.075 | 0.105 | 0.105 | 0.105 | 0.135 | 0.135 | 0.164 | 0.164 | |
| | | <u></u> | | Greate not exce | 2 2/3"x1/2" | | 0.060 | 0.060 | 0.060 | 0.060 | 0.075 | 0.075 | 0.105 | 0.105 | 0.105 | 0.135 | 0.164 | 0.164 | | | | | | | | | |
| FOR THE RESPECTIVE | Tvne 1 | | FIII Height: | 3' and less 1' min. cover | " 3"×1" | | ****** | | | | H 0.060 | H 0.060E | (0.075) | (0.075) | (0.105) | (0.105) | (0.105) | (0.105) | (0.135) | (0.135) | (0.135) | (0.135) | 0.135Z | 0.135Z | 0.164Z | 0.164Z | |
| FOR | | 7 | L. | 3'an 1'min | 2 2/3"×1/2" | (0.075) | (0.075) | (0.075) | H 0.060E | (0.105E) | H 0.075E | (0.135E) | 0.105E | 0.105E | 0.105E | 0.135E | 0.164E | 0.164E | | | | | _ | | | | Notes: |
| | er | tən | neiQ .r | lenim | oN | 10 | 15 | 18 | 21 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 99 | 72 | 78 | 84 | 6 | 96 | 102 | 108 | 114 | 120 | Notes: Thists |

Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized. A thickness preceded by an "H" indicates only helical seam fabrication is allowed. E Elongation according to Article 542.04(e), the elongation requirement for Type 1 fill heights may be eliminated for fills above 1:-6" Z 1°-6" Minimum fill

| | | | | I LL | FOR 68 mm x 13 mm AND 75 mm x 25 mm CORRUGATIONS (Metric) | x 13 mm Ar | VD 75 mm (Metric) | יובר חבוטח x 25 mm C(| DRRUGATI | NE TOP O ONS | | 114 | | |
|---------------|---------------|----------------------------------|---------------------|---------------------------------------|--------------------------------------------------------------|-----------------------------------------|------------------------|-----------------------------------------|----------|------------------|--------------------|-------------------------|----------------------|-----------|
| 19) | TY | Type 1 | TV | Type 2 | TVD | Tvpe 3 | | Tvna 4 | F | | | | | |
| jər | H | Fill Hainht- | | loiots. | 17. | | 7. | he 4 | 1X | I ype 5 | Type 6 | еб | Type 7 | e 7 |
| | - | 1160 | | riii Height: | Ĩ | Fill Height: | | Fill Height: | E E | Fill Height: | Fill Height: | eight: | Fill Height: | eight: |
| l lenin Im | 0.3 m m | 1 m and less 0.3 m min. cover | Greater not exce | Greater than 1 m not exceeding 3 m | Greater I not exceed | Greater than 3 m not exceeding 4.5 m | Greater t not excet | Greater than 4.5 m not exceeding 6 m | Greater | Greater than 6 m | Greater than 7.5 m | an 7.5 m | Greater than 9 m | han 9 m |
| ION | 68 x 13 mm | 75 × 25 mm | 68 × 13 | 75 × 25 | 68 x 13 | 75 x 25 | 68 x 13 | 75 × 25 | 68 x 13 | 75 x 25 | 68 x 13 75 x 25 | 75 v 75 | not exceeding 10.5 m | ng 10.5 n |
| 000 | | | 11111 | | uu | mm | ш | mm | mm | E | um m | mm | 00 X 13 | 67 X G/ |
| 300 | (1.91) | | 1.52 | | 1.52 | | 1.52 | | 1 50 | | | | | |
| 3/5 | (1.91) | | 1.52 | | 1.52 | | 1 52 | | 10.1 | | 76.1 | | 1.52 | |
| 450 | (1.91) | | 1.52 | | 1.52 | | 1 53 | | 70.1 | | 1.52 | | (1.91) | |
| 525 | H 1.52E | | 1.52 | | 1 52 | | 70.1 | | 1.52 | | (1.91) | | H 1.52 | |
| 600 | (2.67E) | | 1.52 | | 1 52 | | 76.1 | | (1.91) | | H 1.52 | • • • • • • • • • • • • | H 1.52E | |
| 750 | H 1.91E | H 1.52 | 191 | H 1.52 | 101 | , 1 | (1.91) | | (2.67) | | (2.67) | | (2.67E) | |
| 900 | (3,43E) | H 1.52F | 1 01 | П 1 65 | 10.1 | 70.1 1 | (/0.7) | Н 1.52 | (2.67) | H 1.52 | H 1.91E | H 1.52 | H 1,91E | H 1.52 |
| 1050 | 2.67E | (1.91) | 2.67 | 152 | 2.67 | Н 1.52 | (2.67) | H 1.52 | (3.43) | H 1.52 | H 1.91E | H 1.52 | H 1.91E | H 1.52E |
| 1200 | 2.67E | (1.91) | 2.67 | 1.52 | 2.67 | 1 53 | 10.7 | 1.52 | 2.67 | (1.91) | 2.67E | 2.67 | 2.67E | (2.67E) |
| 1350 | 2.67E | (2.67) | 2.67 | 1 5.2 | 2 67 | 70.1 | 10.7 | (1.91) | 2.67 | (2.67) | 2.67E | (2.67E) | 2.67E | (3.43E) |
| 1500 | 3.43E | (2.67) | 3.43 | 1.52 | 3.43 | 1011 | 2.67 | (1.91) | 2.67 | (2.67) | 2.67E | (2.67E) | (3.43E) | (3.43E) |
| 1650 | 4.17E | (2.67) | 4.17 | 1.52 | 4 17 | (101) | 0 1 1 1 | (79.7) | 3.43 | (2.67) | 3.43E | (3.43E) | (4.17E) | (3.43E) |
| 1800 | 4.17E | (2.67) | 4.17 | 1.52 | 4 17 | (101) | | (7.67) | 4.17 | (3.43) | 4.17E | (3.43E) | H 4.17E | (3.43E) |
| 1950 | | (3.43) | | 1.91 | ÷ | (18.1) | 4.17 | (2.67) | 4.17 | (3.43) | H 4.17E | (3.43E) | H 4.17E | (4.17E) |
| 2100 | | (3.43) | | 2.67 | | 2.67 | | (79.7) | | (3.43) | | (3.43E) | | (4.17E) |
| 2250 | | (3.43) | | 2.67 | | 2.67 | | (0.43) | | (3.43) | | (4.17E) | | (4.17E) |
| 2400 | | (3.43) | | 2.67 | | 2.67 | | (3.43) | | (3.43) | | (4.17E) | | (4.17E) |
| 2550 | | 3.43Z | | 3.43 | | 2.43 | | (3.43) 2.45 | | (3.43) | | (4.17E) | | H 3.43E |
| 2700 | | 3.43Z | | 3.43 | | 01-0 7 7 | | 0.40 0.40 | | (4.17) | | (4.17E) | | H 3.43E |
| 2850 | | 4.17Z | | 4.17 | | 4 17 | | 5,43 | | (4.17) | | (4.17E) | | H 4.17E |
| 3000 | | 4.17Z | | 4.17 | | 1 17 | | + | | 4.17 | | H 4.17E | | H 4.17E |
| Notes: | | | | | | f | | 4 | | 1 1 1 | | | | |

A thicknesses are pased on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized. A thickness preceded by an "H" indicates only helical seam fabrication is allowed. E Elongation according to Article 542.04(e), the elongation requirement for Type 1 fill heights may be eliminated for fills above 450 mm.

| | | Type 3 | Fill Height: | Greater than 10' not exceeding 15' | × • • • | Aluminum | $5^{n} \times 1^{n} \begin{vmatrix} 4 & 2/3 & X \\ 1/2^{n} \end{vmatrix} = 3^{n} \times 1^{n}$ | 0.060 | 0.060 | 0.060 | 0.075 | (0,105) | 0 105 | 0.105 | 0.109) 0.135 0.060 | 0.164 | 0 164 | - | | 0.109 0.105 | | 0.109 0.135 | (0.138) 0.164 | (0.138) 0.164 | 0.138 | 0.138 | 0.168 | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|-----------------------|------------------------------------|----------|--------------|------------------------------------------------------------------------------------------------|----------|-------|----------|----------|---------|--------|---------------|--------------------|------------|---------------|------------|------------|-------------|----------|-------------|---------------|---------------|----------|-----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| lES | | | Ē | ater than 1 | Ctool | | 3"×1" 5 | | | <u>-</u> | | | | | 0) 6.079 | (0.109) 0 | (0.109) 0 | | | 0.109 0. | | 0.109 0. | 0.109 (0. | 0.109 (0. | 0.138 0. | 0.138 0. | 0.168 0.1 | - |
| PE ARCH | | | | Gre | | 2 2/2" ~ | | 0.064 | 0.064 | 0.064 | 0.064 | (0.079) | 0.064 | (0.109) | 0.109 | 0.109 | 0.138 | 0.168 | 0.168 | | | | | | _ | | | |
| ALLOY PI | 5 | | | 1g 10' | Atuminum | × | " 3"×1" | 00 | 0 | 0 | 5 | 5 | 5 | 5 | 5 0.060 | 4 0.060 | 4 0.060 | 0.075 | 0.105 | 0.105 | 0.105 | 0.135 | 0.164 | 0.164 | | | | |
| JMINUM, | | 7 | ght: | t exceedir | Ali | 2 | × 1 1/2" | 0.060 | 0.060 | 0.060 | 0.075 | 0.075 | 0.105 | 0.105 | 9 0.135 | 9 0.164 | 9) 0.164 | (6) | (6) | 6 | 6 | 6 | | 0 | 8 | | | |
| ATED ALL | E E | i ype ∠ | Fill Height: | Greater than 3' not exceeding 10' | lei | "" "P.'NC | 0 | | | | | | | | 79 0.079 | 79 0.079 | 79 (0.109) | 79 (0.109) | 79 (0.109) | 90) 0.109 | | 9) 0.109 | | | 8 0.138 | | 8 0.168 | 1006.01 |
| | | | | Greater t | Steel | × | + | 0.064 | 0.064 | 64 | 64 | 64 | 64 | (60 | | 09 0.079 | 38 0.079 | 58 0.079 | 58 0.079 | (0.109) | (0.109) | (0.109) | 0.109 | 0.109 | 0.138 | 0.138 | 0.168 | to Articla |
| ES AND C | - | + | | | | 3"×1" 22 | + | 0.0 | 0.0 | 0.064 | 0.064 | 0.064 | 0.064 | | | 75) 0.109 | 75) 0.138 | | 0.168 | 35 | 55 | 22 | <u></u> | 4 | _ | | _ | according |
| E ARCHE | | | | | Aluminum | 2 2/3" x 3". | | 0.060 | 0.060 | (0.0/5) | (0.105) | 0.105) | 0.105 | | | | 0.164 (0.075) | 0.075 | 0.105 | 0.105 | 0.105 | 0.135 | 0.164 | 0.164 | _ | | | up to 42" |
| TEEL PIP | Type 1 | | riii Height: | 3' and less | | × 1" | | <u> </u> | o g | <u>j</u> | <u>o</u> | 0 0 | | | ~ | | | 0.109 | 0.109 | 0.109 | 0.109 | EDI SOL | (0.138) | 0 138 | 20 | 0.138 | 0,100 | el spans (|
| SATED S | F | | Ē | 3, ar | Steel | 3"×1" 5" | - | | | ╀ | | | + | | (0.109) (0. | - i | | | - | | 0.109 0. | | | | | 0.138 0.1 | 100 N. | ed for ste |
| CORRUG VE EQUIN | | | | | | 2 2/3" x | 10.064 | +00.0 | 0.064 | ton | (0.079) | (0.079) | 10.10. | | 0,109 (0 | + | | 0.100 (0. | | <u> </u> | эс | | эс | ; c | | 5 c | 5 | be requir |
| A: THICKNESS FOR CORRUGATED STEEL PIPE ARCHES AND CORRUGATED ALUMINUM ALLOY PIPE ARCHES FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIDE | | : | Min. Cover | | Steel & | Aluminum 2 | 1:-6" | | | ╋ | | | 11, 6" | | | ╋ | | | ╋ | | 1.6" | 1'-6" | 1'-6" | 1'-6" | 1'-6" | 1-6" | | Aluminized Type 2 Steel or Precoated Galvanized Steel shall be required for steel spans up to 42" according to Article 1006 of |
| THICKN OR THE | ╞── | ated | - | | | (in.) All | - | | | - | | | ╞ | 41 | 46 | 51 | | | + | | 71 | 75 1 | 79 1 | 83 | 87 1 | | | alvanized |
| Table IIA: T FOF | | Corrugat | Pipe Arch | t X Lo | | (in.) | | | | | | | | 53 | | 66 | | 81 | 87 | | 103 | 112 | 117 | 128 8 | 137 8 | | | coated Ga |
| | Corrugated | Steel & | Aluminum Pipe Arch | 3" × 1" | | (in.) | | | | | | | | 41 | 46 | 51 | 55 | 59 | 63 | 67 | 71 | 75 | 79 | 83 | 87 | 91 | | el or Prec |
| | | | | | | (°u) | ~ ~ | | ~ | | | | | 53 | 60 | 99 | | 81 | 87 | 92 | 103 | 112 | 117 | 128 | 137 | 142 | | pe 2 Ste |
| | Corrugated | Steel & | Aluminum Pipe Arch | 2 2/3" x 1/2" | | (nn.) (in.) | 17 13 | 21 15 | 24 18 | 28 20 | 35 24 | 42 29 | 49 33 | 57 38 | 64 43 | 71 47 | 77 52 | 83 57 | | | | | | | | | | nized Tyi |
| | | | 'uj | nəlevir 9xi2 | | | 15 | ¢ | 21 | 24 | 30 | 36 4 | 42 4 | 84 80 8 | 54 6 | 60 7 | 66 7 | 72 8 | 78 | 84 | 90 | 96 | 102 | 108 | 114 | 120 | Notes: | Thicknesses are based on longitudied in the second of the second on longitudied in the second on longit |

Thicknesses are based on longitudinal riveted seam fabrication, values required for steet spans up to 42° according to Article 1006.01. The Type 1 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 3 tons per square foot. The Type 2 and 3 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 3 tons per square foot. This minimum bearing capacity will be determined by the Engineer in the field.

| | | | | Table IIA: T FOR | A: THK FOR TH | A. THICKNESS FOR CORRUGATED STEEL PIPE ARCHES AND CORRUGATED ALUMINUM ALLOY PIPE ARCHES FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIPE (Metric) | OR COR CTIVE E | RUGATE | ED STEE | L PIPE AF JND SIZE (M | ARCHES A ZE OF PIPE (Metric) | ND CORI | RUGATE L HEIGH | ED ALUM | R THE TO | LOY PIP | E ARCHES | | | | |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|------------------|-----------------------------|------------------------------------|---------|-------------------|------------------------------------|-----------|---------|------------|----------|--------------------------------------|-----------|----------------------------------|
| əzi | Corrugated | <u> </u> | Corrugated | | | | | | Type 1 | | | | | Type 2 | | | | | 0 | | |
| S P | Steel | | Steel | | Corrugated Steel | A fire | | | Fill Hoight | ht. | | | | Fill Heinht | | | | | i ype 3 | | |
| | Pipe Arch | | & Aluminum Pipe Arch | | Pipe Arch | Cover | | | 5 | 1 | | | | | | | | Ĩ | Fill Height: | | |
| n jnels m) | 68 × 13 mm | | 75 x 25 mm | | WIII 67 | | | | 1 m and less | ess | | Grea | ter than | Greater than 1 m not exceeding 3 m | xceeding | 3 m | Greater | than 3 n | Greater than 3 m not exceeding 4.5 m | seding 4. | 5 m |
| vinp | | | | | | Steel & | | | | | Aluminum | | Steel | | Aluminum | 810 | | Ctool | | | |
| 3 | (m) (m) | (mm) (mm) | (mm) (r | (mm) | (mm) | Aluminum | 68 × 13 | | 75 × 25 125 × 25 | 68 x 13 | 1 | 68 x 13 | 75 x 25 | 75 x 25 125 x 25 68 x 13 75 x 25 | 68 x 13 7 | | 68 x 13 75 | - | Alun 126 v 26 60 v 12 | | un un |
| 375 | 430 | 330 | | | Γ | 2 2 2 | | | E | E | E | Ē | mm | шш | mm | | | | | | 47 X G/ |
| 450 | 530 380 | 30 | | | | | 1.03 | | | 1.52 | | 1.63 | | | 1.52 | | 1.63 | | $\left \right $ | 152 | |
| 525 | 610 460 | 02 | | | | | 3. 5 | | | 1.52 | | 1.63 | | | 1.52 | | 1.63 | | | 1 5 2 | |
| 600 | 710 510 | 0 | and the second se | | | | CO | | | (1.91) | | 1.63 | | | 1.52 | | 1.63 | | | 1 5.5 | |
| 750 | | ç | | | | E 10 | (2.01) | | | (2.67) | | 1.63 | | | 1.91 | | 1.63 | | | 1 04 | Contraction of the second second |
| 900 | | 2 0 | | | | 0.5 m | (2.01) | | | (2.67) | | 1.63 | | | 1.91 | | (2 01) | | | 1.4 | |
| 1050 | 1240 | | and a second second second second | | T | 0.5 m | (2.01) | | | 2.67 | | 1.63 | | | 2.67 | | 1.6.4 | | | (79.2) | |
| 1200 | 1440 | 1240 | | | 4 | 0.5 m | 2.77 | | | 2.67 | | (2.77) | | | 2.67 | | 122 (12 C) | | | 707 | |
| 1250 | 1620 | - | | | 0901 | 0.5 m | 2.77 | (2.77) | (2.77) | 3.43 | 1.52 | 2.77 | 2.01 | 2 01 | 3.43 | 1 53 | ******* | | | 7.67 | |
| | 0701 | | 0/11/0 | 1520 | 1170 | 0.5 m | 2.77 | (2.77) | 2.77 | 4.17 | (161) | 77.6 | 500 | | | 70.1 | | - | _ | 3.43 | 1.52 |
| 1500 | 1800 | 00 1670 | 1300 | 1670 | 1300 | 0.5 m | 3.51 | (2.77) | 277 | 4 17 | (1 01) | | 10.2 | 10.2 | 4.1/ | 1.52 | 2.77 (2. | (2.77) | 2.77 | 4.17 (| (1.91) |
| 1650 | 1950 | | 1400 | 1850 | 1400 | 0.5 m | 4.27 | (2.77) | 2.77 | ŕ | 1 01 | 0.0 | 10.2 | (2.77) | 4,17 | 1.52 | | (2.77) | 2.77 | 4.17 (| (1.91) |
| 1800 | 2100 1450 | 50 2050 | 1500 | 2050 | 1500 | 0.5 m | 4.27 | (2.77) | 2 77 | | 10.1 | 4.61 | L0.2 | (2.77) | | 1.91 | | (2.77) 2 | 2.77 | | 1.91 |
| 1950 | | 2200 | 1620 | 2200 | 1620 | 0.5 m | | 2 77 | 77 0 | | 10.2 | 4.21 | 10.2 | (2.77) | | 2.67 | 4.27 (2. | (2.77) 2 | 2.77 | | 2.67 |
| 2100 | | 2400 | 1720 | 2400 | 1720 | 0.5 m | | 2.77 | 2 77 | | 10.7 | | (7.7) | 2.77 | | 2.67 | i7) | 2.77 2 | 2.77 | | 2.67 |
| 2250 | A description of the second state of the secon | 2600 | 1820 | 2600 | 1820 | 0.5 m | | 2.77 | 2.77 | | 3.43 | | (7.7.7) | 2.77 | | 2.67 | | | 2.77 | | 2.67 |
| 2400 | | 2840 | 1920 | 2840 | 1920 | 0.5 m | | 2.77 | (3.51) | | CT | | (11.7) | 7.11 | | 3.43 | 5 | 2.77 2 | 2.77 | | 3.43 |
| 2550 | | 2970 | 2020 | 2970 | 2020 | 0.5 m | | 2.77 | (351) | | | | 7.77 | 2.77 | | 4.17 | 2.77 | | (3.51) | 7 | 4.17 |
| 2700 | a de la constante de la consta | 3240 | 2120 | 3240 | 2120 | 0.5 m | | 2.5 | 1200 | | 4 | | 2.77 | 2.77 | | 4.17 | 2.77 | | (3.51) | ~~~~ | 4.17 |
| 2850 | | 3470 | 2220 | 3470 | 2220 | 0.5 m | | 3.51 | 2 2 2 | | | | 3.51 | 3.51 | | | 3.6 | 51 3 | 3.51 | | |
| 3000 | | 3600 | 2320 | 3600 | 2320 | 0.5 m | | 4 27 | 4.97 | - | ******* | | | 3.51 | **** | | 3.51 | | 3.51 | | |
| Notes: | | | | | | | | | 1.1.1 | | | | 4.27 | 4.27 | | | 4.27 | | 4.27 | | |
| Ā | Aluminized Type 2 Steel or Precoated | Type 2 (| Steel or | Precos | ated G | Galvanized Steel shall be required for | Steel ch | n of liet | - Localitation | 1 | | | | | | | | | | |] |

* Aluminized Type 2 Steel or Precoated Galvanized Steel shall be required for steel spans up to 1060 mm according to Article 1006.01. Thicknesses are based on longitudinal riveted seam fabrication, values in "()" can be reduced by one gage thickness if helical seam fabrication is utilized. The Type 1 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 290 kN per square meter. The Type 2 and 3 corrugated steel or aluminum pipe arches shall be placed on soil having a minimum bearing capacity of 290 kN per square meter. This minimum bearing capacity will be determined by the Engineer in the field.

| | | Table IIE FOR TI | 3: CLASSE HE RESPE | ES OF REIN ECTIVE EQ | IFORCED UIVALENT | Table IIB: CLASSES OF REINFORCED CONCRETE ELLIPTICALL AND REINFORCED CONCRETE ARCH PIPE FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIPE | IPTICALL AF F PIPE AND | ND REINFOI | RCED CON | ICRETE AR THE TOP C | CH PIPE | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------|-----------------------|-------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------|--------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------|
| alent Concrete Reinforced Minimum 1 Size Filiptical pipe Arch pipe (in.) X and less 1) (in.) Arch pipe (in.) Cover X and less 5 23 14 18 11 1 ⁻⁰ " HE-III 6 23 14 22 13 1/2 1 ⁻⁰ " HE-III A-III 7 30 19 26 15 1/2 1 ⁻⁰ " HE-III A-III 7 34 22 36 1/4 22 1/2 1 ⁻⁰ " HE-III A-III 7 38 24 36 1/4 22 1/2 1 ⁻⁰ " HE-III A-III 8 23 34 51/2 1 ⁻⁰ " HE-III A-III 7 38 24 36 1/2 1 ⁻⁰ " HE-III A-III 8 53 35 1 ⁻⁰ " HE-III A-III 8 60 38 54 1 ⁻⁰ " HE-I A-II 83 | | Reinf | orced | | | | TVD | be 1 | Tvr | Tvne 2 | 1 | |
| Span Rise Span Rise Roch HE Arch 6 23 14 18 11 1'-0" HE-III Arch 7 30 19 26 15 1/2 1'-0" HE-III Arch 7 33 19 26 15 1/2 1'-0" HE-III Arli 7 34 22 36 1/4 22 1/2 1'-0" HE-III Arli 7 38 224 36 1/4 22 1/2 1'-0" HE-III Arli 8 24 36 1/4 22 1/2 1'-0" HE-III Arli 8 24 36 1/2 1'-0" HE-III Arli Arli 8 53 34 51/16 1'-0" HE-II Arli Arli 8 66 43 73 26 5/8 1'-0" HE-I Arli Arli 8 65 40 1'-0" HE-I Arli Arli | Equivalent Round Size (in.) | Elliptic | crete al pipe | Reinf Con Arch pi | orced crete pe (in.) | Minimum Cover | 3' ar H | eight: rd less | Fill H Greater tl exceed | Fill Height: Fill Height: Greater than 3' not exceeding 10' | Type 3 Fill Height: Greater than 10' not exceeding 15' | l ype 3 Il Height: r than 10' not eeding 15' |
| 5 23 14 18 11 1'-0" HE-III A-III 1 30 19 26 151/2 1'-0" HE-III A-III 1 30 19 26 151/2 1'-0" HE-III A-III 2 34 22 361/4 221/2 1'-0" HE-III A-III 38 24 361/4 221/2 1'-0" HE-III A-III 38 24 361/4 221/2 1'-0" HE-III A-III 38 23 34 51/4 221/2 1'-0" HE-II A-III 38 53 34 51/6 1'-0" HE-II A-III A-II 46 1'-0" HE-II A-II A-II A-II A-II 53 34 51/16 1'-0" HE-I A-II A-II 66 38 54 1'-0" HE-I A-II A-II 73 45 1'-0" HE-I A-II A-II 76 48 <t< td=""><td></td><td>Span</td><td>Rise</td><td>Span</td><td>Rise</td><td>RCCP HE & A</td><td>Ψ</td><td>Arch</td><td>H</td><td>Arch</td><td></td><td>-</td></t<> | | Span | Rise | Span | Rise | RCCP HE & A | Ψ | Arch | H | Arch | | - |
| 8 23 14 22 131/2 1-0 HE-III AIII 4 30 19 26 151/2 17.0° HE-III AIII 7 34 22 361/4 221/2 17.0° HE-III AIII 7 34 22 361/4 221/2 17.0° HE-III AIII 7 34 22 361/4 221/2 17.0° HE-III AIII 7 35 24 351/4 221/2 17.0° HE-III AIII 7 45 17.0° HE-III AIII AIII AIII 8 53 34 511/8 315/16 17.0° HE-I AIII 8 65 40 17.0° HE-I AII AI 7 65 40 17.0° HE-I AII AI 8 53 53 88 54 17.0° HE-I AII AI 8 53 54 17.0° HE-I AII AI AI | 15 | 23 | 14 | 18 | 11 | 11 01 | | | | 57 | | Arch |
| 1 30 19 26 15 1/2 1 -0 HE-III A-III 7 34 22 36 1/4 22 1/2 17 -0" HE-III A-III 7 34 22 36 1/4 22 1/2 17 -0" HE-III A-III 7 34 22 36 1/4 22 1/2 17 -0" HE-III A-III 7 45 29 43 3/4 26 5/8 17 -0" HE-III A-III 8 53 34 51 1/8 31 5/16 17 -0" HE-I A-II 8 65 40 17 -0" HE-I A-II A-I 7 65 40 17 -0" HE-I A-II 83 53 88 54 17 -0" HE-I A-II 91 58 54 17 -0" HE-I A-II H | 18 | 23 | 4 | 2 60 | 13 1/2 | - - | | A-III | ≡-́ш Ш | A-III | HE-IV | A-IV |
| 4 30 19 28.1/2 10.1/2 1-0 HE-III A-III 7 34 22 36.1/4 22.1/2 17.0° HE-III A-III 0 38 24 36.1/4 22.1/2 17.0° HE-III A-III 0 38 24 36.1/4 22.1/2 17.0° HE-III A-III 0 45 29 43.3/4 26.5/8 17.0° HE-II A-II 1 66 38 58.1/2 36 17.0° HE-I A-II 1 68 43 65 40 17.0° HE-I A-II 1 68 43 65 40 17.0° HE-I A-II 1 68 43 65 40 17.0° HE-I A-II 1 68 53 53 88 54 17.0° 1 58 54 17.0° HE-I A-II 1 91 58 54 17.0° HE-I A-II | 21 | 30 | 6 | 35 | 10101 | - - | | A-III | H⊓- H | A-III | HE-I< | A-IV |
| 7 34 22 36 1/4 22 1/2 1 -0 HE-III A-III 0 38 24 36 1/4 22 1/2 1' -0" HE-III A-III 0 38 24 36 1/4 22 1/2 1' -0" HE-III A-III 0 38 24 315/16 1' -0" HE-II A-II 0 53 34 51 1/8 31 5/16 1' -0" HE-I A-II 1 68 43 65 40 1' -0" HE-I A-II 0 76 48 73 45 1' -0" HE-I A-II 0 76 48 73 45 1' -0" HE-I A-II 0 76 88 54 1' -0" HE-I A-II | 24 | 30 | 0 | 28 1/2 | 10 10 | ç ₹ - ₹ | | A-III | H⊓-⊫ | A-III | HE-IV | A-IV |
| 0 38 24 36/14 22/12 1-0 HE-III A-III 5 45 29 43/3/4 26/5/8 1'-0" HE-III A-III 5 53 34 51/18 31/5/16 1'-0" HE-II A-II 6 38 58/1/2 36 1/-0" HE-II A-II 7 65 40 1'-0" HE-I A-I 7 76 48 73 45 1'-0" HE-I 83 53 88 54 1'-0" HE-I A-II 91 58 88 54 1'-0" HE-I A-II | 27 | 34 | 22 | 36 1/4 | 01100 | | | A-III | HH- HH- | A-III | HE-I< | A-IV |
| 5 45 29 43 3/4 26 5/8 1 - 0 HE-III A-III 2 53 34 51 1/8 31 5/16 1 - 0" HE-II A-II 2 53 34 51 1/8 31 5/16 1 - 0" HE-II A-II 3 60 38 58 1/2 36 40 1 - 0" HE-I A-II 0 76 48 73 45 1 - 0" HE-I A-II 1 53 53 88 54 1 - 0" HE-I A-II 1 58 54 1 - 0" HE-I A-II | 30 | 38 | 24 | 36 1/4 | 21 12 | - ; | | A-III | ЩЩ | A-III | HE-I< | A-IV |
| P 53 34 51 1/8 31 5/16 1 -0 HE-II A-II 8 60 38 58 1/2 36 1 -0° HE-I A-II 1 68 43 65 40 1 -0° HE-I A-II 76 48 73 45 1 -0° HE-I A-II 83 53 88 54 1 -0° HE-I A-II 91 58 88 54 1 -0° HE-I A-II | 36 | 45 | 29 | 43 3/4 | 26 5/8 | ې ٿ - ج | | A-III-A | ≡- Щ | A-III | HE-IV | A-IV |
| 3 60 38 58 1/2 36 1 -0 HE-I A-II 1 68 43 65 40 1'-0" HE-I A-II 7 68 43 65 40 1'-0" HE-I A-II 83 53 88 54 1'-0" HE-I A-II 91 58 54 1'-0" HE-I A-II | 42 | 53 | 34 | 51 1/8 | 31 5/16 | | | A-II | HE-H | A-III | HE-IV | A-IV |
| Image: Image base of the state of | 48 | 60 | 38 | 58 1/2 | 36 | ç - ₹ | | A-II | | A-III | HE-IV | A-IV |
| 76 48 73 45 1 -0 HE-I A-II 83 53 88 54 1' -0" HE-I A-II 91 58 54 1' -0" HE-I A-II | 54 | 68 | 43 | 65 | | | | A-II | Щ Щ Ц | A-III | 1460 | 1450 |
| 0 83 53 88 54 1 -0 HE-I A-II 91 58 88 54 1'-0" HE-I A-II 91 58 88 54 1'-0" HE-I A-II | 60 | 76 | 48 | 73 | | | | A-II | ≓ ₩ | A-III | 1460 | 1460 |
| 91 58 88 54 1'-0 HE-I A-II A-II A-II | 66 | 83 | 23 | | | - , | ц Ц Ц | A-II | HF-II | A-III | 1460 | 1470 |
| | 72 | 91 | 58 | | 5 2 | - - | | A-II | HE-III | A-III | 1470 | 1480 |
| | Notes: | | | | 5 | | | A-II | | A-III | 1470 | 1480 |

A number indicates the D-Load for the diameter and depth of fill and that a special design is required. Design assumptions; Water filled pipe, AASHTO Type 2 installation per AASHTO LRFD Table 12.10.2.1-1

| | , | Table IIB: CL FOR THE R | ASSES OF F RESPECTIVE | REINFORCE E EQUIVALE | able IIB: CLASSES OF REINFORCED CONCRETE ELLIPTICALL AND REINFORCED CONCRETE ARCH PIPE FOR THE RESPECTIVE EQUIVALENT ROUND SIZE OF PIPE AND FILL HEIGHTS OVER THE TOP OF PIPE (Metric) | LIPTICALL AN DF PIPE AND tric) | ID REINFORC | ED CONCRE S OVER THE | TE ARCH PII TOP OF PIPI | ШШ | |
|----------------------------------|--------------|----------------------------|--------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------|-------------------------------------------------------|-----------------------------------------------------|----------------------------------|---------------------------------------------------------|
| | Reir | Rainforcad | | | | Tyi | Type 1 | Typ | Type 2 | TVI | Type 3 |
| Equivalent Round Size (mm) | Elliptical | Elliptical pipe (mm) | Arch pi | Arch pipe (mm) | Minimum Cover | 1 Elli | Fill Height: 1 m and less | Fill Height: Greater than 1 m not exceeding 3 m | Fill Height: eater than 1 m not exceeding 3 m | Fill H Greater th exceedii | Fill Height: Greater than 3 m not exceeding 4.5 m |
| | Span | Rise | Span | Rise | RCCP HE & A | Щ | Arch | Щ | Arch | 뽀 | Årch |
| 375 | 581 | 266 | | | | | | | | | |
| 450 | 584 | 356 256 | 40/ 01/ | 279 | 0.3 m | HE | A-III | HE-III | A-III | HE-IV | A-IV |
| 525 | 762 | 000 | 600 000 | 343 | 0.3 m | H- H | A-III | HE-III | A-III | HE-IV | A-IV |
| 600 | 762 | 10.0 | 000 | 394 | 0.3 m | HE-III | A-III | HE-III | A-III | HE-IV | A-IV |
| 686 | 86A | | 124 | 457 | 0.3 m | HE-III | A-III | HE-III | A-III | HF-IV | A-IV |
| 750 | 100 | 009 640 | 921 | 572 | 0.3 m | ≡-≡ ⊒H | A-III | HE-III | A-III | HF-N | 21.2 |
| 006 | 300 1143 | 737 | 921 | 572 | 0.3 m | HE | A-III | HE-III | A-III-A | HE-IC | VI-A |
| 1050 | 1346 | 86A | 0000 | 0/0 | 0.3 m | н- Н | A-II | HE-III | A-III | HE-I< | A-IV |
| 1200 | 1524 | 965 | 1496 | CR / | 0.3 m | ΗÜ | A-II | HE-II | A-III | HE-IV | A-IV |
| 1350 | 1727 | 1092 | 1651 | 4040 | 0.3 m | щ Ц | A-II | HE-II | A-III | 70 | 70 |
| 1500 | 1930 | 1219 | 1854 | 1110 | 0.3 m | HE-I | A-II | HE-III | A-III | 70 | 70 |
| 1676 | 2108 | 1346 | 2235 | 1040 | 0.3 m | н Н Н | A-II | ≡-≡ | A-III | 70 | 70 |
| 1800 | 2311 | 1473 | 2235 | 2/01 | 0.3 m | т Ш | A-II | HE-III | A-III | 70 | 20 |
| Notes: | | | 2220 | 2/61 | U.3 M | HE-I | A-II | HE-III | A-III | 70 | 70 |
| A number indica | ates the D-I | oad for the | diameter and | I denth of fill | A number indicates the D-Load for the diameter and denth of fill and that a control of | - | | | | | |

A number indicates the D-Load for the diameter and depth of fill and that a special design is required. Design assumptions; Water filled pipe, AASHTO Type 2 installation per AASHTO LRFD Table 12.10.2.1-1

| | | | | | FOR A | GIVEN | TABLE IIIA: PLASTIC PIPE PERMITTED FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE | BLE IIIA METER | PLAS AND FI | TABLE IIIA: PLASTIC PIPE PERMITTED DIAMETER AND FILL HEIGHT OVER THI | PERMIT HT OVE | TED 3 THE TC | DP OF TI | | | | | | |
|----------|-----|-----------|-------------|---------------------------|--------|-------|----------------------------------------------------------------------------------------------------------|-------------------|----------------|-------------------------------------------------------------------------|------------------|------------------------------------------------|--------------------|----------------------|-----|---------|---------------------------|----------|---------|
| | | | Tvpe | 1 | | | | - | | | | | | | | | | | |
| Nominal | | Fill Heig | tht: 3' | Fill Height: 3' and less. | | | Fill Height: Crostics than 21 | Type z | | | | | Type 3 | | | | Tvp | Type 4 | |
| Diameter | | | with 1' min | nin | | | not (| not exceeding 10' | ig 10' | 'n | <u>.</u> | Fill Height: Greater than not exceeding 15' | eight: Greater tha | r than 10', d 15' | | Fill He | Fill Height: Greater than | eater th | an 15', |
| (iu.) | PVC | CPVC | Ц | ЦЦС | 000 | | | l | | | | | | 2 | | | not exceeding 20' | sding 2(| |
| | | | 1 | 2 | L 5 | | いとう | т П | СРЕ | СРР | PVC | CPVC | Щ | CPE | СРР | PVC | CPVC | Ц | aac |
| 10 | × | × | × | × | VIV | > | > |]; | | | | | | | | |) | - | 5 |
| ¢.† | > | ; > | | < : | ç | < | < | ~ | × | AN | × | × | × | × | VIV | > | , | ; | |
| 7 | < | × | × | × | × | × | × | × | × | * | > | : > | < > | < : | Ş | < | < | × | AN |
| 15 | × | × | NA | × | × | > | > | | Į. | | < | < | \times | NA | × | × | × | × | AN |
| 18 | × | × | × | < | < > | < > | < > | ¥, | × : | × | × | × | AN | NA | × | × | × | NA | × |
| 24 | > | () | | < : | < | < | × | × | × | × | × | × | × | ٩N | > | > | : > | 5 | < : |
| 7 | < | × | AN | ΨZ | AN | × | × | NA | NA | VIV | > | ; ; | | ç | < | < | ~ | × | AN |
| 24 | × | × | × | × | × | > | > | > | ;;;; | Ş | < | ~ | AA | AN | NA | × | × | AN | NA |
| 30 | × | × | × | × | < > | < > | < > | < : | < | ~ | × | × | NA | AN | NA | × | × | × | NA |
| 36 | × | × | : > | <> | < > | < > | < : | × | × | × | × | × | × | AN | × | × | × | : > | |
| | | | < | < | < | ~ | × | × | × | × | × | × | × | NIA | VIV | : > | \sim | < ; | EN. |
| 44 | < | AN | × | × | ¥ | × | NA | × | VIV | VIV | ; | | | | E. | < | × | × | AN |
| 48 | × | AN | × | × | × | × | VIV | < > | | | × | AN | × | AN | NA | × | NA | × | NA |
| Notes: | | | | | | | EN. | < | AN | AN | × | AN | × | AN | NA | × | VIV | > | |
| | | | | | | | | | | | | | | | | < | ç | < | |

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PVC Polyvinyl Chloride (PVC) pipe with a smooth interior CPVC Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior PE Polyethylene (PE) pipe with a smooth interior CPE Corrugated Polyethylene (PE) pipe with a smooth interior CPP Corrugated Polypropylene (CPP) pipe with a smooth interior X This material may be used for the given pipe diameter and fill height NA Not Available

| DE . | | Tvne 4 | | m, not exceeding 6 m | CPE CPP PVC CPVC PE CPP | | - | < | X X X NA | NA | × | X | × × × | × | NA X X NA | NA X | NA X NA X NA |
|-----------------------------------------------------------------------------|--------|------------|----------------------------------------------------|----------------------|-------------------------|-----|-----|---|----------|---------------------------------------|-----|---------------|-------------------|-------------------|-----------|------|--------------|
| MITTED VER THE TOP OF T | | Type 3 | Fill Height: Greater than 3 m, | | C CPVC PE | | ××× | > | × × | × | × | X NA | ~ × | × : | + | | NA |
| FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE (Metric) | | | rii reight: Greater than 1 m, not exceeding 3 m | | PVC CPVC PE CPE CPP PVC | | × | | | X X X X X X X X X X X X X X X X X X X | × : | X NA NA NA VA | × : × : × : | < > < > < > | | | |
| FOR A G | Tvne 1 | Fill Heigh | | | PVC CPVC PE CPE CPP | | | < | × | × | | × | : × | × | X NA X NA | × | |
| | | | Diameter | (mm) | | 250 | 300 | | 375 | 450 | 525 | 600 | 750 | 006 | 1000 | 1200 | Notes: |

PVC Polyvinyl Chloride (PVC) pipe with a smooth interior
 CPVC Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior
 Polyethylene (PE) pipe with a smooth interior
 CPE Corrugated Polyethylene (PE) pipe with a smooth interior
 CPE Corrugated Polypylene (CPP) pipe with a smooth interior
 X This material may be used for the given pipe diameter and fill height
 Not Available

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| Nominal Interpreter Product FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE Nominal Interpreter Type 5 Type 6 Type 7 Nominal Interpreter Fill Height. Greater than 20', not exceeding 30' Fill Height. Greater than 30', not exceeding 35' Nominal Interpreter PVC CPVC CPVC CPVC CPVC CPVC 10 X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X </th <th></th> <th></th> <th></th> <th></th> <th>TARI FILIR: DI ACTIC</th> <th></th> <th></th> <th></th> | | | | | TARI FILIR: DI ACTIC | | | |
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| Type 5 Type 6 minal Fill Height: Greater than 20', not exceeding 30' neter PVC CPVC CPVC | | | | | UIAME LEK AND FILL | L HEIGHT OVER THE TOP OF | THE PIPE | |
| ninal Fill Height: Greater than 20', not exceeding 25' Fill Height: Greater than 25', not exceeding 30' PVC CPVC CPVC CPVC CPVC CPVC CPVC CPVC | | | Typ | ie 5 | | Type 6 | | Ī |
| The second solution of | Nominal Diameter | Fill Height: | Greater than | n 20', not exceeding 25' | | or than 35' and and a form | iype / | |
| PVC PVC PVC PVC PVC PVC PVC PVC | (in.) | ; | | | | | Fill Height: Greater than 30', not exceedi | ling 35' |
| | | PVC | CPVC | | | CPVC | CPVC | |
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| | 12 | × | < × | | < | × > | X | |
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| | 24 | × | × | | <> | <>> | × | |
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| x x NA X N | 36 | × | × | | < > | < > | × | |
| 8 × NA × NA × NA | 42 | × | NA | | <>> | × | × | |
| | 48 | × | AN | | < > | AZ | NA | |
| | Notes: | | | | < | NA | NA | |

PVC Polyvinyl Chloride (PVC) pipe with a smooth interior CPVC Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior X This material may be used for the given pipe diameter and fill height NA Not Available

| | | | FOR A GIVEN PIP | E DIAMETER A | PABLE 111B: PLAS I IC PIPE PERMITTED DIAMETER AND FILL HEIGHT OVER THE (metric) | FOR A GIVEN PIPE DIAMETER AND FILL HEIGHT OVER THE TOP OF THE PIPE (metric) | THE PIPE | |
|----------|------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------|----------------------------------------------------|
| | | Type 5 | 5 | | H H | | | |
| Nominal | | and the second | | | I ype 6 | | | Type 7 |
| Diameter | Fill Height: G | Fill Height: Greater than 6 m, not | m, not exceeding 7.5 m | Fill Height: G | reater than 7.5 | Fill Height: Greater than 7.5 m, not exceeding 9 m | Fill Height: Greater tha | Fill Height: Greater than 9 m not exceeding 10.6 m |
| | PVC | CPVC | | PVC | CPVC | | CPVC | |
| 250 | × | × | | | | | | |
| 300 | × | < × | | × | × : | | × | |
| 375 | × | × | | <;; | × | | × | |
| 450 | × | × | | < | × | | × | |
| 525 | × | × | | < × | < | | × | |
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| 006 | × × | ×× | | ×: | < × | | × × | |
| 1000 | × | ŇA | | ×× | × | | × | |
| 1200 | × | NA | | < × | A Z Z | | NA | |
| | | | | ; | | | NA | |
| PVC P0 | Ivvinvl Chloride | (PVC) nine with | Polyvinyl Chloride (PVC) nine with a smooth interior | | | | | |

Polyvinyl Chloride (PVC) pipe with a smooth interior Corrugated Polyvinyl Chloride (CPVC) pipe with a smooth interior Polyethylene (PE) pipe with a smooth interior This material may be used for the given pipe diameter and fill height Not Available" PVC CPVC NA PEVC

Revise the first sentence of the first paragraph of Article 542.04(c) of the Standard Specifications to read:

"Compacted aggregate, at least 4 in. (100 mm) in depth below the pipe culvert, shall be placed the entire width of the trench and for the length of the pipe culvert, except compacted impervious material shall be used for the outer 3 ft (1 m) at each end of the pipe culvert."

Revise the seventh paragraph of Article 542.04(d) of the Standard Specifications to read:

"PVC, PE and CPP pipes shall be joined according to the manufacturer's specifications."

Replace the third sentence of the first paragraph of Article 542.04(h) of the Standard Specifications with the following:

"The total cover required for various construction loadings shall be the responsibility of the Contractor."

Delete "Table IV : Wheel Loads and Total Cover" in Article 542.04(h) of the Standard Specifications.

Revise the first and second paragraphs of Article 542.04(i) of the Standard Specifications to read:

"(i) Deflection Testing for Pipe Culverts. All PE, PVC and CPP pipe culverts 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 pipe culverts with diameters 24 in. (600 mm) or smaller, a mandrel drag shall be used for deflection testing. For PVC, PE, and CPP pipe culverts with diameters over 24 in. (600 mm), deflection measurements other than by a mandrel shall be used."

Revise Articles 542.04(i)(1) and (2) of the Standard Specifications to read:

- "(1) For all PVC pipe: as defined using ASTM D 3034 methodology.
- (2) For all PE and CPP pipe: the average inside diameter based on the minimum and maximum tolerances specified in the corresponding ASTM or AASHTO material specifications."

Revise the second sentence of the second paragraph of Article 542.07 of the Standard Specifications to read:

"When a prefabricated end section is used, it shall be of the same material as the pipe culvert, except for polyethylene (PE), polyvinylchloride (PVC), and polypropylene (PP) pipes which shall have metal end sections."

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."



LRFD STORM SEWER BURIAL TABLES (BDE)

Effective: November 1, 2013 Revised: November 1, 2014

Revise Article 550.02 of the Standard Specifications to read as follows:

| "Item Artic | cle Section |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| (a) Clay Sewer Pipe | 1010.00 |
| | 1010 00 |
| | |
| (a) the motor of other of the o | |
| (1) Storm Drain and Course Dime (Multi-A) | |
| (1) Remotived Convicte Alch Culver Storm Drain and Sower Ding (Mate 4) | |
| | |
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| (7) Son agained For Division of Division | 40.40.00 |
| V/ Standor Odonoto University FIEXINE JOINT Segionte for Concernity Di | |
| (k) Mastic Joint Sealer for Pipe | 1056 |
| (k) Mastic Joint Sealer for Pipe (l) External Sealing Band | 1055 |
| (I) External Sealing Band | 1057 |
| (m) Fine Aggregate (Note 2) | 1003.04 |
| (n) Coarse Aggregate (Note 3) | 1004.05 |
| (o) Reinforcement Bars and Welded Wire Fabric (p) Handling Hole Plugs | 1006.10 |
| | |
| | 1010 01 |
| (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.

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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 |
|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| A | 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 |
| F | Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe |
| ľ | Polyvinyl Chloride (PVC) Pipe |
| | Corrugated Polywinyl Chlorido Ding (DVO) with a communication |
| | 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:

| | | | | - | СРР | AN | × | × | × | AN | × | NA | × | NA | × | AN | AN | AN | × | AN | NA | AN | ٩N | AN | AN | AN | NA | |
|--------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------|--------------|-----|-----|----------|----------|------------|-------|-----|------|---------|------|------|----|------|----------|-----|------|------|----|-------|-----|------|------------------------------|----------------------------|
| | | | | | ц 2 Ц | × | × | × | × | AN | × | NA | × | AN | × | AN | AN | NA | AN | AN | NA | AN | ٩N | AN | AN | AZ | NA | |
| | | | 3, | | л Т | × | × | Υ Ν | × | AN | × | AN | × | Ν | × | × | × | NA | AN | NA | AN | AN | ٨A | AN | AN | NA | NA | |
| | | 2 | eater than | | 1710 1710 | × | × | × | × | × | × | NA | × | NA | × | NA | Ν | NA | NA | NA | NA | ΝA | NA | NA | NA | AN | NA | |
| | E PIPE | Type 2 | Fill Height: Greater than 3' | U//0 | | × | × | × | × | × | × | AN | × | NA | × | × | × | AN | Ν | AN | NA | NA | NA | AN | AN | AN | AN | |
| IRED | P OF THE | | E | ESCP | 502 | × | × | × | × | × : | × | × | × | × | × | × | × | ٩N | AN : | AN | AN | AN S | NA | AN | AN | AN | NA | |
| TH REQU | R THE TO | | | CSP | ; | | - , | - | 2 | | 7 | ი - | m : | AN | A Z | A S | AN | AN . | A Z | AN | AN . | AN S | AN | AN | AN | AN . | AN | |
| A SEWERS ED AND STRENGTH REQUIRED | FILL HEIGHTS OVER THE TOP OF THE PIPE | | | RCCP | | AN | = = | = | = = | = = | = | = : | = : | = | == : | = : | = | = : | = = | = = | = : | = = | = | = = | = : | = : | = | |
| STORM SEWERS ERMITTED AND S | | | | СРР | | ₹> | < > | <> | < 2 | Ę> | < | ¥, | < 2 | AN X | × | 4Z > | < | ¥, | < 2 | | | | | | E S | AN N | AN | |
| | AND | | | СРЕ | > | < > | < > | <> | < 7 | <u>چ</u> > | < VIV | Ę> | < 2 | ۲N N | < > | < > | < | | | VN | | | VN | | | | E E | |
| TERIAL | | | | Щ | > | < | NΔ | <u> </u> | < M | ź× | VIV | Ę> | < NA | ×> | < > | < | | | AN AN | NA | NA | AN | NA | AN AN | | | e e | |
| STOF KIND OF MATERIAL PERMI | | | Fill Height: 3' and less With 1' minimum cover | CPVC | × | < × | : × | < × | < × | < × | ΝΔ | × | NA | × | < NA | AN | NA | AN | AN | NA | AN | AN | NA | NA | NA | AN | 10 | |
| KIN | Tvpe 1 | | Height: 3 | PVC | × | : × | × | × | < × | × | NA | × | NA | × | < × | × × | NA | AN | AN | NA | NA | AN | NA | NA | AN | AN | 2 | |
| aC1 | 5 | | Vit V | ESCP | × | × | AN | NA | AN | AN | AN | NA | AN | NA | × | × | NA | NA | NA | NA | AN | AN | NA | AN | AN | AN | Storm | 1 |
| | | the property of the second | | CSP | 6 | NA | AN | NA | AN | AN | NA | AN | NA | NA | NA | AN | NA | AA | NA | NA | AN | ΔN | NA | AN | AN | AN | ste Culvert | Storn drain |
| | | Name of State of State and Advantages | | RCCP | NA | 2 | 2 | N | <u> </u> | H | | ≥ | = | | | = | - | | - | = | | - | = | | | = | Reinforced Concrete Culvert, | Concrete Sewer Storm Junio |
| | | Nominal | Diameter in. | | 10 | 12 | 15 | 8 | 21 | 24 | 27 | 30 | 33 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 06 | 96 | 102 | 108 | م | CUT Concrete |

Polyvinyl Chloride Pipe Corrugated Polyvinyl Chloride Pipe Extra Strength Clay Pipe Polyethylene Pipe with a Smooth Interior Corrugated Polypropylene Pipe with a Smooth Interior PVC CPVC PE CPE CPP

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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

| FOR A GIVEN PIPE DIAMETERS AND Type 1 Nominal Type 1 Diameter Type 1 in. Fill Height: 1 m and less 375 IV NA 3 X X X 375 IV NA 3 X X X X 300 IV NA 3 X X X X 450 IV NA X X X X X 675 III NA X X X X X 600 III NA NA X X X X 750 IV NA NA NA NA NA 750 IV NA | | | | | × | STORM STORM | AATERIA | STORM SEWERS (Metric) L PERMITTED AND STRE | SEWERS TTED AN | EWERS (Metric) TED AND STRENGTH REQUIRED | GTH RFO | Call | | | | | |
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| Fill Height: The and less Arcor CSP EVC CPVC | Mominal | Value of Annal State of State | Anna da ana ang ang ang ang ang ang ang ang an | annan a sua anna anna an anna an an annan an an an | d h | 61 | | | | | | | Typ | e 2 | | | |
| RCCP CSP ESCP PVC CPU CP CSP ESCP PVC CPU CP CP <td>Diameter in.</td> <td></td> <td></td> <td>With 3</td> <td>Height: 1 00 mm m</td> <td>m and le inimum o</td> <td>ss over</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>eight: Gri not excee</td> <td>eater than ding 3 m</td> <td>E E</td> <td></td> <td></td> | Diameter in. | | | With 3 | Height: 1 00 mm m | m and le inimum o | ss over | | | | | | eight: Gri not excee | eater than ding 3 m | E E | | |
| 250NA3XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX< | | RCCP | CSP | ESCP | PVC | CPVC | Щ | CPE | СРР | RCCP | CSP | ESCP | U/d | | Ĺ | L | |
| 300VNANA375VNANANA450VNANANA525VNANANA525VNANANA525VNANANA750VNANANA755VNANANA755VNANANA755VNANANA755VNANANA755VNANANA755VNANANA755VNANANA755VNANANA755VNANANA755VNANA755VNANA755VNANA755VNANA755VNA755VNA755VNA755VNA755VNA755VNA755VNA755NANA755NANA755VNA755VNA755VNA755VNA755VNA755VNA755VNA755VNA755VNA755NANA755< | 250 | AN | 3 | × | × | × | > | > | | | | | | いてい | Ц Г | СРЕ | СРР |
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| 325 II NA NA <t< td=""><td>750</td><td>2</td><td>AN</td><td>AN</td><td>×</td><td>×</td><td><u></u> ></td><td>¥ ></td><td>ΥN A</td><td>= :</td><td>ო</td><td>×</td><td>AN</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td></t<> | 750 | 2 | AN | AN | × | × | <u></u> > | ¥ > | ΥN A | = : | ო | × | AN | NA | NA | NA | NA |
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| 1200 I NA X X NA X X NA 1350 II NA NA <td< td=""><td>1050</td><td></td><td>AN</td><td>×</td><td>: ×</td><td>ΝΔ</td><td>< ></td><td>< ></td><td>< }</td><td>= :</td><td>AN</td><td>×</td><td>×</td><td>×</td><td>×</td><td>×</td><td>×</td></td<> | 1050 | | AN | × | : × | ΝΔ | < > | < > | < } | = : | AN | × | × | × | × | × | × |
| 1350IINANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANA </td <td>1200</td> <td>=</td> <td>AN</td> <td>×</td> <td>< ×</td> <td>AN</td> <td>< ></td> <td>< ></td> <td>AN ></td> <td>= :</td> <td>AN .</td> <td>×</td> <td>×</td> <td>AN</td> <td>×</td> <td>NA</td> <td>AN</td> | 1200 | = | AN | × | < × | AN | < > | < > | AN > | = : | AN . | × | × | AN | × | NA | AN |
| 1500 II NA < | 1350 | == | NA | AA | NA | NA | < N | | < | = | NA | × | × | AN | × | AN | AN |
| 1650 II NA < | 1500 | = | NA | NA | NA | AN | | | AN > | = = | AN . | NA | AN | NA | NA | NA | NA |
| 1800 11 NA < | 1650 | = | NA | AN | AN | AN | AN | | < 2 | = = | AN S | A N | AN | NA | AN | AN | × |
| 950 II NA | 1800 | | NA | NA | NA | NA | NA | VN | | = | AN | AA | AN | NA | AN | NA | NA |
| 2100 II NA < | 1950 | **** | AN | AN | AN | AN | MAN | | | | AN . | AN | AN | ۸N | NA | NA | NA |
| 2250 II NA | 2100 | - | NA | AN | ΝA | NA | AN | AN AN | | | A Z | AN S | AN | AN | NA | AN | AN |
| 2400 II NA | 2250 | | AN | AN | AN | NA | NA | AN | | = = | AN | AN | AA | NA | AN | AN | AN |
| 2500 II NA III NA | 2400 | = | AN | AN | NA | AN | NA | AN | | = = | A S | AN S | AN | NA | NA | NA | AA |
| P Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe | 0922 | | AN | AN | NA | AN | NA | NΔ | | | AN S | AN S | AN | AN | NA | NA | AN |
| P Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe | 21 | = | AN | NA | AN | NA | AN | AN | | = = | AN | A Z | AN S | AN | AN | NA | AN |
| | ı. | rced Concr | ete Culvei | rt, Storm C | Jrain, and | Sewer P | De | | | | AN | AN | AA | AN | NA | AN | NA |

Polyvinyl Chloride Pipe C Corrugated Polyvinyl Chloride Pipe Extra Strength Clay Pipe Polyethylene Pipe with a Smooth Interior Corrugated Polyethylene 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. May also use Standard Strength Clay Pipe

| FOR ADVEND OF MATERIAL PERMITTER AND FILL HEIGHTS OVER THE COURD Norminal FOR ADVEND OF MATERIAL PERMITTER AND STENCTH REQUIRED Time and the state of the st | | | | | | | | | | | | | | | | |
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| Type 3 Type 4 Type 3 Type 4 Type 3 Type 4 | | | | FOR A G | KIND C | DE MATEF | SIAL PER TFRS AN | | AND STI | RENGTH | REQUIRE | | | | | |
| Fill Height. Greater than 10. Fill Height. Greater than 10. RCCP CSP PVC CPC CPC <td></td> <td></td> <td></td> <td></td> <td>Type</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Ш Т</td> <td></td> <td></td> <td></td> | | | | | Type | 3 | | | | | | | Ш Т | | | |
| RCCP CSP ESCP PVC CPVC PVC CPVC PVC CPVC PVC CPVC PVC | Diameter | | | Fill He | ight: Gre | ater than | 10' | | | | | Fill Height | Greater | than 15' | | |
| ACUPCSPESCPPVCCPVCPVCCPVCPVCCPVCPVCCPVCPVCCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVCPVC <td>.c.</td> <td></td> <td></td> <td></td> <td>or exceed</td> <td>.91 Buit</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>not e</td> <td>xceeding</td> <td>20'</td> <td></td> <td></td> | .c. | | | | or exceed | .91 Buit | | | | | | not e | xceeding | 20' | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Ę | RUCP | CSP | ESCP | PVC | CPVC | РЕ | СРЕ | СРР | RCCP | CSP | ESCP | PVC | CPVC | Ъ | СРР |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 12 | 5 ≡ | 10 | < | × > | × | ×× | × | NA | NA | 3 | × | × | × | × | MA |
| 18 III NA X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X <td>15</td> <td></td> <td>۰ m</td> <td>< ×</td> <td>< ×</td> <td>< ></td> <td>× ¥</td> <td>¥ ž</td> <td>×</td> <td>2</td> <td>NA</td> <td>NA</td> <td>×</td> <td>< ×</td> <td>< ×</td> <td>Z Z</td> | 15 | | ۰ m | < × | < × | < > | × ¥ | ¥ ž | × | 2 | NA | NA | × | < × | < × | Z Z |
| 21 IIII NA < | 18 | 11 | AN | × | < × | < > | ¥.> | AN . | × | 2 | AN | AN | × | × | NA | × |
| 24 III NA NA <t< td=""><td>21</td><td>=</td><td>NA</td><td>AN</td><td>< ×</td><td><</td><td>< 5</td><td>AN AN</td><td>× <u>:</u></td><td>≥ :</td><td>AN</td><td>AN</td><td>×</td><td>×</td><td>×</td><td>NA</td></t<> | 21 | = | NA | AN | < × | < | < 5 | AN AN | × <u>:</u> | ≥ : | AN | AN | × | × | × | NA |
| 2711NANANANANANANA330111NANANANANANANANANA333111NANANANANANANANANANA333111NANANANANANANANANANANA412111NANANANANANANANANANANA414111NANANANANANANANANANANA415111NANANANANANANANANANANA416111NANANANANANANANANANA417NANANANANANANANANANANA411NANANANANANANANANANANA411NANANANANANANANANANANA411NANANANANANANANANANANA411NANANANANANANANANANANA411NANANANANANANANANANANA411NANANA | 24 | 111 | NA | NA | < × | < × | <u></u> × | | A N | 2 2 | A S | AN . | × | × | AN | NA |
| 33 111 NA NA <t< td=""><td>27</td><td>=</td><td>٩Z</td><td>AN</td><td>NA</td><td>NA</td><td>NA</td><td>VIV</td><td></td><td>2</td><td>AN</td><td>AN</td><td>×</td><td>×</td><td>×</td><td>AN</td></t<> | 27 | = | ٩Z | AN | NA | NA | NA | VIV | | 2 | AN | AN | × | × | × | AN |
| 33IIINANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANANA <td>30</td> <td></td> <td>AN</td> <td>AZ</td> <td>×</td> <td>×</td> <td><u> </u></td> <td></td> <td>¥.></td> <td>2</td> <td>A N</td> <td>AN</td> <td>NA</td> <td>AN</td> <td>AN</td> <td>NA</td> | 30 | | AN | AZ | × | × | <u> </u> | | ¥.> | 2 | A N | AN | NA | AN | AN | NA |
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| 42 11 NA NA <td< td=""><td>36</td><td></td><td>NA</td><td>NA</td><td>×</td><td>×</td><td>×</td><td></td><td>AN AN</td><td>2</td><td>NA</td><td>AN</td><td>NA</td><td>AN</td><td>AN</td><td>NA</td></td<> | 36 | | NA | NA | × | × | × | | AN AN | 2 | NA | AN | NA | AN | AN | NA |
| 111 NA X NA | 42 | | ٩N | ٩N | × | AN | < | | A N | 2 2 | ¥ : | AN | × | × | × | NA |
| 36 III NA NA <t< td=""><td>48</td><td>=</td><td>AA</td><td>٩N</td><td>×</td><td>NA</td><td>< ×</td><td>V N</td><td></td><td>2 2</td><td>AN .</td><td>AN</td><td>×</td><td>NA</td><td>×</td><td>AN</td></t<> | 48 | = | AA | ٩N | × | NA | < × | V N | | 2 2 | AN . | AN | × | NA | × | AN |
| 00 III NA NA <t< td=""><td>54</td><td>-</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>AN</td><td></td><td>21</td><td>NA</td><td>AA</td><td>×</td><td>NA</td><td>×</td><td>NA</td></t<> | 54 | - | NA | NA | NA | NA | NA | AN | | 21 | NA | AA | × | NA | × | NA |
| Na < | 00 | | AN | ٨A | NA | AN | NA | AN AN | | 22 | AZ 2 | AN | AN | AN | NA | AN |
| Na Na <th< td=""><td>66</td><td>=</td><td>NA</td><td>AN</td><td>NA</td><td>NA</td><td>AN</td><td>AN AN</td><td></td><td>2 2</td><td>AN :</td><td>AN.</td><td>AN</td><td>NA</td><td>NA</td><td>NA</td></th<> | 66 | = | NA | AN | NA | NA | AN | AN AN | | 2 2 | AN : | AN. | AN | NA | NA | NA |
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| ⁴⁴ III NA | 8, 3 | | AN | ٩N | NA | NA | AN | ΔN N | | 2 2 | AZ . | AN | AN | AN | NA | NA |
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| 10 111 NA | 0.0 | | AN | AN | AN | NA | NA | NA | | 1000 | AN | AN | AN | NA | AN | AN |
| III NA | 99 | | NA | AN | AN | AN | AN | AN AN | | 1600 | AN S | A Z | AN | AN | AN | NA |
| De 1360 NA NA NA NA NA NA NA NA 1710 NA | 201 | | AN | ٩N | NA | AN | NA | AN | | 1200 | AN | AN S | AN | AN | NA | NA |
| Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe | 8 | 1360 | AA | | AN | NA | AN | AN | AN | 1710 | AN | A Z | A S | AN | AN | NA |
| | | orced Conci | rete Culve | | Irain, and | Sewer Pil | Je Je | | | 2 | AN | NA | AA | AN | AN | NA |

Concrete Sever, Som drain, and Culvert Pipe Polyvinyl Chloride Pipe Corrugated Polyvinyl Chloride Pipe E ztra Strength Clay Pipe Polyethylene Pipe with a Smooth Interior Corrugated Polyethylene Pipe with a Smooth Interior Corrugated Polyethylene 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

La

| | | | FOR A G | FOR A GIVEN PIPE DIAMETERS | VEN PIPE DIAMETERS AND | AL PERMI | | ND STR | ENGTH R | TTED AND STRENGTH REQUIRED | | | | | |
|-------------------------------|-----------------------------------------------------|-------------|--------------|----------------------------|------------------------|----------|-------|----------|----------|----------------------------|---------------------------------|----------------------|------------------|-----|----------|
| | | | | Type 3 | e | | | | | | THE PIPE | | | | |
| Diameter | | | Fill Height: | iaht: Gree | Greater than 3 m | 8 | | | | | | I ype 4 | | | |
| in. | | | uc | not exceeding 4.5 m | 1g 4.5 m | | | | | i.i | Fill Height: Greater than 4.5 m | ight: Greater than | han 4.5 m 6 m | | |
| | RCCP | CSP | ESCP | PVC | CPVC | Б | СРЕ | СРР | BCCB | 000 | | Bunnanau Bunnanau | E | | |
| 250 | AN | 2 | × | × | > | > | , | | 502 | | 1 2 2 2 2 | 2 2 2 2 | CPVC | Щ | СРР |
| 300 | = | ~ | × | < × | < > | < > | < 2 | ¥, | NA | ო | × | × | × | × | NA |
| 375 | | e | × | < × | < > | < 2 | A S | × : | 2 | AN | AN | × | × | : × | ΔN |
| 450 | = | NA | × | × | < > | ¥/> | AN | × | 2 | AA | NA | × | × | AN | Ś× |
| 525 | | AN | AN | < | < > | < 2 | A S | × | ≥ | AN | NA | × | × | × | NA |
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| 675 | = | NA | NA | NA | VIV | < | AN | NA | 2 | NA | AN | × | × | × | ΔN |
| 750 | = | NA | Z | × | ž× | ¥ > | A Z | ¥, | 2 | AN | AA | NA | NA | NA | AN AN |
| 825 | | ٩Z | AN | ŇĂ | Ň | < 2 | ¥ : | × : | 2 | AN | NA | × | × | × | |
| 006 | = | AN | NA | × | × | × > | AN | AN | 2 | AN | NA | NA | AN | AN | AN |
| 1050 | 7446444 2446444 2446444 2446444 2446444 | NA | AN | < × | ŇA | < > | AN AN | A S | 2 | ΝA | NA | × | × | × | NA |
| 1200 | Ξ | AN | AN | × | AN | < > | ŽŽ | AN S | 2 | AN | NA | × | NA | × | AN |
| 1350 | = | NA | NA | NA | NA | NA | VIV | AN | 2 | AN | AN | × | AN | × | AN |
| 1500 | = | NA | NA | NA | AN | | | AN A | 2 | AN | AN | AA | NA | NA | NA |
| 1650 | = | NA | NA | AN | AN | | | AN | 22 | AN . | AN | AN | NA | AN | AN |
| 1800 | = | AN | NA | NA | NA | NA | | HN. | 2 | AN | AN | NA | AN | AN | NA |
| 1950 | | AN | AN | AN | AN | AN AN | | AN 2 | 2 | AN . | AN | NA | NA | NA | NA |
| 2100 | = | AN | NA | AN | AN | AN | | AN N | 2 | A Z | AN | NA | NA | AN | AN |
| 2250 | sianga. Ministra Ministra | NA | NA | NA | NA | VN | | AN | 2 | AA | NA | NA | NA | AN | AN |
| 2400 | | AN | AN | AN | NA | V N | | A A | 08 | AN | AN | AN | AN | NA | NA |
| 0992 | = | AN | AN | AA | NA | MA | | | 80 | AN | AN | NA | AN | AN | AN |
| Ĩ, | 102 | AN | NA | AN | AN | AZ | AN | AN NA | 000 | A N | A S | ΑN | NA | AN | AN |
| RUCH Reinforced Concrete Culv | Reinforced Concrete Culve | te Culvert. | Storm Drain | Puc. | | 1 | | ۲Z | 20 Do | AN | AN | ΔN | VIV | VIV | |

N * N × C C P C C P C C P C C P C C P C C P C C P C C P C C P C C C P C C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C C P C C P C C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C C P C C P C C P C C P C C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C C P C P C C P C C P C C P C C P C C P C C P C C P C P C P C C P C P C P C C P C P C C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P C P

Polyvinyl Choride Pipe Corrugated Polyvinyl Choride Pipe Extra Strength Clary Pipe Extra Strength Clary Pipe For use the with a Smooth Interior Corrugated Polypropylene 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. 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 metric D-load to produce a 25.4 micro-meter crack.

| IPE | Tvna 7 | Fill Height: Greater than 30' not exceeding 35' | CPVC | | × : | × > | <> | < > | < > | < | AN > | × | NA | × | AN | AN | NA | NA | NA | NA | NA | NA | NA | | | | - AN |
|---------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------|------|-----|------|-----|-----|-----|-----|-----------------------------------------|------|-----|----|-----|-----|--------|------|----------|----|------|------|------|----------|--------------|------|--------|---------------------------------------------------------|
| STORM SEWERS FOR A GIVEN PIPE DAND STRENGTH REQUIRED FOR A GIVEN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF THE PIPE | 1 | Fill Height: G | RCCP | N N | AN > | >> | ~ ~ | > > | > > | ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | > > | > > | ^ | > : | > : | > | > | > | > | > | 2730 | 2740 | 2750 | 2750 | 2760 | 2770 | |
| STURN OF MATERIAL PERMITTED AND STRENGTH REQUIRED /EN PIPE DIAMETERS AND FILL HEIGHTS OVER THE TOP OF | | r than 25' 3 30' | CPVC | > | < | < × | × | : × | :× | NA | × | ŇA | > | < 7 | A Z | EN. | AN | A N | NA | AN | AN | NA | AN | AN | AN | NA | |
| WERS AND STRE IEIGHTS (| Type 6 | Fill Height: Greater than 25' not exceeding 30' | PVC | × | < × | < × | × | × | × | AN | × | NA | × | < > | < > | ~ | AN . | A S | AN | AN | AN | AN | AN | AN | AN | AN | r Pipe |
| STURM SEWERS ERMITTED AND S AND FILL HEIGHT | | Fill Heig | RCCP | NA | > | > | > | > | > | > | > | > | / | • > | > > | | > ; | > > | >: | > 00 | 23/0 | 2380 | 2390 | 2400 | 2410 | 2410 | Storm Drain, and Sewer Pipe |
| TERIAL PE | | than 20' 25' | CPVC | × | × | × | × | × | × | AN | × | NA | × | AN | AN | NIA | | | | | | EN . | AN | AN | NA | NA | torm Drain |
| ID OF MAT | Type 5 | Fill Height: Greater than 20' not exceeding 25' | PVC | × | × | × | × | × | × | ٩N | × | NA | × | × | × | NA | NA | AN NA | NA | | | | ¥. | AN S | AN S | AN | Culvert, S pe |
| KIN DR A GIVEN | | Fill Heigt not | RCCP | AN | 2 | N | 2 | 2 | 2 | 2 | 2 | 2 | 2 | ≥ | 2 | \geq | 2 | : 2 | > | 2020 | 2020 | 2030 | 2040 | 2040 2010 | 0007 | 0907 · | Reinforced Concrete Culvert, Polyvinyl Chloride Pipe |
| U L | | Nominal Diameter ìn. | | 10 | 27 | 000 | 0 7 | N C | 24 | 71 | 00 | 33 | 95 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 06 | an an | 10.0 | 100 | | |

CPCC ESCP NA NA

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rolyvinyi Chioride Pipe Corrugated Polyvinyi 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.

CPVC CPVC NA Note

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 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."

PAVEMENT STRIPING - SYMBOLS (BDE)

Effective: January 1, 2015

Revise the Symbol Table of Article 780.14 of the Supplemental Specifications to read:

| Symbol | Largo Siza | 0 |
|----------------------------------------------------|--------------|--------------|
| - j | Large Size | Small Size |
| T I | sq ft (sq m) | sq ft (sq m) |
| Through Arrow | 11.5 (1.07) | 6.5 (0.60) |
| Left or Right Arrow | 15.6 (1.47) | 8.8 (0.82) |
| 2 Arrow Combination Left (or Right) and Through | 26.0 (2.42) | 14.7 (1.37) |
| 3 Arrow Combination Left, Right, and Through | 38.4 (3.56) | 20.9 (1.94) |
| Lane Drop Arrow | 41.5 (3.86) | |
| Wrong Way Arrow | 24.3 (2.26) | |
| Railroad "R" 6 ft (1.8 m) | 3.6 (0.33) | |
| Railroad "X" 20 ft (6.1 m) | 54.0 (5.02) | |
| International Symbol of Accessibility | 3.1 (0.29) | |
| Bike Symbol | 4.7 (0.44) | |
| Shared Lane Symbol | 8.0 (0.74) | |

"SYMBOLS

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 offset voucher shall be a credit against the Department's obligation to pay the Contractor'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 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."

RETROREFLECTIVE SHEETING FOR HIGHWAY SIGNS (BDE)

Effective: November 1, 2014

Revise the first sentence of the first paragraph of Article 1091.03(a)(3) of the Standard Specifications to read:

"When tested according to ASTM E 810, with averaging, the sheeting shall have a minimum coefficient of retroreflection as show in the following tables."

Replace the Tables for Type AA sheeting, Type AP sheeting, Type AZ sheeting and Type ZZ sheeting in Article 1091.03(a)(3) with the following.

Type AA Sheeting Minimum Coefficient of Retroreflection Candelas/foot candle/sq ft (candelas/lux/sq m) of material

| 0 | oservation Entrance | | | | | | | | |
|---|---------------------|-----------------|-------|--------|-----|-------|------|-----|--|
| | Angle (deg.) | Angle (deg.) | White | Yellow | Red | Green | Blue | FO | |
| | 0.2 | -4 | 800 | 600 | 120 | | | | |
| | 0.2 | +30 | 400 | 300 | 120 | 80 | 40 | 200 | |
| | 0.5 | -4 | 200 | | 60 | 35 | 20 | 100 | |
| | 0.5 | +30 | 100 | 150 | 30 | 20 | 10 | 75 | |
| L | | .00 | 100 | 75 | 15 | 10 | 5 | 35 | |

Type AA (Average of 0 and 90 degree rotation)

| Observation Angle (deg.) | Entrance Angle (deg.) | Yellow | FO | | |
|--------------------------------|-----------------------------|--------|-----|--|--|
| 0.2 | -4 | 500 | 165 | | |
| 0.2 | +30 | 115 | 40 | | |
| 0.5 | -4 | 140 | 65 | | |
| 0.5 | +30 | 60 | 30 | | |

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Type AA (45 degree rotation)

Type AP Sheeting Minimum Coefficient of Retroreflection Candelas/foot candle/sq ft (candelas/lux/sq m) of material

| Observation | Entrance | ·)µ0/ // (| werage of | 0 and 90 degree rotation) | | | | | | |
|-----------------|-----------------|-------------|-----------|---------------------------|-------|------|-------|-----|--|--|
| Angle (deg.) | Angle (deg.) | White | Yellow | Red | Green | Blue | Brown | FO | | |
| 0.2 | -4 | 500 | 380 | 75 | | | | | | |
| 0.2 | +30 | 180 | 135 | | 55 | 35 | 25 | 150 | | |
| 0.5 | -4 | 300 | 225 | 30 | 20 | 15 | 10 | 55 | | |
| 0.5 | +30 | 90 | | 50 | 30 | 20 | 15 | 90 | | |
| | | 30 | 70 | 15 | 10 | 7.5 | 5 | 30 | | |

Type AP (Average of 0 and 90 degree rotation

Type AZ Sheeting Minimum Coefficient of Retroreflection Candelas/foot candle/sq ft (candelas/lux/sq m) of material

| Observation | | Type AZ (| Average of | 0 and 90 | degree rot | ation) | | |
|--------------------------------|-----------------------------|-----------|------------|----------|------------|----------|-----|------|
| Observation Angle (deg.) | Entrance Angle (deg.) | White | Yellow | Red | Green | Blue | FYG | FY |
| 0.2 | -4 | 375 | 280 | 75 | 45 | <u> </u> | | |
| 0.2 | +30 | 235 | 170 | | | 25 | 300 | 230 |
| 0.5 | -4 | 245 | | 40 | 25 | 15 | 190 | 150 |
| 0.5 | | | 180 | 50 | 30 | 20 | 200 | 155 |
| | +30 | 135 | 100 | 25 | 15 | 10 | | |
| 1.0 | -4 | 50 | 37.5 | 8.5 | | | 100 | 75 |
| 1.0 | +30 | 22.5 | | | 5 | 2 | 45 | 25 |
| L. | - 00 | 22.3 | 20 | 5 | 3 | 1 | 25 | 12.5 |

Type AZ (A

Type ZZ Sheeting Minimum Coefficient of Retroreflection Candelas/foot candle/sq ft (candelas/lux/sq m) of material

| Oherenti | | Type ZZ | (Average | of 0 and | 90 dearee | rotation) | | | |
|--------------------------------|-----------------------------|---------|----------|----------|-----------|-----------|-----|----------|-----|
| Observation Angle (deg.) | Entrance Angle (deg.) | White | Yellow | Red | Green | Blue | FYG | FY | FO |
| 0.2 | -4 | 570 | 425 | 90 | 60 | 30 | 400 | <u> </u> | |
| 0.2 | +30 | 190 | 140 | 35 | | | 460 | 340 | 170 |
| 0.5 | -4 | 400 | | | 20 | 10 | 150 | 110 | 65 |
| 0.5 | | | 300 | 60 | 40 | 20 | 320 | 240 | 120 |
| | +30 | 130 | 95 | 20 | 15 | 7 | 100 | | |
| 1.0 | -4 | 115 | 90 | 17 | 12 | | | 80 | 45 |
| 1.0 | +30 | 45 | 35 | ~~ | | 5 | 95 | 70 | 35 |
| | | <u></u> | | / | 5 | 2 | 35 | 25 | 15 |

SIDEWALK, CORNER, OR CROSSWALK CLOSURE (BDE)

Effective: January 1, 2015

Revise the first sentence of Article 1106.02(m) of the Supplemental Specifications to read:

"The top and bottom panels shall have alternating white and orange stripes sloping 45 degrees on both sides."

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"."

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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 1 . 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 submit 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. Transportation and the Federal Highway Administration shall approve a program, if it is The Illinois Department of 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, 2014

<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 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.

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.
 - 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."

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.

WORKING DAYS (BDE)

Effective: January 1, 2002

The Contractor shall complete the work within 90 working days.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. 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

 $\ensuremath{\text{(ii)}}$ 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 federallyassisted 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 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 b. 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 from the site at 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 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 (<u>https://www.epls.gov/</u>), 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.

* * * * *

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 (<u>https://www.epls.gov/</u>), 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.

* * * * *

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.