

# 5

**Letting August 3, 2018**

## **Notice to Bidders, Specifications and Proposal**



**Illinois Department  
of Transportation**

**Springfield, Illinois 62764**

**Contract No. 61E17  
LAKE County  
Section 15-00101-00-BT (Mundelein)  
Route FAU 1238 (Maple Avenue)  
Project H5LE-048 ()  
District 1 Construction Funds**

Prepared by

Checked by

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## NOTICE TO BIDDERS

- 1. TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 10:00 a.m. August 3, 2018 at which time the bids will be publicly opened from the iCX SecureVault.
- 2. DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. 61E17  
LAKE County  
Section 15-00101-00-BT (Mundelein)  
Project H5LE-048 ()  
Route FAU 1238 (Maple Avenue)  
District 1 Construction Funds**

**Construct a pedestrian patch adjacent to Maple Avenue, from Midlothian Road to Lake Street in the Village of Mundelein.**

- 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

Randall S. Blankenhorn,  
Secretary

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FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2018

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 4-1-16) (Revised 1-1-18)

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CHECK SHEET  
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## BDE SPECIAL PROVISIONS

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

<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80099		Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2014
80382	89	X Adjusting Frames and Grates	April 1, 2017	
80274		Aggregate Subgrade Improvement	April 1, 2012	April 1, 2016
80192		Automated Flagger Assistance Device	Jan. 1, 2008	
80173		Bituminous Materials Cost Adjustments	Nov. 2, 2006	Aug. 1, 2017
80241		Bridge Demolition Debris	July 1, 2009	
50261		Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481		Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491		Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531		Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80366		Butt Joints	July 1, 2016	
80386		Calcium Aluminate Cement for Class PP-5 Concrete Patching	Nov. 1, 2017	
80396		Class A and B Patching	Jan. 1, 2018	
80384	91	X Compensable Delay Costs	June 2, 2017	
80198		Completion Date (via calendar days)	April 1, 2008	
80199		Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293		Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	July 1, 2016
80311		Concrete End Sections for Pipe Culverts	Jan. 1, 2013	April 1, 2016
80277		Concrete Mix Design – Department Provided	Jan. 1, 2012	April 1, 2016
80261	95	X Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387		Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
* 80029	98	X Disadvantaged Business Enterprise Participation	Sept. 1, 2000	April 2, 2018
80378		Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
80388	109	X Equipment Parking and Storage	Nov. 1, 2017	
80229		Fuel Cost Adjustment	April 1, 2009	Aug. 1, 2017
80304		Grooving for Recessed Pavement Markings	Nov. 1, 2012	Nov. 1, 2017
* 80246		Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	Aug. 1, 2018
* 80398		Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	
* 80399	110	X Hot-Mix Asphalt – Oscillatory Roller	Aug. 1, 2018	
* 80347		Hot-Mix Asphalt – Pay for Performance Using Percent Within Limits - Jobsite Sampling	Nov. 1, 2014	Aug. 1, 2018
80383		Hot-Mix Asphalt – Quality Control for Performance	April 1, 2017	Nov. 1, 2017
80376	112	X Hot-Mix Asphalt – Tack Coat	Nov. 1, 2016	
80392	113	X Lights on Barricades	Jan. 1, 2018	
80336		Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
* 80393	115	X Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	March 2, 2018
* 80400		Mast Arm Assembly and Pole	Aug. 1, 2018	
80045		Material Transfer Device	June 15, 1999	Aug. 1, 2014
80394		Metal Flared End Section for Pipe Culverts	Jan. 1, 2018	April 1, 2018
80165		Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80349		Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
80371		Pavement Marking Removal	July 1, 2016	
80390	117	X Payments to Subcontractors	Nov. 2, 2017	
80377		Portable Changeable Message Signs	Nov. 1, 2016	April 1, 2017
80389	118	X Portland Cement Concrete	Nov. 1, 2017	
80359		Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2017
* 80401		Portland Cement Concrete Pavement Connector for Bridge Approach Slab	Aug. 1, 2018	

<u>File Name</u>	<u>Pg.</u>		<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80385	119	X	Portland Cement Concrete Sidewalk	Aug. 1, 2017	
80300			Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
80328	120	X	Progress Payments	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 Shingles (RAS)	Nov. 1, 2012	Jan. 1, 2018
80395			Sloped Metal End Section for Pipe Culverts	Jan. 1, 2018	
80340			Speed Display Trailer	April 2, 2014	Jan. 1, 2017
80127			Steel Cost Adjustment	April 2, 2014	Aug. 1, 2017
* 80397	121	X	Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	122	X	Subcontractor Mobilization Payments	Nov. 2, 2017	
80317			Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	April 1, 2016
80298			Temporary Pavement Marking (NOTE: This special provision was previously named "Pavement Marking Tape Type IV".)	April 1, 2012	April 1, 2017
20338	123	X	Training Special Provision	Oct. 15, 1975	
80318			Traversable Pipe Grate for Concrete End Sections (Note: This special provision was previously named "Traversable Pipe Grate".)	Jan. 1, 2013	Jan. 1, 2018
80288	126	X	Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	128	X	Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
80071	129	X	Working Days	Jan. 1, 2002	

The following special provisions are in the 2018 Supplemental Specifications and Recurring Special Provisions.

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80368	Light Tower	Article 1069.08	July 1, 2016	
80369	Mast Arm Assembly and Pole	Article 1077.03(a)(1)	July 1, 2016	
80338	Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	Recurring CS #35	April 1, 2014	April 1, 2016
80379	Steel Plate Beam Guardrail	Articles 630.02, 630.05, 630.06, and 630.08	Jan. 1, 2017	
80381	Traffic Barrier Terminal, Type 1 Special	Article 631.04	Jan. 1, 2017	
80380	Tubular Markers	Articles 701.03, 701.15, 701.18, and 1106.02	Jan. 1, 2017	

## STATE OF ILLINOIS

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### SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted April 1, 2016, 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 the Maple Avenue (FAU 1238) Bike Path, Section 15-00101-00-BT, Project H5LE(048); Village of Mundelein, Lake County; and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

Route: FAU 1238 (IL Route 176 – Maple Avenue)  
Section: 15-00101-00-BT  
County: Lake  
Contract No. 61E17  
Job No. C-91-183-16

#### LOCATION OF PROJECT

The project is located along the north side of IL Route 176 (Maple Avenue) between Midlothian Road and US Route 45 (Lake Street) in the Village of Mundelein, Lake County, Illinois. The net and gross length of the project is 3,939 Feet (0.75 miles).

#### DESCRIPTION OF PROJECT

Work consists of the construction of hot mix asphalt surface course, cast-in-place retaining wall, storm sewers, water main, landscape restoration and all incidental and collateral work necessary to complete the project in accordance with the approved plans and specifications, and as described herein.

#### 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.

**STATUS OF UTILITIES (D-1)**

Effective: June 1, 2016

Utility companies and/or municipal owners located within the construction limits of this project have provided the following information in regard to their facilities and the proposed improvements. The tables below contain a description of specific conflicts to be resolved and/or facilities which will require some action on the part of the Department's contractor to proceed with work. Each table entry includes an identification of the action necessary and, if applicable, the estimated duration required for the resolution.

UTILITIES TO BE ADJUSTED

Conflicts noted below have been identified by following the suggested staging plan included in the contract. The company has been notified of all conflicts and will be required to obtain the necessary permits to complete their work; in some instances resolution will be a function of the construction staging. The responsible agency must relocate or complete new installations as noted in the action column; this work has been deemed necessary to be complete for the Department's contractor to then work in the stage under which the item has been listed.

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
Maple Avenue – North parkway	Frames & Lids	Adjusted upon completion of water main installation	North Shore Gas	North Shore Gas to adjust valve box in coordination with the contractor
Maple Avenue – South parkway	Underground Gas	Underground gas	North Shore Gas	North Shore Gas to replace existing gas main prior to construction. 30 days.
Maple Avenue – North parkway	Aerial Electric	Utility poles, guy wires & aerial cables	ComEd	Relocate poles and cables prior to construction. 90 days.
Maple Avenue – North parkway	Aerial Cable	Telephone service cable and pedestals	AT&T	Relocate poles and cables prior to construction. 60 days.
Maple Avenue – North parkway	Aerial Cable	Cable service and pedestals	Comcast	Relocate poles and cables prior to construction. 60 days.

UTILITIES TO BE WATCHED AND PROTECTED

The areas of concern noted below have been identified by following the suggested staging plan included for the contract. The information provided is not a comprehensive list of all remaining utilities, but those which during coordination were identified as ones which might require the Department's contractor to take into consideration when making the determination of the means and methods that would be required to construct the proposed improvement. In some instances the contractor will be responsible to notify the owner in advance of the work to take place so necessary staffing on the owners part can be secured.

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
Maple Avenue –South parkway	Aerial Electric	Utility poles, guy wires & aerial cables	ComEd	Transmission lines shall be protected from damage by the contractor during construction.
Maple Avenue – South parkway	Aerial Cable	Telephone service cable and pedestals	AT&T	Transmission lines shall be protected from damage by the

				contractor during construction.
Maple Avenue – South parkway	Aerial Cable	Cable service and pedestals	Comcast	Transmission lines shall be protected from damage by the contractor during construction.
Maple Avenue – South parkway	Gas Main	Underground gas main	North Shore Gas	Gas mains shall be protected from damage by the contractor during construction.

The following contact information is what was used during the preparation of the plans as provided by the owner of the facility.

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
AT&T (Distribution)	Hector Garcia	1000 Commerce Drive Oak Brook, IL 60523	630-573-5465	hg2929@att.com
Comcast	Patrick Goheen	688 Industrial Drive Elmhurst, IL 60123	847-789-0976	Patrick_goheen@cable.comcast.com
ComEd	Hugo Silva	1 Lincoln Centre, Suite 600 Oakbrook Terrace, IL 60181	630-437-3182	Hugo.silva@comed.com
North Shore Gas	Jay Hammer	3001 Grand Avenue Waukegan, IL 60085	847-263-4678	jrahammer@integrysgroup.com

The above represents the best information available to the Department and is included for the convenience of the bidder. The days required for conflict resolution should be taken into account in the bid as this information has also been factored into the timeline identified for the project when setting the completion date. The applicable portions of the Standard Specifications for Road and Bridge Construction shall apply.

Estimated duration of time provided in the action column for the first conflicts identified will begin on the date of the executed contract regardless of the status of the utility relocations. The responsible agencies will be working toward resolving subsequent conflicts in conjunction with contractor activities in the number of days noted.

The estimated relocation dates must be part of the progress schedule submitted by the contractor. A utility kickoff meeting will be scheduled between the Department, the Department's contractor and the utility companies. The Department's contractor is responsible for contacting J.U.L.I.E. prior to any and all excavation work.

**PROJECT REPORTS AND INFORMATION**

The reports identified below are available for inspection at HR Green, Inc., 420 N. Front Street, McHenry, Illinois.

Geotechnical Report  
 Prepared by: Chicago Testing Laboratory  
 Dated September 14, 2017

And

Final Preliminary Site Investigation (PSI) Report  
Prepared by: Illinois Department of Transportation  
Dated February 22, 2018

## **TRAFFIC CONTROL PLAN**

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

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

The Contractor shall contact the Village of Mundelein at (847) 949-3220 and the District 1 Bureau of Traffic (847) 705-4141 at least 72 hours in advance of beginning work.

### STANDARDS:

701006-05, 701011-04, 701301-04, 701311-03, 701501-06, 701701-10, 701801-06, 701901-07, 704001-08

### DETAILS:

General Notes (Signing)  
TC-10 (Traffic Control and Protection for Side Roads, Intersections, and Driveways)  
TC-13 (District One Typical Pavement Markings)  
TC-22 (Arterial Road Information Sign)

### SPECIAL PROVISIONS:

Maintenance of Roadways  
Advanced Public Notification  
Equipment Parking and Storage (BDE 80388)  
Lights on Barricades (BDE 80392)  
Public Convenience and Safety (D-1)  
Temporary Information Signing (D-1)

## **ADVANCED PUBLIC NOTIFICATION**

Description: This work shall consist of furnishing, installing, maintaining, and relocating temporary information signing for various stages of construction.

The Contractor shall provide notice to the public a minimum of 5 days in advance of any work that requires the closure of lanes through the use of a temporary information signing.

Basis of Payment: This work will be paid as TEMPORARY INFORMATION SIGNING in sq ft.

## **DETECTABLE WARNINGS**

### Description.

This work shall consist of the installation of pre-fabricated replaceable panel of truncated domes on concrete pads at locations as directed by the Engineer.

Truncated domes shall be in accordance with Article 424.09 of the Standard Specifications. The domes shall parallel the pavement crosswalk in accordance with the latest Highway Standard. The panel shall be Red. The panel shall meet the requirements of ASTM C1028 – Slip Resistance and ASTM G155 – Accelerated Weathering.

### Materials.

The Detectable Warning Panel shall be one of the following products.

Duratek tile available from  
Detectile Corporation  
P.O. Box 3513  
Oak Brook, IL 60523  
Phone: (630) 734-0277

OR

High-Impact Polymer Wet-Set tile available from  
TufTile, Inc.  
1200 Flex Court  
Lake Zurich, IL 60047  
Phone: (888) 960-8897

OR

Armor-Tile Replaceable Cast-In Place System available from  
White Cap Construction Supply  
8124 W. 188<sup>th</sup> Street  
Mokena, IL 60448  
Phone: (815) 464-8828

The product and method used for installing detectable warnings shall come with the following documents which shall be given to the Engineer prior to installation:

- (a) Manufacturer's certification stating the product is fully compliant with ADAAG.
- (b) Manufacturer's specifications stating the required materials, equipment, installation procedures and conformance to ASTM C1028

### Measurement and Basis of Payment.

This work will be paid for at the contract unit price per SQUARE FOOT for DETECTABLE WARNINGS which price shall include all equipment, labor and materials required to complete the work as shown on the plans and as described herein. Concrete pad will be measured and paid for separately.

## **EXPLORATION TRENCH, SPECIAL**

### Description.

This work shall be in accordance with Section 213 of the Standard Specifications insofar as applicable and noted herein.

Revise Article 213.01 to read:

“This work shall consist of excavating a trench at locations as directed by the Engineer for the purpose of locating existing sewer lines, water mains, sanitary sewers and other utilities within or adjacent to the proposed project limits.”

Revise the second paragraph of Article 213.02 to read:

“The trench shall be deep enough to expose the sewer lines, water mains, sanitary sewers or other utilities. The width of the trench shall be sufficient to allow proper investigation to determine if the existing facility needs to be adjusted.

The Contractor shall familiarize himself with the locations of all underground utilities of facilities as outlined in applicable Articles 105 of the Standard Specifications and shall save such facilities from damage.”

Revise the fourth paragraph of Article 213.02 to read:

“The exploration trench shall be backfilled with trench backfill meeting the requirements of the Standard Specifications, the cost of which shall be included in the item EXPLORATION TRENCH, SPECIAL.”

#### Method of Measurement.

This work shall be measured in place and measured per lineal FOOT. Payment shall be based on actual length of trench explored without change in unit price because of adjustment in plan quantities due to field conditions.

An estimated length of EXPLORATION TRENCH, SPECIAL has been shown in the Summary of Quantities to establish a unit price, and payment shall be based on actual length of trench explored without change in unit price because of adjustment in plan quantities. This work shall be measured in accordance with Article 213.03.

#### Basis of Payment.

This work will be paid for at the contract unit price per FOOT for EXPLORATION TRENCH, SPECIAL and no extra compensation will be allowed for any delays, inconvenience or damage sustained by the Contractor in performing this work. This price shall include excavation, backfill, and disposal of excess material.

### **BARRIER WALL REFLECTORS, TYPE C**

#### Description.

This work shall consist of the installation of Type C barrier wall reflectors and shall be performed in accordance with all applicable articles of Section 782 of the Standard Specifications.

#### Basis of Payment.

This work will not be paid for separately but included in the contract unit price per FOOT for TEMPORARY CONCRETE BARRIER, as specified..

### **REMOVE EXISTING FLARED END SECTION**

#### Description.

This work shall consist of the removal of existing flared end sections and shall be performed in accordance with all applicable articles of Section 551 of the Standard Specifications.

#### Basis of Payment.

This work will not be paid for separately but included in the contract unit price per FOOT for PIPE CULVERT REMOVAL or STORM SEWER REMOVAL, as specified, regardless of material class, type

and size, which price shall include all excavation and backfilling, and removing and disposing of structure as necessary.

### **REMOVE CONCRETE HEADWALL**

Description.

This work shall consist of the removal of existing headwalls and shall be performed in accordance with all applicable articles of Section 501 of the Standard Specifications.

Basis of Payment.

This work will not be paid for separately but included in the contract unit price per CUBIC YARD for EARTH EXCAVATION, as specified, regardless of type and size, which price shall include all excavation and backfilling, and removing and disposing of structure as necessary.

### **REMOVAL OF LANDSCAPING WALLS**

Description.

This work shall consist of the removal of existing landscape walls, including but not limited to paver type stones and timber edging, and shall be performed in accordance with Article 201.01(a) of the Standard Specifications.

Basis of Payment.

This work will not be paid for separately but included in the contract unit price per CUBIC YARD for EARTH EXCAVATION, as specified, regardless of type and size, which price shall include all excavation and backfilling, and removing and disposing of structure as necessary.

### **BRUSH REMOVAL**

Description.

This work shall consist of clearing existing vegetation in accordance with Article 201.01(a) of the Standard Specifications.

Basis of Payment.

This work will not be paid for separately but included in the contract unit price per CUBIC YARD for EARTH EXCAVATION, as specified, regardless of type and size, which price shall include all removing and disposing of excess materials as necessary.

### **CONNNECTION TO EXISTING SEWER**

Description.

This item shall consist of the construction of proposed storm sewer connection to existing storm sewers or existing drainage structures at locations shown on the plans and as directed by the Engineer.

Construction.

The new opening in the existing drainage structure or storm sewer shall be made in a manner to minimize any structural damage to the storm sewer. Any damage to the existing drainage structure or storm sewer shall be repaired to the Engineer's satisfaction at no additional cost to the Village.

A storm sewer connection to an existing drainage structure shall be sealed with class SI concrete or brick and suitable mortar to the satisfaction of the Engineer.

The storm sewer structure connection to the existing storm sewer shall be sealed with class SI concrete or brick and suitable mortar, per the plan details or to the satisfaction of the Engineer.

Measurement and Basis of Payment.

This work will be paid for at the contract unit price per EACH for CONNECTION TO EXISTING SEWER, as specified, regardless of material class, type and size, which price shall include all excavation and backfilling, and removing and disposing of structure as necessary.

**DRIVEWAY PAVEMENT REMOVAL**

Description.

This work shall be done in accordance with Section 440 of the Standard Specifications. This work shall be done at locations shown on the plans and where directed by the Engineer.

Revise the third paragraph of Article 440.03 to read:

“Driveway material types may include Portland Cement Concrete, Hot-Mix Asphalt and Aggregate. Additional compensation will NOT be allowed for varying materials types or thicknesses comprising of the existing driveway approach.”

Add the following to Article 440.03:

“The Contractor shall be responsible for maintaining traffic control and protection to prevent traffic from using the driveways during construction. The Contractor shall not be allowed to close a half of a driveway entrance for more than 72 hours under any circumstance.

Reinforcing bars may be embedded in old concrete driveways. Sawing, removal, and disposal of reinforcing bars will not be paid for separately but shall be included in the cost of the item removed.

Additional excavation noted by the Engineer in the field to provide a suitable granular sub-base will be performed by the Contractor at no expense to the Contract.

The Contractor shall form a perpendicular straight joint by full depth machine sawing at the end of the portion to be removed to prevent surface spalling. These areas must be marked and measured for payment by the Engineer prior to removal. The Contractor at his/her expense shall repair any driveway pavement damaged by the Contractor during the driveway pavement removal operations.”

Measurement and Basis of Payment.

This work will be paid for at the contract unit price per SQUARE YARD for DRIVEWAY PAVEMENT REMOVAL, which price shall include saw cutting and the removal and disposal of the existing driveway pavement.

**PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT**

Description.

This work shall consist of Portland Cement Concrete driveway pavement constructed on a prepared sub-base and in accordance with requirements of Section 423 in so far as they apply and the concrete shall meet the requirements of Article 1020.04 for Class SI concrete.

Add the following to Article 423.02:

“The Contractor shall use Class PP concrete in order to limit driveway closure to 72 hours.”

Add the following to Article 423.04:

“Any necessary preparation of the sub-grade including excavation and disposal of materials shall be paid for as DRIVEWAY PAVEMENT REMOVAL.”

Add the following to Article 423.06:

“Materials.

Portland Cement Concrete Driveway Pavement shall be eight inches (8") in thickness.

Construction.

At points where the proposed driveway pavement abuts a concrete gutter crossing, 3/4" preformed expansion joint filler shall be placed between the concrete driveway and the gutter. The expansion joint filler shall extend the entire depth and width of the driveway. Preformed expansion joint filler of 1/2" thickness shall be placed between the new concrete and all structures which extend through the driveway, including, but not limited to, utility manholes.

Alignment, slope, and grades of the formwork will be verified by the Engineer upon a minimum of 24 hours notice by the Contractor before pouring concrete. No concrete shall be placed without prior approval of the formwork by the Engineer.

Prior to replacement with the Portland cement concrete, the exposed base course shall be shaped and compacted to the satisfaction of the Engineer. Additional crushed aggregate (CA-6 gradation) base course may be required in the preparation of the base course as indicated above. Any additional aggregate base course required for the preparation of the base and filling of depressions created by the removal of driveway / installation of pipe culverts or storm sewers shall be considered included to this pay item.”

Measurement and Basis of Payment.

This work will be paid for at the contract unit price per SQUARE YARD for PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, of the depth specified, measured in place, which price shall include aggregate base course where unsuitable materials are found, additional cost for the use of Class PP concrete, and all incidental work.

No stamps advertising the Contractor, construction companies, or other private concerns shall be placed in the concrete.

**STORM SEWER REMOVAL**

Description.

This work shall include the removal and disposal of existing storm sewer pipe and end sections at the locations shown in the plans or as directed by the Engineer in accordance with Section 551 of the Standard Specifications except as noted herein. No additional compensation will be provided for variance in pipe material or pipe type.

Revise the first and second paragraph of Article 551.03 to read:

“STORM SEWER REMOVAL will consist of the removal of existing storm sewer pipe beneath roadways, driveways, or within parkway areas at locations with no proposed replacement pipe. The existing storm sewers to be removed will not be salvaged and shall be removed and disposed outside of the project limits by the Contractor. Materials excavated for STORM SEWER REMOVAL shall be removed and disposed of as included to this pay item.

If the proposed storm sewer falls in the same trench as the existing storm sewer, the removal of the existing storm sewer will not be paid for separately, but will be included in the cost of the storm sewer being installed.”

Measurement and Basis of Payment.

This work will be paid for at the contract unit price per FOOT for STORM SEWER REMOVAL, of the size specified, regardless of depth, or type of material. The price shall include the removal of the existing pipe and patching of the existing storm structure(s) as directed by the Engineer.

## **PIPE CULVERT REMOVAL**

### Description.

This work shall include the removal and disposal of existing pipe culverts and end sections at the locations shown in the plans or as directed by the Engineer in accordance with Section 501 of the Standard Specifications except as noted herein. No additional compensation will be provided for variance in pipe material, pipe type or type of headwall.

Add the following to the third paragraph of Article 501.04:

“As shown in the plans, existing headwalls or culvert aprons may consist of masonry, concrete, stone and/or timber, these items will be removed with the pipe culvert to accommodate construction activities.

Materials excavated for PIPE CULVERT REMOVAL, including headwalls, shall be removed and disposed of as included to this pay item.”

### Measurement and Basis of Payment.

This work will be paid for at the contract unit price per FOOT for PIPE CULVERT REMOVAL, regardless of size, depth, or type of material. The price shall include the removal of the existing pipe culvert headwalls as shown on the plans or as directed by the Engineer.

## **CATCH BASIN, TYPE A CATCH BASIN, TYPE C MANHOLE, TYPE A**

### Description.

This work shall be done in accordance with Section 602 of the Standard Specifications, except as noted herein, and the Standard Details, and as directed by the Engineer.

Add the following to Article 602.07

“All new storm sewer structures shall be constructed using precast reinforced concrete sections. Final adjustments will be made using expanded polypropylene adjusting rings. A maximum of 12” of adjusting rings will be permitted.

Add the following to Article 602.11

“Frame and grates or lids of the type specified in the plans will be included in the various storm sewer structures pay items in the contract.”

### Measurement and Basis of Payment.

This work will be paid for at the contract unit price per EACH for MANHOLE, and per EACH for CATCH BASIN, of the type specified, with specified Frame and Grate/Lid or Grate, which shall include all labor, material, and equipment to complete the work as specified above.

## **WOOD FENCE TO BE REMOVED AND RE-ERECTED**

### Description.

This work shall consist of removing and re-erecting wood fences, including rails, posts and gates that conflict with the proposed improvement. Fence material types may include wood or chain link of varying types and heights. Additional compensation will NOT be allowed for varying materials types or heights comprising of the existing fences to be removed or re-erected. It is intended that sections of the removed fence will be re-erected in order to tie in existing side yard fences regardless of type.

The removed fence(s) shall be stacked at each property location on a palette provided by the Contractor.

It will be the Contractor's responsibility to determine the type of fence and materials required to complete each relocation.

Method of Measurement.

This work shall be measured in place and measured per lineal FOOT. Payment shall be based on actual length of fence re-erected without change in unit price because of adjustment in plan quantities due to field conditions.

Basis of Payment.

This work will be paid for at the contract unit price per FOOT for WOOD FENCE TO BE REMOVED AND RE-ERECTED which price shall include connections to existing and proposed fence(s), post foundations (if required), post excavation and all equipment, labor and materials required to complete this work.

**TREE ROOT PRUNING**

Description.

This work shall be performed in accordance with Section 201 of the Standard Specifications.

Add the following to Article 201.06 (a):

“Root pruning shall be performed by an arborist for trees at the locations where proposed gutter, storm sewer installation and/or proposed curb and gutter operations necessitate. A chemical agent approved by an arborist shall be applied to improve the tree's ability to recover from root loss. All varying diameters of root size shall be combined under this pay item.”

Measurement and Basis of Payment.

TREE ROOT PRUNING will be measured per EACH tree, and paid for at the contract unit price per EACH for TREE ROOT PRUNING.

**SUPPLEMENTAL WATERING**

Description.

This work will include watering turf, trees, shrubs, vines and perennial plants at the rates specified and as directed by the Engineer.

Schedule.

Watering must be completed in a timely manner. Damage to plant material that is a result of the Contractor's failure to water in a timely way must be repaired or replaced at the Contractor's expense.

Source of Water/Transporting Water.

The Contractor shall notify the Engineer of the source of water used and provide written certification that the water does not contain chemicals harmful to plant growth. Transporting of the water from the source to the work area shall be the daily responsibility of the Contractor.

Rate of Application.

The normal rates of application for watering are as follows. The Contractor will adjust these rates as needed depending upon weather conditions.

Turf and Perennial Plants:	3 gallons per square yard
Trees:	10 gallons per tree
Shrubs:	3 gallons per shrub
Vines:	2 gallons per vine

Method of Application.

A spray nozzle that does not damage small plants must be used when watering perennial plants or turf. Water shall be applied at the base of the plant to keep as much water as possible off plant leaves. An open hose may be used to water trees, shrubs, and vines if mulch and soil are not displaced by watering. Water shall trickle slowly into soil and completely soak the root zone. All necessary hose, piping, water truck, etc. shall be supplied by the Contractor. The Contractor must supply metering equipment as needed to assure the specified application rate of water.

Method of Measurement.

Supplemental watering will be measured in units of 1000 gallons (3,785 liters) of water applied as directed.

Basis of Payment.

This work will be paid for at the contract unit price per UNIT of SUPPLEMENTAL WATERING, measured as specified. Payment will include the cost of all water, equipment and labor needed to complete the work specified herein and to the satisfaction of the Engineer.

**PLANTING SOIL MIX FURNISH AND PLACE, 18”**

Description.

This work shall include all labor, materials, equipment, and supervision required to furnish and install the topsoil for perennial planting and backfill for shrubs and trees. The material and work specified in this section includes: topsoil, compost, sand, and all other items of pertinence necessary to provide, install and grade the topsoil/amended topsoil as detailed herein and on the plans.

Materials.

- A. Topsoil for amended topsoil should be sandy loam soil, typical of cultivated topsoils of the locality. Secure from naturally well drained areas. Use satisfactory soil materials with highly organic content capable of sustaining shrub, perennial and tree growth. Topsoil shall be free of admixture of subsoil, reasonably free from clay lumps, stone, or other debris greater than 1” in the longest dimension. Stones ranging from 0.5” to 1” shall not exceed 5% of the soil volume, and gravel 0.25” to 0.5” inches shall not exceed 5% of the soil volume. The soil should have no herbicides, heavy metals, biological toxins, or hydrocarbons that will impact plant growth or are at levels exceeding the EPA’s standards for soil contaminants. Topsoil to have pH value of minimum 5.4 and maximum 7.0.
- B. Compost (30% of amended topsoil mixture): A product of compost or locally available organic waste. Compost should be free from debris, weed seeds, and insects or diseases which may be harmful to the intended planting.
- C. Sand (30% of amended topsoil mixture): Medium and coarse sand (<25% fine sand).
- D. The Contractor will submit samples of topsoil, compost and sand for approval to the Engineer prior to delivery and installation.

Installation.

- A. Amended topsoil shall be installed in lifts or layers of less than 12”. Loosen/scarify surface of subgrade to minimum two inch (2”) depth to ensure a positive bond between subgrade and topsoil. This shall also be done between each lift.
- B. Do not place finish amended topsoil until after clean-up and removal of construction debris, trash, surplus materials, and equipment from project site.

- C. In landscape planting beds, place and spread the amended topsoil to a uniform eighteen inch (18") settled depth for the planters and a minimum thirty-six inch (36") settled depth for trees. Shrub beds shall receive a minimum six inch (6") settled depth scarified and tilled to twelve inches (12").
- D. Where topsoil is spread, use a cultipacker, pulverizer, or similar tool to pulverize the soil and eliminate all lumps. Do not compact topsoil.
- E. On a clean topsoil surface, add the topsoil, compost, and sand per the ratios specified and till the amendments throughout the depth of topsoil specified.
- F. Finish grade planting bed areas as shown on the plans. Prepare finish grade for planting, sodding, or seeding with only light raking or scarifying required. Round finished surfaces at abrupt changes in slope. Finish grades to uniform levels or slopes between points where levels are given or between such point and existing grades. Positively drain all landscape plantings and seeded/sodded lawn areas to designated surface water collection points, streets, and/or waterways.
- G. Protect paving, sidewalks, utilities, and plants during finish grading; repair or replace any items damaged by construction operations.
- H. After placement, maintain surfaces to indicated finished grades; deposit additional topsoil or amended topsoil to repair settlement or erosion up to the date of final acceptance. Scarify surfaces upon which additional topsoil is to be deposited.

Maintenance.

- A. Protection of graded areas:
  - 1. Protect newly graded areas from traffic and erosion.
  - 2. Keep free of trash and debris.
  - 3. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.
  - 4. Keep public streets clean from soil, soil tracking, and debris at all times.
- B. Reconditioning Compacted Areas: Where completed graded areas are disturbed by subsequent construction operations, erosion or adverse weather, scarify surface, re-shape, and compact to required density prior to further construction at no additional cost to the contract.
- C. Settling: Where settling is measurable or observable during general project warranty period, add topsoil, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration at no additional cost to the contract.

Method Of Measurement.

The amended topsoil and finish preparation/grading for landscape plantings as indicated on the plans, complete-in-place and accepted, will be measured by SQUARE YARD for finished area. Quantity is calculated by the depths and areas shown on plans. Shrinkage factor shall be considered included to the unit price for this item.

Basis of Payment.

This work shall be paid for at the contract unit price per SQUARE YARD for PLANTING SOIL MIX FURNISH AND PLACE, 18" which shall include furnishing all equipment, materials, and all other work necessary or incidental to the construction of the complete the work.

**PLANTINGS**

This work shall be completed in accordance with Sections 253 (Planting Woody Plants) and 254 (Planting Perennial Plants) of the Standard Specifications insofar as applicable and the following provisions.

## Part I. General

### I. Description of Work

- A. Provide all exterior planting as shown on the drawings or inferable there from and/or as specified in accordance with the requirements of the Contract Documents.
- B. These specifications include standards necessary for and incidental to the execution and completion of planting, including hauling and spreading of topsoil, and finished grading as indicated on the prepared drawings and specified herein.
- C. Protection of existing features. During construction, protect all existing trees, shrubs, and other specified vegetation, site features and improvements, structures, and utilities specified herein and/or on submitted drawings. Removal or destruction of existing plantings is prohibited unless specifically authorized by the owner.

### II. Applicable Standards

- A. *American National Standards for Tree Care Operations, ANSIA300*. American National Standards Institute. 11 West 42" Street, New York, N.Y. 10036.
- B. *American Standard for Nursery Stock, ANSI Z60. 1*. American Nursery and Landscape Association, 1250 Eye Street. NW, Suite 500, Washington, D.C. 20005.
- C. *Hortus Third*, The Staff of the L.H. Bailey Hortorium. 1976. MacMillan Publishing Co., New York. All standards shall include the latest additions and amendments as of the date of advertisement for bids.

### III. Qualifications

- A. Landscape planting and related work shall be performed by a company with a minimum of five years' experience specializing in this type of work. The Landscape Architect shall approve all contractors and their sub-contractors who will be performing any landscape work included in this section of the specification.

### IV. Requirements of Regulatory Agencies

- A. Certificates of inspection shall accompany the invoice for each shipment of plants as may be required by law for transportation. File certificates with the Landscape Architect prior to acceptance of the material. Inspection by federal or state authorities at place of growth does not preclude rejection of the plants at the site.

### V. Submittals

- A. **Manufacturer's Data:** Submit copies of the manufacturer's and/or source data for all materials specified, including soils.
- B. **Nursery Sources:** Submit a list of all nurseries that will supply plants, along with a list of the plants they will provide and the location of the nursery.

### VI. Utility Verification

- A. The contractor shall contact the local utility companies for verification of the location of all underground utility lines in the area of the work. The contractor shall be responsible for all damage resulting from neglect or failure to comply with this requirement.
- B. Verify locations and finished grades of utilities including drainage and irrigation systems installed by others. In the vicinity of utilities, hand-excavate to minimize the possibility of damage to underground utilities. Protect above-ground utility stubs, footings, or fixtures from damage by landscape construction.

### VII. Job Conditions

- A. Prior to beginning work, and regularly for the duration of landscape operations, the Contractor shall examine and verify the conditions and readiness of the job site and shall notify the General Contractor of unsatisfactory conditions. The Contractor shall not proceed with the work until unsatisfactory conditions have been corrected or resolved.
- B. Where soil preparation occurs in close proximity to other site improvements, adequate protection shall be given to all features prior to commencing work. Any items damaged during soil preparation operations shall be promptly repaired to their original condition at no addition to the Contract Price.
- C. Notify Engineer at least seven (7) working days prior to installation of plant material.
- D. A complete list of plants, including sizes, quantities and other requirements is shown on the drawings and in the bid form. In the event that quantity discrepancies or material omissions occur in the plant list, the planting plans shall govern.

## Part 2. Materials

### I. Plants

Plants shall be true to species and variety specified and nursery-grown in accordance with good horticultural practices under climatic conditions similar to those in the locality of the project for at least two years. They shall have been freshly dug (during the most recent favorable harvest season).

- A. All plant names and descriptions shall be as defined in *Hortus Third*.
- B. All plants shall be grown and harvested in accordance with the *American Standard for Nursery Stock*.
- C. Unless approved by the landscape architect, plants shall have been grown at a latitude not more than 325 km (200 miles) north or south of the latitude of the project unless the provenance of the plant can be documented to be compatible with the latitude and cold hardiness zone of the planting location.
- D. Unless specifically noted, all plants shall be of specimen quality, exceptionally heavy, symmetrical, and so trained or favored in development and appearance as to be unquestionably and outstandingly superior in form, compactness, and symmetry. They shall be sound, healthy, vigorous, well branched, and densely foliated when in leaf; free of disease and insects, eggs, or larvae; and shall have healthy, well-developed root systems. They shall be free from physical damage or other conditions that would prevent vigorous growth.
- E. Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over 20 mm (3/4 in.) in diameter that are not completely closed will be rejected.
- F. Plants shall conform to the measurements specified, except that plants larger than those specified may be used if approved by the landscape architect. Use of larger plants shall not increase the contract price. If larger plants are approved, the root ball shall be increased in proportion to the size of the plant.
- G. Caliper measurements shall be taken on the trunk 150 mm (6 in.) above the natural ground line for trees up to and including 100 mm (4 in.) in caliper, and 300 mm (12 in.) above the natural ground line for trees over 100 mm (4 in.) in caliper. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to branch tip. Plants shall be measured when branches are in their normal position. If a range of sizes is given, no plant shall be less than the minimum size, and no less than 50 percent of the plants shall be as large as the maximum size specified. Measurements specified are minimum sizes acceptable after pruning, where pruning is required. Plants that meet measurements but do not possess a standard relationship between height and spread, according to the *American Standards for Nursery Stock*, shall be rejected.
- H. Substitutions of plant materials will not be permitted unless authorized in writing by the landscape architect. If proof is submitted in writing that a plant specified is not obtainable, consideration will be given to the nearest available size or similar variety, with a corresponding adjustment of the contract price.
- I. The plant list at the end of this section, or on the drawing, is for the contractor's information only, and no guarantee is expressed or implied that quantities therein are correct or that the list is

complete. The contractor shall ensure that all plant materials shown on the drawings are included in his or her bid.

J. All plants shall be labeled by plant name. Labels shall be attached securely to all plants, bundles, and containers of plant materials when delivered. Plant labels shall be durable and legible, with information given in weather-resistant ink or embossed process lettering.

K. Selection and Tagging

1. Plants shall be subject to inspection for conformity to specification requirements and approval by the landscape architect at their place of growth and upon delivery. Such approval shall not impair the right of inspection and rejection during progress of the work.
2. A written request for the inspection of plant material at their place of growth shall be submitted to the landscape architect at least ten calendar days prior to digging. This request shall state the place of growth and the quantity of plants to be inspected. The landscape architect may refuse inspection at this time if, in his or her judgment, sufficient quantities of plants are not available for inspection.
3. All field grown deciduous trees shall be marked to indicate the trees north orientation in the nursery. Place a 1 -in. diameter spot of white paint onto the north side of the tree trunk within the bottom 12 inches of the trunk.

L. Balled and Burlapped (B&B) Plant Materials

1. Trees designated B&B shall be properly dug with firm, natural balls of soil retaining as many fibrous roots as possible, in sizes and shapes as specified in the American Standard for Nursery Stock. Balls shall be firmly wrapped with nonsynthetic, rottable burlap and secured with nails and heavy, nonsynthetic, rottable twine. The root collar shall be apparent at surface of ball. Trees with loose, broken, processed, or manufactured root balls will not be accepted, except with special written approval before planting.
2. Container grown deciduous and/or evergreen shrubs will be acceptable in lieu of balled and burlapped shrubs subject to specified limitations for container grown stock. Size of container grown material must conform to size/height requirements on the plant list.

M. Container Plants

1. Plants grown in containers shall be of appropriate size for the container as specified in the most recent edition of the American Standard for Nursery Stock and be free of circling roots on the exterior and interior of the root ball.
2. Container plants shall have been grown in the container long enough to have established roots throughout the growing medium.

N. Immediately after harvesting plants, protect from drying and damage until shipped and delivered to the planting site. Rootballs shall be checked regularly and watered sufficiently to maintain root viability.

O. Transportation and Storage of Plant Material

1. Branches shall be tied with rope or twine only, and in such a manner that no damage will occur to the bark or branches.
2. During transportation of plant material, the contractor shall exercise care to prevent injury and drying out of the trees. Should the roots be dried out, large branches broken, balls of earth broken or loosened, or areas of bark torn, the landscape architect may reject the injured tree(s) and order them replaced at no additional cost to the owner. All loads of plants shall be covered at all times with tarpaulin or canvas. Loads that are not protected will be rejected.
3. All bareroot stock sent from the storage facility shall be adequately covered with wet soil, sawdust, woodchips, moss, peat, straw, hay, or other acceptable moisture-holding medium, and shall be covered with a tarpaulin or canvas. Loads that are not protected in the above manner may be rejected.
4. Plants must be protected at all times from sun or drying winds. Those that cannot be planted immediately on delivery shall be kept in the shade, well protected with soil, wet mulch, or other acceptable material, and kept well watered. Plants shall not remain unplanted any longer than three days after delivery. Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. Plants shall be lifted and handled with suitable support of the soil ball to avoid damaging it.

## II. Materials for Planting

- A. Fertilizer: shall be an emulsion specifically manufactured for agricultural use, which provides a protective film over plant surfaces. Anti-desiccants shall be delivered in containers of the manufacturer and shall be mixed according to the manufacturer's directions. Submit manufacturer literature for approval.
- B. Herbicide: shall be applied at a rate of 3 lbs./1000 sf as available from ACI for all shrub beds.
- C. Guying Material: shall be #10 gauge galvanized steel for trees under 5" caliper. For trees over 5" caliper, seven-strand cadmium plated steel with galvanized "eye" thimbles and galvanized clamps shall be used. Turnbuckles shall be 5/16", eye and eye, with 4" takeup. Hose shall be new, 2-ply reinforced rubber hose, minimum 1/2" I.D.
- D. Tree Wrap: shall be burlap tree wrap, 4" wide.
- E. Twine: shall be soft nursery jute.

### Part 3. Execution

#### I. Excavation in Planting Areas

- A. Locations for plants and/or outlines of areas to be planted are to be staked out at the site. Locate and mark all subsurface utility lines. Approval of the stakeout by the landscape architect is required before excavation begins.
- B. In areas beyond the critical root zone of existing trees to remain, where soil is to be added to the existing grade or areas where soil is to be graded, tilled or amended, remove all existing sod, weeds or other vegetative growth including the surface root mat, thatch and plant tops prior to the start of the work. In areas within the critical root zone of existing trees remove existing vegetation using selective techniques that do the least damage to the existing tree root structure while removing enough of the existing plant mass so as to not interfere with the drainage and biological functions of the new soil. The landscape architect shall approve all means and methods of work within the critical root zone of all existing trees to remain.
- C. Tree and Shrub Pits
  - 1. Tree and shrub pits are to be excavated to a depth that allows plant root balls to sit on stable native soil, with tops of root balls 1 in above adjacent finish grades. Tree holes to be at least 3 times the spread diameter of the root ball. Use shovel to rough up sides of exposed walls.
  - 2. If the planting area under any tree is initially dug too deep, the soil added to bring it up to the correct level should be thoroughly tamped.
  - 3. Subgrade soils shall be separated from the topsoil, removed from the area, and not used as backfill. Excavations shall not be left uncovered or unprotected overnight.
- D. Perennial Beds
  - 1. Remove enough existing native soil to accommodate 8" depth of Amended Planting Soil.
  - 2. Existing soil may be acceptable for amendment if it meets the requirements for Sandy Loam Topsoil described above.
- E. Turf Areas
  - 1. Remove enough existing native soil to accommodate 6" depth of Topsoil with organic matter amendment.
  - 2. Existing soil may be acceptable for amendment if it meets the requirements for Sandy Loam Topsoil described above.
- F. Detrimental soil conditions: The landscape architect is to be notified, in writing, of soil conditions encountered, including poor drainage that the contractor considers detrimental to the growth of plant material. When detrimental conditions are uncovered, planting shall be discontinued until instructions to resolve the conditions are received from the landscape architect.
- G. Obstructions: If rock, underground construction work, utilities, tree roots, or other obstructions are encountered in the excavation of planting areas, alternate locations for any planting shall be determined by the landscape architect.

#### II. Planting Operations

- 1. Plants shall be set on flat-tamped or unexcavated pads at the same relationship to finished grade as they were to the ground from which they were dug, unless otherwise noted on the drawings. Plants must be set plumb and braced in position until topsoil or planting mix has been placed and tamped

around the base of the root ball. Improper compacting of the soil around the root ball may result in the tree settling or leaning. Plants shall be set so that they will be at the same depth and so that the root ball does not shift or move laterally one year later.

2. Determine the elevation of the root flare and ensure that it is planted at 1 in. above finish grade. This may require that the plant be set higher than the grade in the nursery.
  - a. Lift plants only from the bottom of the root balls or with belts or lifting harnesses of sufficient width not to damage the root balls. Do not lift trees by their trunk or use the trunk as a lever in positioning or moving the tree in the planting area.
  - b. Remove plastic, paper, or fiber pots from containerized plant material. Pull roots out of the root mat, and cut circling roots with a sharp knife. Loosen the potting medium and shake away from the root mat. Immediately after removing the container, install the plant such that the roots do not dry out. Pack planting mix around the exposed roots while planting.
  - c. Cut ropes or strings from the top of shrub root balls and trees smaller than 3 in. caliper after plant has been set. Remove burlap or cloth wrapping and any wire baskets from around top half of balls. Do not turn under and bury portions of burlap at top of ball.
  - d. Do not immediately remove the ropes and burlap from trees larger than 3 in. caliper. Return to each tree three months after planting (six months for fall-planted material), and cut all ropes around the trunks and tops of the root balls of these trees.
  - e. Completely remove any waterproof or water-repellant strings or wrappings from the root ball and trunk before backfilling.
  - f. Set balled and burlapped trees in the hole with the north marker facing north unless otherwise approved by the landscape architect.
  - g. Place Amended Planting Soil as described above into the area around the plant, tamping lightly to reduce settlement.
  - h. approved for amendment, place 3 of organic matter on top of existing soil and rototill into existing topsoil.
  - i. Ensure that the backfill immediately around the base of the root ball is tamped with foot pressure sufficient to prevent the root ball from shifting or leaning.
  - j. Thoroughly water all plants immediately after planting. Apply water by hose directly to the root ball and the adjacent soil.
  - k. Remove all tags, labels, strings, etc. from all plants after approval is given from the Resident Engineer.
  - l. Remove any excess soil, debris, and planting material from the job site at the end of each workday.
  - m. Form watering saucers 3 in. height immediately outside the area of the root ball of each tree.

### III. Wrapping

- A. Immediately after planting the Engineer will inspect the trees for injury to trunks, evidence of insect infestation and improper pruning.
- B. In Fall only, immediately after inspection the Contractor will wrap the trunks of all trees spirally with the specified materials.
  - a. Overlap  $\frac{1}{2}$  the width of the tree wrap strip and cover the trunk from the base to the height of the first major branches.
- C. Secure tree wrap in place with twine wound spirally downward in opposite direction of tree wrap, tied around the tree in at least three (3) places in addition to the top and bottom.
- D. Contractor shall remove tree wrap the following Spring.

### IV. Guying

- A. Guying of trees shall be at the option of the Landscape Contractor; however, all trees shall be plump and straight through final inspection and warranty.
- B. When guying of trees is deemed necessary to insure proper planting and positioning of the tree, it should be done immediately after lawn seeding or sodding operations and prior to acceptance. When high winds or other conditions which may affect tree survival or appearance occur, the Engineer may require immediate guying.

### V. Pruning

- A. Plants shall not be heavily pruned at the time of planting. Pruning is required at planting time only to correct defects in the tree structure, including removal of injured branches, double leaders, waterspouts, suckers, and interfering branches. Healthy lower branches and interior small twigs should not be removed except as necessary to clear walks and roads. In no case should more than one-quarter of the branching structure be removed. Retain the normal or natural shape of the plant.
- B. All pruning shall be completed using clean, sharp tools. All cuts shall be clean and smooth, with the bark intact with no rough edges or tears.
- C. Except in circumstances dictated by the needs of specific pruning practices, tree paint shall not be used. The use of tree paint shall be only upon approval of the landscape architect. Tree paint, when required, shall be paint specifically formulated and manufacturing for horticultural use.
- D. Pruning of large trees shall be done from a hydraulic man-lift such that it is not necessary to climb the tree.

VI. Maintenance of Trees, Shrubs, and Perennial Plants

- A. Maintenance shall begin immediately after each plant is planted and continue until its acceptance has been confirmed by the landscape architect.
- B. Maintenance shall consist of pruning, watering, cultivating, weeding, mulching, tightening, resetting plants to proper grades or upright position, restoring of the planting saucer, and furnishing and applying such sprays or other materials as necessary to keep plantings free of insects and diseases and in vigorous condition.
- C. Planting areas and plants shall be protected at all times against trespassing and damage of all kinds for the duration of the maintenance period. If a plant becomes damaged or injured, it shall be treated or replaced as directed by the landscape architect at no additional cost.
- D. Watering: Contractor shall irrigate as required to maintain vigorous and healthy tree growth. Overwatering or flooding shall not be allowed. The contractor shall monitor, adjust, and use existing irrigation facilities, if available, and furnish any additional material, equipment, or water to ensure adequate irrigation.
- E. During periods of restricted water usage, all governmental regulations (permanent and temporary) shall be followed. The contractor may have to transport water from ponds or other sources, at no additional expense to the owner when irrigation systems are unavailable.

VII. Care of Existing Trees

- a. Selectively prune existing trees in designated areas, under Landscape Architect's direction. Remove sucker shoots, dead, rubbing, and damaged branching.
- b. Fertilize designated existing trees with 2 to 3 lbs. of Type B plant fertilizer per inch of trunk diameter for trees less than 6" diameter and 3 to 5 lbs. for trees greater than 6" diameter.
  - i. Fertilize in early spring before growth begins or in late October.
  - ii. Fertilize by broadcast spreading fertilizer over area within dripline of tree at rates specified above.
- c. Water existing trees every two (2) weeks until acceptance. Water thoroughly with a fine mist sprinkler head, soaker hose, or hose at a low flow rate over the entire drip line area as required to allow water to penetrate to a depth of 12" to 18".

VIII. Acceptance

- A. The Engineer shall inspect all work for acceptance upon written request of the contractor. The request shall be received at least ten calendar days before the anticipated date of inspection.
- B. Acceptance of plant material shall be for general conformance to specified size, character, and quality and shall not relieve the contractor of responsibility for full conformance to the contract documents, including correct species.
- C. Upon completion and re-inspection of all repairs or renewals necessary for earth excavating in the judgment of the Engineer, the Engineer shall certify in writing that the work has been accepted.

IX. Acceptance in Part

- A. Work may be accepted in parts when the landscape architect and contractor deem that practice to be in their mutual interest. Approval must be given in writing by the landscape architect to the

contractor verifying that the work is to be completed in parts. Acceptance of work in parts shall not waive any other provision of this contract.

X. Period of Establishment

A. Period of establishment will be in accordance to Article 254.09 of the Standard Specifications.

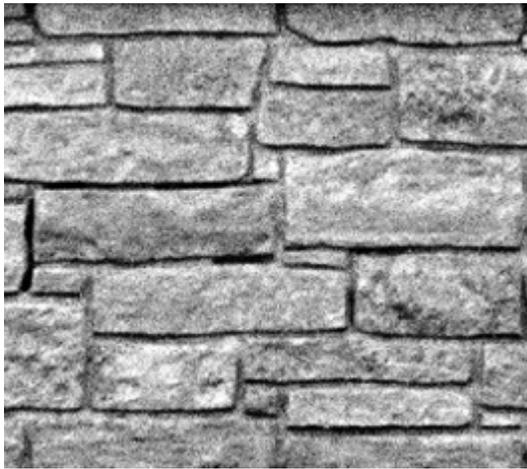
**FORM LINER TEXTURED SURFACE**

This work shall be completed in accordance with Section 503 of the Standard Specifications.

Pattern.

The aesthetics of exposed surfaces for each type of retaining wall option shall be as follows:

Retaining Wall Coursed Stone Form Liner Pattern



The retaining wall shall be constructed with a coursed stone rusticated surface with a 1” relief. The aesthetic surface treatment shall be accomplished by the use of form liners as specified. The walls shall not contain patched or unpatched tie holes. The concrete pours shall be coordinated to prevent visible differences between individual pours or batches.

The following form liner suppliers and patterns have been preapproved for use in this project:

Customrock International Pattern No. 12005 Bearpath Coursed Stone  
1156 Homer St.  
St. Paul, MN 55116  
(800) 637-2447  
[www.customrock.com](http://www.customrock.com)

Greenstreak Pattern No. 477 Meramec Drystack  
3400 Tree Court Industrial Blvd.  
St. Louis, MO 63122  
(800) 325-9504  
[www.greenstreak.com](http://www.greenstreak.com)

Fitzgerald Formliners  
1500 East Chestnut Avenue  
Santa Ana, CA 92701  
(800) 547-7760

[www.formliners.com](http://www.formliners.com)

In accordance with Article 503.06, the Contractor shall deliver to the Village of Mundelein, attention Mr. Bill Emmerich (847-949-3220), a 2 ft x 2 ft sample of the colors, textures and patterns proposed for use on the project. The Engineer shall supply approval as coordinated with the Village.

Any touch up and repair is at the Contractor's expense and shall be carried out according to the manufacturer's recommendations or as directed by the Engineer.

### **SANITARY SEWER - VILLAGE UTILITY COORDINATION**

Prior to performing utility work, contractor shall contact the Village of Mundelein's Public Works Department. The following is the contact information:

**Primary Contact:**

Rob Greenfield  
Village of Mundelein Public Works & Engineering  
Wastewater Assistant Superintendent  
(847) 949-3264  
rgreenfield@villageofmundelein.org

**Secondary Contact:**

Bill Emmerich, P.E.  
Village of Mundelein Public Works & Engineering  
Village Engineer  
(847) 949-3220  
bemmerich@villageofmundelein.org

This work shall be performed in accordance with the Village of Mundelein Specifications & General Notes and the Village of Mundelein Construction Details.

### **ADJUSTING SANITARY FORCE MAIN**

Description.

This work shall be performed in accordance with Division IV of the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition), the details provided in the plans, and the Village of Mundelein standards.

This work shall consist of lowering sanitary force mains to provide clearance from the proposed retaining wall.

The superintendent of the Utility (Village), the Engineer, and the Contractor shall mutually agree upon a date and time which will allow ample time to assemble labor and materials and to notify all customers affected.

Couplings shall be installed to connect to existing force mains where indicated on the Drawings. Couplings shall be ductile iron with stainless steel bolts and nuts. Couplings shall meet requirements to accommodate a working pressure of 150 psi. Couplings shall be in accordance with Village of Mundelein standards.

Once the new force mains have been tested and approved for service, then the Contractor shall, under the direction of the Engineer, place the new force main in service.

Measurement and Basis of Payment.

This work shall be included in the contract unit price per FOOT for ADJUSTING SANITARY FORCE MAIN of the size specified, which price shall include all testing, excavation, bedding and haunching, bracing, pipe joint material and restraint, pipe and fittings, trench dewatering, removal and disposal of waste excavated materials, protection, replacement or repair of existing utilities, removal of existing fittings and installation of new fittings, labor, materials, transportation, handling, and incidentals necessary to lower the sanitary force mains.

**SANITARY SEWER BYPASS PUMPING**

Description.

This work shall be performed in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition), and the Village of Mundelein standards.

This work shall consist of furnishing, installing, maintaining, and removing temporary wastewater diversion systems to bypass wastewater from the Beach Place lift station around the sanitary force main adjustment work zone.

Construction Requirements.

The Contractor shall maintain continuous flow of wastewater at all times unless otherwise indicated. The Contractor shall provide all necessary equipment, temporary installations, and personnel to set up, test, and maintain diversion of wastewater around construction areas for the time necessary to accomplish the work.

All wastewater shall be conveyed to the downstream sanitary sewers on Emerald Drive. Redundant equipment (pumps, drive-units, power sources, etc.) and parallel pipe may be necessary. The superintendent of the utility (Village) will provide the Contractor with peak flow capacity data for conveyance.

The Contractor shall be responsible for damages, including cleanup of any spills or the removal of settled materials caused by wastewater backup.

The complete system shall be in place and connected prior to start-up of the temporary conveyance system. Suitable valves shall be provided at the upstream and downstream end of each line for isolation purposes in the event of a rupture, leak or some other problem. Under normal conditions, these valves shall remain open.

One set of repair clamps/coupling for each temporary force main pipe size and type shall be stocked on-site prior to starting any pumping of wastewater to perform the work. Any use of these spare materials will require immediate replacement within one calendar day.

Prior to diversion of wastewater, the Contractor shall successfully hydrotest the temporary piping system with intermediate clarifier water.

At all times when any equipment, bulkheads or other devices are in the existing sewer, the Contractor shall provide a system with the means to detect or determine that flow is not backing up abnormally and is hence moving properly through the plant and/or temporary diversion piping. System shall be such that should a problem start, the attendant is alerted by the system. Any device(s) that the Contractor uses shall be tested or checked daily and a log of such shall be maintained.

If a spill or issue occurs, the Contractor will have their emergency repair and cleanup respondents on site within six hour to assess the situation and initiate the appropriate action. The first response will be to stop the spill immediately. Depending upon the nature of the incident, the Contractor's responders may need to call in additional equipment and personnel.

Contractor's respondents will review the cause of the problem and will implement the appropriate corrective action. This corrective action may involve, but not necessarily be limited to, pumping wastewater into tanker trucks and hauling sewage to a downstream location until such time that repairs can be completed.

Upon completion of the work and flow transfer, the temporary diversion system shall be removed and all affected surface improvements shall be restored to a condition equal to or better than the condition existing prior to construction.

Measurement and Basis of Payment.

This work shall be included in the contract LUMP SUM price for SANITARY SEWER BYPASS PUMPING, which price shall include all setup, temporary pumps and piping, ramping across the roadway, protection, replacement or repair of existing utilities, removal of existing fittings and installation of new fittings, labor, materials, transportation, handling, and incidentals necessary to provide temporary sanitary sewer bypass pumping.

**WATER MAIN - VILLAGE UTILITY COORDINATION**

Prior to performing utility work, contractor shall contact the Village of Mundelein's Water Department. The following is the contact information:

Primary Contact:

Rob Haley  
Village of Mundelein Public Works & Engineering  
Water Superintendent  
(847) 949-3273  
rhaley@villageofmundelein.org

Secondary Contact:

Bill Emmerich, P.E.  
Village of Mundelein Public Works & Engineering  
Village Engineer  
(847) 949-3220  
bemmerich@villageofmundelein.org

This work shall be performed in accordance with the Village of Mundelein Specifications & General notes and the Village of Mundelein Construction Details.

**WATER MAIN SEQUENCE OF CONSTRUCTION**

The following is a suggested sequence of major water main construction items. The Contractor will be able to recommend a preferred construction sequence for review and approval of the Engineer.

Prior to shutting down any segment of water main the Contractor shall provide the Engineer a minimum of two (2) working day notice.

Swab all pipes and fittings that will not be pressure tested or chlorinated with chlorine solution of at least 50 MG/L. During installation, use extra precaution to prevent soils and debris from entering the pipe. When connecting new pipe to the existing water system, use system operating pressure to visually inspect for leaks prior to backfilling when feasible.

1. CUT AND CAP THE EXISTING WATER MAIN AT THE EAST LEG OF GREENVIEW. CUT AND CAP THE EXISTING WATER MAIN AT THE SOUTH LEG OF EMERALD. CUT AND CAP THE

EXISTING WATER MAIN AT THE SOUTH LEG OF BLUE SPRUCE. CUT AND CAP THE EXISTING REAR YARD WATER MAIN TO CAIRO COURT. CUT AND CAP THE EXISTING WATER MAIN AT THE EAST, WEST AND SOUTH LEGS OF CALIFORNIA. CUT AND CAP THE EXISTING WATER MAIN AT THE EAST, WEST AND SOUTH LEGS OF BONNIEBROOK. THE CONTRACTOR WILL BE ALLOWED TO CREATE DEAD ENDS DURING CONSTRUCTION FOR MAINS TO REMAIN IN SERVICE. THE EXISTING WATER MAIN BETWEEN BONNIEBROOK AND CALIFORNIA WILL REMAIN IN SERVICE VIA FEED FROM RIDGEMOOR. THE EXISTING MAIN BETWEEN MIDLOTHIAN ROAD AND BONNIEBROOK WILL REMAIN IN SERVICE VIA FEED FROM MIDLOTHIAN ROAD.

INSTALL WATER MAIN FROM GREENVIEW TO THE NEW VALVE EAST OF THE MIDLOTHIAN ROAD INTERSECTION. FLUSH, DISINFECT, AND PRESSURE TEST NEW WATER MAIN. INSTALL NEW SERVICE LINES BETWEEN GREENVIEW AND BONNIEBROOK. TRANSFER ALL SERVICES PRIOR TO CONNECTING THE RIDGEMOOR AND MIDLOTHIAN WATER MAINS.

VILLAGE PUBLIC WORKS WILL PROVIDE A TEMPORARY WATER SERVICE TO THE PRIVATE RESIDENCE 722 MAPLE AVENUE FOR NO MORE THAN A TWO (2) CALENDAR WEEK CONSTRUCTION DURATION. LIQUIDATED DAMAGES IN THE AMOUNT OF \$500 PER HOUR WILL BE ASSESSED FOR EACH HOUR BEYOND THE INITIAL TWO (2) CALENDAR WEEKS.

2. CUT AND CAP THE EXISTING WATER MAIN AT THE SOUTH LEG OF RIDGEMOOR. INSTALL RIDGEMOOR WATER MAIN. FLUSH, DISINFECT, AND PRESSURE TEST NEW WATER MAIN. MAKE WATER MAIN CONNECTION AT RIDGEMOOR.
3. INSTALL NEW SERVICE LINES TO BUSINESSES BETWEEN MIDLOTHIAN AND BONNIEBROOK. SHUT DOWN WATER MAIN BETWEEN MIDLOTHIAN AND BONNIEBROOK TO MAKE SERVICE CONNECTIONS. THE CONNECTION TO GREASE MONKEY CAN BE MADE DURING NORMAL BUSINESS HOURS. THE CONNECTION TO THE STRIP MALL MUST OCCUR BETWEEN THE HOURS OF 4AM AND 9AM. THE MAXIMUM TIME OF SHUT DOWN FOR EACH BUSINESS CONNECTION SHALL BE FOUR (4) HOURS. LIQUIDATED DAMAGES IN THE AMOUNT OF \$500 PER HOUR WILL BE ASSESSED FOR EACH HOUR BEYOND THE INITIAL FOUR (4) HOUR SHUT DOWN.
4. CUT AND CAP THE EXISTING WATER MAIN AT THE NORTH AND SOUTH LEGS OF MIDLOTHIAN. INSTALL MIDLOTHIAN WATER MAIN. FLUSH, DISINFECT, AND PRESSURE TEST NEW WATER MAIN.

No additional compensation will be allowed to the Contractor for the above requirements.

## **WATER MAIN, PVC**

### Description.

This work shall consist of constructing PVC water main at the locations indicated in the plans or as directed by the Engineer. In addition to this special provision, this work shall be in accordance with Section 561 of the Standard Specifications, the Village of Mundelein Standard Specifications for Improvements and the details included in the plans.

All water main connections and/or disconnections shall be done in such a manner as to not have any resident without water for more than four (4) hours. The connections and/or disconnections shall be reviewed with the Engineer. Water service shall not be disrupted without the prior consent of the Engineer.

Materials.

The PVC pipe shall meet the requirements of ANSI/AWWA C-909 Class 150 pipe shall conform to the requirements of SDR 18. The PVC pipe shall be push-on joints and conform to ASTM F477. Fittings and bolts shall conform to ANSVAWWA C110/A21.10 and ANSVAWWA C153/A21.53.

Tracer wire shall be placed on all sections of PVC water main installed under this project. Tracer wire shall be copperhead 12 AWG high strength copper clad steel conductor insulated with a 45-mil high density, high molecular weight polyethylene jacket and rated for direct burial use at 30 volts. Tracer wire must be secured to the top of water main pipe at intervals not to exceed four (4) feet with an approved adhesive tape. Tracer connectors shall be twist lock LSC, and must be brought to bottom of frame in valve vaults. Fire hydrants shall include magnetized access tracer boxes attached to the fire hydrant by Copperhead. Tracer wire must be secured to the top of valve vaults.

Pipe joints shall be push-on joints or mechanical joints conforming to AWWA C-111/A21.11. All mechanical joint fittings, valves, and hydrants shall be restrained with retainer glands. All mechanical joints shall have coated stainless steel, washers, bolts and nuts.

Couplings: Install where indicated on the Drawings. Couplings shall be ductile iron with coated stainless steel bolts and nuts. Couplings shall meet working pressure of 150 psi.

The cost of furnishing and installing retainer glands and couplings is considered included in the cost of WATER MAIN of the size specified.

Construction Requirements.

Water mains shall be laid at least ten feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer, or sewer service connection. Water mains may be laid closer than ten feet (10') to sewer line when local conditions prevent a lateral separation of ten feet, the water main invert is at least eighteen inches (18") above the crown of the sewer, or the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

A water main shall be laid so that its invert is eighteen inches (18") above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers, or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within ten feet (10') horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

As directed by the Engineer, some joints may require deflection to attain the specified depth. The maximum allowable deflection at any joint is two degrees, unless otherwise specified by the manufacturer.

Where conditions exist that the minimum vertical separation cannot be maintained, or it is necessary for the water main to pass under a sewer or drain, the sewer should be partially removed and replaced with a length of STORM SEWER (WATER MAIN REQUIREMENTS) that extends at least ten feet (10'), measured normally to the pipe, on each side of the crossing.

Proper and suitable tools and appliances for the safe and convenient handling and laying of the pipe and fittings shall be used. Great care shall be taken to prevent the pipe from being damaged, particularly on the inside of the pipes and fittings. All pieces shall be carefully examined for defects and no piece shall be laid which is known to be defective. If any defective piece should be discovered after having been laid, it shall be removed and replaced with a sound one by the Contractor at his/her own expense. The interior of the pipe and fittings shall be thoroughly cleaned and, when laid, shall conform accurately to the lines and grades or depth of cover below established grade.

The minimum and maximum cover to the established grade shall be five feet six inches (5'-6") and six feet zero inches (6'-0") respectively, unless otherwise specified. Bedding material and haunching material to

one foot (1') above the main shall be selected granular backfill, CA-7 washed (non-limestone). All open trenches shall be backfilled by the end of the day. The Contractor shall limit the amount excavated to the length of pipe that can be laid in the same day or the amount of acceptable trench backfill material available.

Where water is encountered in the trench, it shall be removed during pipe laying and jointing operations. Trench water shall not be allowed to enter the pipe at any time.

Pipefittings shall be laid on a good foundation, trimmed to shape, and, where required, secured against settlement in a manner approved by the Engineer. Pipes shall have a solid bearing throughout their entire length. When laid in tunnel, the pipe shall be blocked in such a manner as to take the weight off the bells. All bends, 22 ½ degrees or greater, tees, crosses, plugs, etc. shall be backed up and anchored with concrete so that there will be no movement of the pipe in the joints due to internal and external pressures. The concrete shall be placed around the fitting and the wall of the trench, from six inches (6") below the fitting or pipe to twelve inches (12") above the fittings. The anchor concrete shall be so placed that joints may be retightened, if necessary.

All tees, bends and other accessories required to place the water main at the locations depicted in the plans or as determined by the engineer shall be paid for separately as DUCTILE IRON WATER MAIN, FITTING of the size specified or DUCTILE IRON WATER MAIN, TEE of the size specified.

The Contractor shall perform Hydrostatic Tests in accordance with Division IV, Section 41 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, and applicable provisions of AWWA C-600 and C-603. The water mains shall maintain a 150 psi average for a period of not less than 2 hour. Allowable leakage shall be as set forth in Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, and at no time shall the pressure loss be greater than 2 psi. Duration of the test shall be two (2) hours minimum. The Contractor shall provide and use a pressure gauge approved by the Village for the test. The gauge should be of good quality and condition and be fluid filled. The gauge should have large enough range for the pressure of one (1) psi. The testing length shall be limited to 1000 lineal feet unless otherwise approved by the Engineer. If more than 1000 lineal feet of water main is tested, the allowable leakage will be based upon 1000 lineal feet. The Village water operator in charge or person authorized by the Village water operator in charge shall be present during all testing.

Upon completion of the newly laid water main, the water main shall be disinfected in accordance with the American Water Works Association, Procedure Destination, AWWA C-651. The Contractor is responsible for collecting samples and having bacteriological testing performed as required by the Illinois Environmental Protection Agency. The Engineer shall be present when the samples are taken.

Water samples collected on two (2) successive days from the treated piping system shall show satisfactory bacteriological results. Bacteriological analyses must be performed by a laboratory certified by the IEPA and approved by the Engineer.

Should the initial treatment result in an unsatisfactory bacterial test, the original chlorination procedure shall be repeated by the Contractor until satisfactory results are obtained at the contractors own expense.

The Contractor shall furnish to the Engineer the required documentation, test results, etc., required by the IEPA for placing the water main in service.

#### Method of Measurement.

This work shall be measured per linear FOOT for water main installed of the size specified. The length measured will include retainer glands, couplings and granular bedding materials. DUCTILE IRON WATER MAIN, FITTING of the size specified or DUCTILE IRON WATER MAIN, TEE of the size specified will be measured separately at the contract unit price per EACH.

Basis of Payment.

This work will be paid for at the contract unit price per linear FOOT for WATER MAIN, of the size specified. This price shall include the excavation of the trench, removal of surplus material, trench shoring and dewatering, installation of water main pipe, all pipe fittings not listed as a separate pay item, mechanical joint retainer glands, joint materials, bedding six inches (6") below the pipe, granular backfill to the level of one foot (1 ') above the top of the pipe, copper locator wire, testing and disinfecting of the water main, and other work necessary to complete this item. DUCTILE IRON WATER MAIN, FITTING of the size specified or DUCTILE IRON WATER MAIN, TEE of the size specified will be paid for separately at the contract unit price per EACH.

**DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED**

Description of Work.

This work shall consist of adjusting to grade, water boxes or valve boxes, encountered on the job, and the replacement of defective or damaged parts of the water box.

Water boxes or valve boxes are defined as a three-piece casting consisting of a stem or hip, a neck and a lid. Adjustment is attained by turning the neck of the casting, either clockwise or counterclockwise until the required grade is attained. Excavation of approximately 3 to 3 ½ feet of base and sub-base material is to be anticipated to facilitate the turning of the neck.

New top stems and lids will be required for all valve box or water box adjustment. It may be necessary to excavate the entire water box or valve box in order to complete the adjustment. No additional compensation will be allowed should this need arise. All excavated sub-base material shall be replaced with trench backfill and compacted in accordance with Article 550.07 of the Standard Specifications. The excavated base material shall be replaced in accordance with appropriate articles of section 602 of the Standard Specification.

If any water box or valve box or is adjusted, repaired or replaced, the Contractor shall ensure that the valve box is cleaned of all debris and shall be keyable.

Measurement and Basis of Payment

This work will be paid for at the contract unit price per EACH for DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED, which price shall be payment in full for performing the work as specified herein including trench backfill.

**FIRE HYDRANTS TO BE REMOVED**

Description and Materials.

This work shall be done in accordance with Section 564 of the Standard Specifications and Village standards and consist of removing fire hydrants and their auxiliary valves and valve boxes at the locations indicated in the plans or as directed by the Engineer.

The Village of Mundelein Public Works and the Village or Mundelein Fire Department shall be notified prior to an existing fire hydrant being removed from service. All materials required must be on site prior to water turn off so that the service interruption will be minimal.

The removed material shall be disposed of according to Article 202.03 of the Standard Specifications.

The Contractor shall provide and install a mechanical cap on the existing fire hydrant lead to remain. The hole formed by the removal of a fire hydrant shall be backfilled with fine aggregate and mechanically compacted.

Any fire hydrant not in service shall be securely covered or bagged to prevent accidental use.

Non-operative or out of service fire hydrants shall be reported to the Village of Mundelein Fire Department immediately.

Method of Measurement.

This work shall be measured per EACH fire hydrant and valve assembly to be removed.

Basis of Payment.

This work will be paid for at the contract unit price per EACH for REMOVE FIRE HYDRANT AND VALVE ASSEMBLY, which price shall include the furnishing and installation of the cap, trench backfill and disposal of the removed material.

**FIRE HYDRANT WITH AUXILLARY VALVE AND VALVE BOX**

Description.

This work shall consist of furnishing and installing fire hydrants, auxiliary valves, valve boxes and associated pipes and fittings at the locations indicated in the plans or as directed by the Engineer in accordance with Section 564 of the Standard Specifications and the Village of Mundelein standard details and water main specifications.

Materials.

Per Village ordinance, hydrants shall be model Super Centurion 250, A-243 model as manufactured by Mueller painted "Safety Red."

Thrust blocking shall be either precast concrete blocks or cast-in-place concrete. Granular backfill material shall be IDOT gradation CA-7 washed. These materials shall be according to the following:

	Item	Article/Section
(a)	Portland Cement Concrete	1020
(b)	Coarse Aggregate	1004.01

Auxiliary valves shall be mechanical joint resilient wedge type manufactured by Mueller A-2360, per Village ordinance, Valve boxes with a cover marked with the word "WATER". Auxiliary valve boxes shall be two-piece cast iron screw type with box rubber adapter boot.

Below grade nuts and bolts shall be stainless steel.

Water main from branch tee and the hydrant show must be made of ductile iron pipe.

Construction Requirements

All new fire hydrants shall be set on a firm foundation. Thrust blocks shall be set so as to not block or obstruct the hydrant drain, and in such a manner that the pipe, fittings and joints shall be accessible for future repair. Clean washed aggregate shall be placed in the excavation.

All fire hydrants shall be tested and disinfected in accordance with Article 561.03 of the Standard Specifications.

Any fire hydrant not in service shall be securely covered or bagged to prevent accidental use.

Non-operative or out of service fire hydrants shall be reported to the Village of Mundelein Fire Department immediately.

Tracer wire shall extend from the watermain up to the magnetized tracer wire access box in accordance with the construction detail. Tracer wire will not be paid for separately but included in the cost of the watermain being installed.

New fire hydrant is to be located as close as possible to the location shown on the plans, but the hydrant's final location will depend on presence of utilities and will be field located with the approval of the Engineer and the Owner.

At least 30 calendar days prior to installation of water mains covered in these specifications, the Contractor shall submit to the Engineer shop drawings of all items to be installed. The manufacturer's catalog description of all fittings and other related items shall also be submitted for review and approval.

Method of Measurement.

This work shall be measured per EACH fire hydrant and valve assembly.

Basis of Payment.

This work shall be paid for at the contract unit price per EACH for FIRE HYDRANT WITH AUXILLARY VALVE AND VALVE BOX. The price shall include the fire hydrant, valve, valve box, 6" ductile iron hydrant lead, all connections and fittings, mechanical joints, trench backfill, thrust blocks, required testing, materials, labor, tools, equipment, and incidentals necessary to complete the work as specified.

**WATER VALVES**

**VALVE VAULT, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID**

Description and Materials.

The water valves (gate valves) shall be suitable for ordinary water works service, intended to be installed in a normal position on buried pipe lines for water distribution systems.

Each valve shall have manufacturer's name, pressure rating, and year in which manufactured cast on the body. Prior to shipment from the factory, each valve shall be tested by hydrostatic pressure equal to twice the specified working pressure.

Per Village ordinance, gate valves shall be Mechanical Joint Resilient Wedge type manufactured by Mueller A-2362.

Gate Valves shall be installed with wedge action retainer glands series 2000PV, per Village ordinance.

Valve Vaults shall be reinforced concrete in accordance with ASTM C478. Valve vaults shall be five foot (5') in diameter. The casting shall be as specified in the Plans.

Blocking to prevent movement of lines under pressure at valves shall be a minimum twelve inch (12") thick Precast Portland Cement Concrete Block, placed between the bottom of the vault and the fittings, and shall be anchored in such a manner that pipe and fitting joints will be accessible for repairs. The cost of thrust blocking is considered included in the cost of the item being installed.

Method of Measurement.

This work shall be measured per EACH valve vault with specified diameter with type 1 frame and closed lid, and per EACH valve with the specified diameter.

Basis of Payment.

This work shall be paid for at the contract unit price EACH for WATER VALVE of specified size and VALVE VAULT, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID of the type and size specified, which price shall include providing and installing the valve, valve vault, mechanical joint fittings, trench backfill materials and as detailed on the plans.

**WATER SERVICE CONNECTION (LONG)**  
**WATER SERVICE CONNECTION (SHORT)**

Description.

This work shall be performed in accordance with 41-2.11 of the Standard Specifications for Water and Sewer Main Construction (latest edition), except as modified herein.

Each service installed shall be fabricated of seamless copper tubing conforming to ASTM B-88M, Type K, soft-temper, designated for underground service. The tubing shall be marked with the manufacturer's name or trademark, and a mark indicating the type and grade of material. The outside diameter and minimum weight per foot of the pipe shall conform to that listed in ASTM B-251, Table II. The service tubing is to be installed in continuous lengths between the corporation tap and the water service box.

Per Village ordinance, the curb stop shall be Mueller H-15154 or A.Y. McDonald. The Contractor may need to provide a 1 ½" to ¾" adapter for some of the residential service connections. In the event that the water service box is in the sidewalk or driveway the water service is to be adjusted. This may require relaying some of the existing water service before the curb stop. Any pipe or fittings necessary to relocate the water service box will be considered included in the cost of proposed water service connection.

Per Village ordinance, the water service box shall be a Minneapolis Pattern Curb Box, Mueller H-10302, A.Y. McDonald 5623, or approved equal, having a 1-1/2" upper, tapped 2". The water service box shall be installed in a true vertical position and the top shall be adjusted flush with the finished grade. Removal of the existing water service box will be considered included in the cost of the proposed water service connection.

The water service tap shall include a full circle stainless steel tapping sleeve.

Service connections must maintain a three (3) foot separation from any other service connection, pipe bell or fitting, valve vault, and/or fire hydrant. The corporation stop shall be Mueller H-15000 or A.Y. McDonald per Village ordinance.

House connections to the new water main shall be made individually and in as short a time period as possible after testing and disinfection. No water customer shall be without water in excess of two (2) hours and shall be notified prior to disconnecting service.

Long service connection shall be defined as a service that is on the opposite side of the street from the new water main. Long service connections must be directionally drilled unless otherwise approved by the Engineer. Directional drilling operations shall meet the requirements set forth within the specification included herein for WATER SERVICE LINES.

Short service connection shall be defined as a service that is on the same side of the street from the new water main.

The Village of Mundelein Water Superintendent or his/her designate must witness the tap/connection to water main. For taps on PVC water main, a coupon from the tap must be provided to the inspector. 24 hour advance notice is required.

The Village of Mundelein Plumbing inspector or his/her designate must inspect the service line from the corporation stop to the curb stop. The Village of Mundelein Plumbing inspector or his/her designate must inspect the service line from the curb stop to the water meter. 24 hour advance notice is required.

Construction - Long Connections.

The Contractor shall be sufficiently trained and knowledgeable of the construction techniques required by use of this methodology. The Contractor shall furnish all directional boring equipment, qualified laborers and equipment operators, and materials necessary to complete the required work in accordance with these specifications, related contract documents and associated drawings. Work shall include and not be

limited to proper installation, testing, restoration of underground utilities and environmental protection and restoration.

Those involved with directional borings shall be knowledgeable about the methods to locate existing underground utilities both vertically and horizontally. The Contractor shall be able to interpret all available data so the completed water main installation is accomplished safely and without damage to existing utilities, all in accordance with the contract.

A pilot hole shall be drilled by means of horizontal directional drilling equipment, enlarging the pilot hole to a diameter suitable (no larger than 1.5 times the outside diameter of the product pipe). The completed hole for pipe installation shall not be significantly bigger than necessary to pull the pipe including pipe bells and joints into the enlarged hole.

The Contractor, unless otherwise necessary, is to use the directional boring method and equipment they deem appropriate for the installation of the specified water mains, provided that the proposed method and equipment is approved by the Engineer. The Engineer's approval, however, shall in no way relieve the Contractor of their responsibility for completing the work satisfactorily and meeting the criteria set forth in the contract.

The Contractor shall install the water services at the planned locations and depths as noted on the Plans, along with related materials or equipment.

The Contractor may vary the depth of the water service lines installed by directional drilling methods to miss both public and private utilities; however, minimum bury depths identified on the plans shall be adhered to throughout the project.

The Contractor shall coordinate proposed drilling pit locations with the Engineer prior to excavating the drilling pit. If the Contractor intends to install the water service lines by a combination of open cut and directional drilling techniques, they shall coordinate these varied installation methods with the Engineer prior to beginning work in each respective area.

Should the pilot hole, at any point during the Contractor's performance of work, deviate excessively from the running line or inclination, the Contractor agrees to restore the hole to a condition satisfactory to the Engineer either by conventional open-cut methods and procedures, modifications of the drilling head alignment while drilling ahead, or by re-drilling. Contractor shall expose all pipeline or conduits, in advance of directional drilling work, that are to be crossed. These locations shall be checked and changes made to the proposed water service lines vertical alignment to provide a minimum of 9 inches clearance. Vertical alignment changes shall be made gradually and shall not exceed the pipe manufacturer's recommendations for bends.

Should the hole, for any cause attributable to be directional drilling Contractor's operations, be lost or damaged while they are engaged in the performance of the work, all such loss or damage to the hole shall be borne by the Contractor. The Contractor shall remedy the specific situation to the satisfaction of the Engineer or commence the drilling of a new hole at the Contractor's cost. The drilling of the new hole shall be completed under the same requirements of these contract documents as though it were the first hole. All re-drilling costs are to be borne by the Contractor.

Upon completion of each directional drilling installation, the Contractor shall verify that all private and public utilities still function. The Contractor shall arrive at a satisfactory method of checking that utility service is still available to each customer.

The Contractor shall make the necessary allowances for thermal expansion or contraction of pipe "on hot days" by bunching up the installed pipe. This shall be done in accordance with pipe manufacturer's recommendations.

Equipment – Long Connections.

Directional drilling Contractor shall maintain equipment in good working condition, at all times during the project, and shall use all reasonable means to prevent and control the loss of circulation and to protect the pilot hole.

Directional drilling equipment shall have a capability of meeting the minimum lbs/pullback for the installation conditions and pipe size. The Contractor shall adhere to the pipe manufacturers most current calculations regarding tensile load limitations for trenchless installation. These calculations or data shall be part of the required shop drawing submittal for the pipe.

Direction control and sensing system shall be either a fixed or remote directional control system which is capable of monitoring and transmitting key equipment signals such as pitch, roll and azimuth. Walkover tracking systems or other types of location sensing systems shall be used to track the downhole assembly and shall be capable of pin-pointing the steering mechanism both horizontally and vertically and determining its depth, azimuth, pitch (inclination), roll and left/right deviations.

The steering tool, as well as other back-up tools used on this project, shall have been recently calibrated in the shop to ensure the equipment is within the manufacturer's specified tolerances, before the start of directional drilling operation. An on-site roll calibration check shall be carried out. Roll checks shall have a minimum of eight points checked. Occasional shoot-ins should be performed, at various locations along the drill path to check for magnetic changes and to confirm the course direction. All data received during these checks should be recorded and submitted for comparison during drilling operations.

The drilling fluid system shall meet all EPA and related requirements and shall be self-contained, transportable, and have the necessary capacity to meet the planned drilling operation. The fluid shall be non-toxic and suitable for its intended use. The drilling fluid shall be used for hole support, pipe lubricity, and preservation of insitu soil permeability and porosity.

The drilling fluid pressure and flow rates shall be continuously monitored to prevent any slurry migration. Any migration or spilling of drilling slurry shall be promptly stopped or contained and cleaned up. The Contractor shall place a silt fence between all drilling operations and any drainage, waterways, or other area designated for such protection by state, federal, or local regulations. Additional environmental protection necessary to contain any hydraulic or drilling fluid spills shall be put in place, including berms, liners, turbidity curtains, and other measures. Upon completion of the directional drill project, the drilling mud and cuttings shall be disposed of by the Contractor at an approved dump site. The Contractor may use combination air valve and clean out locations as drilling mud pressure relief points by excavating pits at each location where the slurry may be collected.

All drilling equipment including drill pipe, reamers, bits, etc., shall be suitably sized to meet the water main requirements and specific drilling location requirements. When in operation, the drilling machine shall be anchored to the ground to withstand the pulling, pushing, and rotating pressure required to complete the installation. The drilling rig shall have a system to monitor and record maximum pull-back pressures during pull-back operations.

Method of Measurement.

This work shall be measured per EACH water service connection of the type specified.

Basis of Payment.

This work will be paid for at the contract unit price per EACH for WATER SERVICE CONNECTION of the type specified. The price shall include all labor, tools, equipment and material including excavation, disconnection of the existing service, backfilling, disposal of waste excavated material, copper line, curb stop, corporation stop, water service box at the required elevation, any necessary adapters and all other material necessary to complete the work as specified.

## **CUT AND CAP EXISTING WATER MAIN**

### Description.

This work shall consist of cutting and capping existing water main at the locations shown on the plans.

This work includes locating the existing water main, excavation and removal and disposal of excavated material, sheeting as required, temporary fencing of the work site as required, and backfilling of the excavation to the existing sub grade.

Caps shall be mechanical joint plug designed to fit the water main and to prevent the infiltration of water or sediment. Installation of caps or plugs must be witnessed by the Village or its authorized representative prior to backfilling.

The work shall be performed in accordance with Article 551 and 605 of the Standard Specifications, Division IV of the Standard Specifications for Water and Sewer Main Construction in Illinois.

Excavation and backfill for water main removal shall conform to the typical sections shown in the plans and shall conform to the provisions of Sections 20, 21, and 22 of the Standard Specifications for Water & Sewer Main Construction in Illinois.

The cutting and capping of the existing water main shall be completed prior to placing the water main back in service and shall be done in accordance with the construction requirements of the special provision "Connection to Existing Water Main" contained herein.

Blocking to prevent movement of lines under pressure at bends, tees, caps, valves, plugs and hydrants shall be a minimum twelve inch (12") thick Precast Portland Cement Concrete Block, placed between undisturbed soil and the fittings, and shall be anchored in such a manner that pipe and fitting joints will be accessible for repairs.

The cost of thrust blocking is considered included in the cost of the item being installed.

### Method of Measurement.

This work shall be measured per EACH existing water main cut and capped for the specified size of existing water main.

### Basis of Payment.

This work will be paid for at the contract unit price for EACH for CUT AND CAP EXISTING WATER MAIN at the size specified.

## **CONNECTION TO EXISTING WATER MAIN**

The Contractor shall perform connections to the existing water main at locations shown on the drawings.

### Description and Materials.

The Contractor shall perform cut-in connections to the existing water main at locations shown on the drawings and in the manner detailed.

Connecting to the existing water main will require interruption of services. The superintendent of the Utility (Village), the Engineer, and the Contractor shall mutually agree upon a date and time which will allow ample time to assemble labor and materials and to notify all customers affected. Customers shall be notified at least 24 hours but not more than 48 hours prior to being taken out of service.

Couplings shall be installed to connect to existing water mains where indicated on the Drawings. Couplings shall be ductile iron with stainless steel bolts and nuts. Couplings shall meet requirements to accommodate a working pressure of 150 psi. Couplings shall meet Village of Mundelein standards.

The Contractor shall not operate valves on existing mains. Valves will be closed and opened only by the employees of the Village's Public Works Department. The Contractor shall expose the water main to be connected to and shall confirm the size and type of piping present.

The Contractor shall obtain the necessary materials required to make a proper connection. The Contractor shall not proceed until he has all the required materials on site. The Contractor shall limit the time for connections on the specified diameter lines to four (4) hours. In no case, shall a customer(s) be out of service overnight.

Once the new water mains have been tested and approved for service, then the Contractor shall, under the direction of the Engineer, place the new water main in service.

The entire length of water main of the specified diameter placed out of service for the purpose of making the connections of the proposed water main to the existing water main shall be disinfected before the existing water main is returned to service.

The Contractor shall reimburse the Village of Mundelein for the cost of overtime inspection beyond the normal eight (8) hour day, 7:00 a.m. – 3:30 p.m. (with ½ hr lunch allotment) including weekend and holidays.

Dewatering, if required, shall be considered included in the cost of the contract.

Method of Measurement.

This work shall be measured per EACH connection to an existing water main.

Basis of Payment.

This work will be paid for at the contract unit price per EACH for CONNECTION TO EXISTING WATER MAIN for specified diameter, which price shall include all equipment, labor, disposal of abandoned pipe, rounded stone bedding, brick and mortar the abandoned water main, backfilling the void left, and other materials (not listed for payment separately) required to properly connect to existing water mains. One connection to existing water main will be paid for each location where a coupling is used to connect new water main to the existing water main. Fittings required for these connections will be considered in the contract unit price for CONNECTION TO EXISTING WATER MAINS for specified diameter. Trench backfill used while connecting to the existing water main shall be considered in the contract unit price for CONNECTION TO EXISTING WATER MAINS for specified diameter.

**WATER CONNECTION SPECIAL**

Description.

This work shall consist of converting an existing dual water service connection to a single water service connection. The existing 'Grease Monkey' building at 1079 Maple Avenue currently receives a domestic water service connection as well as the fire service connection. The work will provide a single water service source with a mechanical conversion beyond the meter to separate the water and fire suppression supply lines. The existing domestic water service line will be abandoned.

Method of Measurement.

This work shall be measured per EACH special water connection.

Basis of Payment.

This work will be paid for at the contract unit price per EACH for WATER CONNECTION SPECIAL, which price shall include all equipment, labor, disposal of abandoned components, and other fittings and materials (not listed for payment separately) required to properly connect to existing water lines.

**WATER MAIN REMOVAL**

Description and Materials.

This work shall consist of the removal and disposal of existing water main at the locations indicated in the plans or as directed by the Engineer.

The Contractor shall sawcut the existing water main and install a mechanical joint end cap on the end of the existing water main that is to be abandoned in place.

No pipe removed shall be considered as salvage. All material shall be disposed of, in accordance with Article 202.03 of the Standard Specifications.

Excavation of trenches shall be performed according to the applicable requirements of Article 550.04. Backfill of trenches shall be performed according to the applicable requirements of Article 550.07.

Method of Measurement.

This work will be measured for payment in feet, along the pipe to be removed. The length measured will include stops, fittings and valves.

Basis of Payment.

This work will be paid for at the contract unit price per foot for WATER MAIN REMOVAL, of the diameter specified.

Cutting and capping the existing water main will be paid for at the contract unit price per each for CUT AND CAP EXISTING WATER MAIN, of the size specified.

**REMOVE EXISTING WATER VALVE**

Description and Materials.

This item shall consist of the removal of the existing valve boxes or valve vaults, as shown on the plans. Removal shall include the excavation and physical removal and disposal of the valve vaults or valve boxes.

For valve vaults or boxes located outside the limits of the roadway, the removal shall include the excavation and physical removal of the structures and backfilling the void left by the valve vaults or boxes with earthen backfill.

For valve vaults or boxes located within the limits of the roadway, the removal and replacement of the asphalt pavement shall be paid for separately at the contract unit price of the required items. The removal shall include the excavation and physical removal of the valve vaults or boxes and backfilling the void left by the valve vaults or boxes with Trench Backfill. Trench Backfill needed to complete the removal shall be considered included in the cost of REMOVE EXISTING WATER VALVE.

In addition to this special provision, this work shall be in accordance with Articles 605.03 and 605.05 of the Standard Specifications.

Method of Measurement.

This work shall be measured per EACH valve vault or valve box to be removed.

Basis of Payment.

Valve vault or valve box removal shall be paid for at the contract unit price per EACH for REMOVE EXISTING WATER VALVE, which includes all necessary labor, tools, equipment, and materials necessary to remove the existing valve vaults or boxes.

**WATER MAIN ENCASEMENT**

Description.

This work shall include providing a casing pipe and spacers for the water main where it must cross under the sewer systems. The casing pipe shall be water main quality PVC pipe. Casing spacers shall meet Village standards. The ends of the casing pipe shall be sealed with brick and mortar. This work shall be in compliance with all applicable detail included in the approved plans and Village Standards.

Method of Measurement.

This work shall be measured per linear FOOT of water main encasement.

Basis of Payment.

This work shall be paid for at the contract unit price per FOOT for WATER MAIN ENCASEMENT which price shall include the casing pipe, spacers, brick and mortar, labor and equipment necessary to complete this work.

**ABANDON EXISTING WATERMAIN, FILL WITH CSLM**

Description and Materials.

This work shall consist of the abandonment of existing water main and filling with controlled low strength material (flowable fill). The work shall be performed in accordance with Article 551 and 605 of the Standard Specifications, Division IV of the Standard Specifications for Water and Sewer Main Construction in Illinois (Latest Edition), except as revised herein.

Existing water main shall be abandoned only after all new water services have been transferred over to the new main and the new main is in operation.

Water Main shall be mechanically capped on each end of the abandoned section. The cap shall not be paid for separately and shall be considered included in the cost of ABANDON EXISTING WATER MAIN, FILL WITH CLSM.

Method of Measurement.

This work shall be measured per linear FOOT for water main to be abandoned.

Basis of Payment.

This work will be paid for at the contract unit price per linear FOOT for ABANDON EXISTING WATER MAIN, FILL WITH CLSM.

**DUCTILE IRON WATERMAIN, FITTING  
DUCTILE IRON WATERMAIN, TEE**

Description.

This work shall consist of furnishing and installing various ductile iron water main fittings at the locations indicated in the plans or as directed by the Engineer. In addition to this special provision, this work shall be in accordance with the Village Standards included in the plans.

Materials.

Fittings shall be cement lined, tar coated ductile iron with mechanical joints rated 250 psi per AWWA C110/ANSI 21.10 (latest revision) or AWWA C153/A21.53 (latest revision). Unless otherwise approved by the Engineer, all fittings shall have mechanical joints conforming to AWWA C111/A21.11 latest revision (Clow, Tyler or Union Foundry are required). All the nuts and bolts required for the installation of a fitting shall be stainless steel.

All fittings shall have a pressure rating of 350 psi and shall be wrapped with an 8-mil thick polyethylene material per AWWA Standard C105 (AWWA Standard Polyethylene Encasement for Ductile-Iron Pipe Systems). At the locations indicated in the plans or as directed by the Engineer, the water main shall be constructed around existing utility structures or other obstacles by use of tees, bends or other appropriate fittings. Gasket material identical to that described above shall be utilized at all joints and fittings.

Thrust blocks shall be installed according to the details included in the Plans or as directed by the Engineer. Thrust blocks shall be set in such a manner that the pipe, fittings and joints shall be accessible for future repair.

At least 30 calendar days prior to installation of water mains covered in these specifications, the Contractor shall submit to the Engineer shop drawings of all items to be installed. The manufacturer's catalog description of all fittings and other related items shall also be submitted for review and approval.

Basis of Payment.

This work will be paid for at the contract unit price per each for DUCTILE IRON WATER MAIN TEE, of the size specified; or DUCTILE IRON WATER MAIN FITTINGS, of the size and degree bend specified.

Thrust blocks will not be paid for separately, but shall be considered as included in the contract unit price of the fitting.

**STEEL CASING PIPE, BORED AND JACKED**

Description.

The casing pipe for the water main shall be steel, bituminous coated, and shall be of leak proof construction, capable of withstanding the anticipated loadings. The steel shall comply with ASTM A139 and have minimum yield strength of 35,000 psi. The minimum wall thickness shall be 0.406".

The installation of the steel casing shall be completed using the jacking and boring method.

The initial section of casing shall be aligned on a poured concrete slab, guide rails or other approved method that will produce the desired alignment and grade. Casing shall be held with braces, guideways, and other devices.

Jacks and struts shall be arranged against the backslope or deadman to apply thrust parallel with the centerline of the casing. Thrust shall be distributed equally between jacks and the pressure exerted uniformly over the end of the casing. Application of pressure with the metal of the jack in direct contact with the material of the casing will not be permitted. Suitable cushioning material shall be inserted between the jack and casing.

After the excavation is opened, the placing and jacking of the casing shall follow immediately and be prosecuted diligently to avoid unnecessary danger of disturbing the stability of the embankment and railway.

If the casing is of metal with a coating of corrosion resisting material, care shall be taken to protect this coating from damage during jacking and excavating processes.

Steel rails or timbers that support the casing as it enters the bore must be accurately placed on line and grade. Both line and grade should be checked at least once per shift as work progresses. Use of a steering head and a water board or other means to check the accuracy of the end of casing as it progresses through the bores is strongly recommended.

Deviation from the prescribed line that reverses the fall of the grade line through the casing shall be cause for rejection.

Damaged casing which will result in an unsatisfactory joint when the succeeding section of casing is placed is cause for rejection and shall be replaced.

The number and capacity of jacks used shall be adequate to exert sufficient force to overcome the greatest resistance to be encountered, considering both the weight of the casing and the friction on its exterior surface.

In soft or unstable soil, the casing shall be allowed to cut its way through the soil to avoid danger of caving and subsidence of the overlying embankment.

Provisions shall be made for keeping the excavation free from surface and seepage water during the jacking operation.

Backfilling that may be necessary shall be in accordance with the Standard Specifications for Water and Sewer Main Construction (Latest Edition). Surplus excavated material shall be hauled to the lift site, at no extra cost to Owner. Rock shall be disposed of at no extra cost to the contract.

Provide casing spacers for carrier pipes as shown on Drawings. See standard casing/carrier pipe details on Drawings.

The boring method allowed consists of the casing being pushed into the fill as the boring auger drills out the earthen material.

Obstacles met during the process of installation shall be reported to the Engineer immediately. Obstructions to the progress of the casing, such as roots, boulders, or parts of former structures, shall be removed. Potential solutions and alternatives for removal of obstruction shall be presented to the Engineer for concurrence of alternative. Deviations from line or grade to pass obstructions shall be avoided if such deviation will result in unsatisfactory fitting joints. The use of explosives for removing obstructions is prohibited.

The use of water under pressure jetting or puddling will not be permitted to facilitate boring, pushing or jacking operations. Some boring may require water to lubricate cutter and casing, and under such conditions, is considered dry boring.

If too large a bored hole is produced during casing installation or it is necessary to abandon a bored hole, immediate remedial action shall be taken by the Contractor. All voids or abandoned holes shall be filled by pressure grouting. The grout material should be sand cement slurry with a minimum of 2 sacks of cement per cubic yard and a minimum of water to assure satisfactory placement.

The hole diameter resulting from bored installation shall not exceed the outside diameter of the casing (including coating) by more than 2”.

Pits for boring or jacking will not be permitted within 30 feet of the centerline of the road; or closer to the road than the toe of fill slopes in fill sections, or toe of shoulder slopes in ditch sections.

#### Method of Measurement.

This work shall be measured per linear FOOT of steel casing installed.

Basis of Payment.

This work includes jack-and-bore, steel casing and other necessary accessories to complete water main installation and will be paid for at the contract unit price per linear foot for STEEL CASING PIPE, BORED AND JACKED, of the diameter specified.

**WATER SERVICE LINE**

Description.

Description.

This work shall be performed in accordance with 41-2.11 of the Standard Specifications for Water and Sewer Main Construction (latest edition), except as modified herein and consists of the construction of four inch (4") water service.

The Village of Mundelein Water Superintendent or his/her designate must witness the connection to water main. 24 hour advance notice is required.

Business connections to the new water main shall be made individually and in as short a time period as possible after testing and disinfection. No water customer shall be without water in excess of two (2) hours and shall be notified prior to disconnecting service.

Method of Measurement.

This work shall be measured per linear FOOT of water service line installed. Excavation, material disposal, restoration and other related Work shall not be paid for separately, but shall be considered incidental to the item of Work being performed.

Basis of Payment.

This work will be paid for at the contract unit price per foot for WATER SERVICE LINE, of the diameter specified.

**RELOCATE SIGN PANEL AND POST**

Description.

This work includes the removal and relocation of existing sign panels and posts that conflict with the installation of the proposed improvements. All other necessary sign relocations to accommodate contractor operations will proceed in accordance with Article 107.25 of the Standard Specifications.

Construction.

Sign panels and posts will be re-established at their permanent location at the proposed location as directed by the Engineer as soon as the construction operations permit. Additional compensation will not be allowed for varying post types or heights. Additional compensation will not be allowed for varying sign panel sizes. It will be the Contractor's responsibility to determine the type of materials required to complete each relocation.

Any sign panels or posts damaged by the Contractor shall be replaced at no additional cost.

Measurement and Basis of Payment.

This work will be paid for at the contract unit price per EACH for RELOCATE SIGN PANEL AND POST, which price shall be payment in full for all of the work as specified above.

## **WASHOUT BASIN**

### Description.

This work consists of installation, maintenance and subsequent removal and disposal of a concrete washout basin and shall be done in accordance with Sections 280 of the Standard Specifications and as shown on the plans. The washout basin shall be removed after concrete items have been installed.

A concrete washout basin shall be supplied as necessary to accommodate concrete delivery operations. No more than one (1) washout basin will be permitted without approval from the Engineer. The washout basin location(s) must be approved by the Engineer prior to installation.

### Measurement and Basis of Payment.

This work will be paid for at the contract LUMP SUM price for WASHOUT BASIN, which price shall be payment in full for all of the work as specified above.

## **STORM SEWER (WATER MAIN REQUIREMENTS)**

### Description.

This work shall consist of constructing storm sewers meeting water main requirements.

Storm Sewer (Water Main Requirements) shall be used at locations where lateral separation between the sewer and water main or water service line is less than 10 feet (3.1 m) and the water main invert is less than 18 inches (457 mm) above the storm sewer crown. Also, Storm Sewer (Water Main Requirements) shall be used where the sewer crosses above the water main or water service line with 18 inches (457 mm) minimum vertical separation.

The storm sewer shall be constructed of

Reinforced concrete pipe with flexible gasket conforming to the latest ASTM Standard C361 and Section 550 of the Standard Specifications.

This work shall be done according to the applicable portions of Sections 550 and 561 of the Standard Specifications.

Method of Measurement. This work will be measured for payment according to Article 550.09 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per FOOT (meter) for STORM SEWER (WATER MAIN REQUIREMENTS), of the diameter specified, regardless of type.

## **MAINTENANCE OF EXISTING TRAFFIC SIGNAL AND FLASHING BEACON INSTALLATION**

Effective: May 22, 2002

Revised: July 1, 2015

850.01TS

### General.

1. Full maintenance responsibility shall start as soon as the Contractor begins any physical work on the Contract or any portion thereof. If Contract work is started prior to a traffic signal inspection, maintenance of the traffic signal installation(s) will be transferred to the Contractor without an inspection.
2. The Contractor shall have electricians with IMSA Level II certification on staff to provide signal maintenance. A copy of the certification shall be immediately available upon request of the Engineer.
3. This item shall include maintenance of all traffic signal equipment and other connected and related equipment such as flashing beacons, emergency vehicle pre-emption equipment, master controllers, uninterruptable power supply (UPS and batteries), PTZ cameras, vehicle detection, handholes, lighted signs, telephone service installations, communication cables, conduits to adjacent intersections, and other traffic signal equipment.
4. Regional transit, County and other agencies may also have equipment connected to existing traffic signal or peripheral equipment such as PTZ cameras, switches, transit signal priority (TSP and BRT) servers, radios and other devices that shall be included with traffic signal maintenance at no additional cost to the contract.
5. Maintenance shall not include Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, or peripheral equipment. This equipment is operated and maintained by the local municipality and should be de-activated while on contractor maintenance.
6. The energy charges for the operation of the traffic signal installation shall be paid for by the Contractor.

### Maintenance.

1. The Contractor shall check all controllers every two (2) weeks, which will include visually inspecting all timing intervals, relays, detectors, and pre-emption equipment to ensure that they are functioning properly. The Contractor shall check signal system communications and phone lines to assure proper operation. This item includes, as routine maintenance, all portions of emergency vehicle pre-emption equipment. The Contractor shall maintain in stock at all times a sufficient amount of materials and equipment to provide effective temporary and permanent repairs. Prior to the traffic signal maintenance transfer, the contractor shall supply a detailed maintenance schedule that includes dates, locations, names of electricians providing the required checks and inspections along with any other information requested by the Engineer.
2. The Contractor is advised that the existing and/or span wire traffic signal installation must remain in operation during all construction stages, except for the most essential down time. Any shutdown of the traffic signal installation, which exceeds fifteen (15) minutes, must have prior approval of the Engineer. Approval to shut down the traffic signal installation will only be granted during the period extending from 10:00 a.m. to 3:00 p.m. on weekdays. Shutdowns shall not be allowed during inclement weather or holiday periods.
3. The Contractor shall provide immediate corrective action when any part or parts of the system fail to function properly. Two far side heads facing each approach shall be considered the minimum acceptable signal operation pending permanent repairs. When repairs at a signalized intersection require that the controller be disconnected or otherwise removed from normal operation, and power is available, the Contractor shall place the traffic signal installation on

flashing operation. The signals shall flash RED for all directions unless a different indication has been specified by the Engineer. The Contractor shall be required to place stop signs (R1-1-36) at each approach of the intersection as a temporary means of regulating traffic. When the signals operate in flash, the Contractor shall furnish and equip all their vehicles assigned to the maintenance of traffic signal installations with a sufficient number of stop signs as specified herein. The Contractor shall maintain a sufficient number of spare stop signs in stock at all times to replace stop signs which may be damaged or stolen.

4. The Contractor shall provide the Engineer with 2 (two) 24 hour telephone numbers for the maintenance of the traffic signal installation and for emergency calls by the Engineer.
5. Traffic signal equipment which is lost or not returned to the Department for any reason shall be replaced with new equipment meeting the requirements of the Standard Specifications and these special provisions.
6. The Contractor shall respond to all emergency calls from the Department or others within one (1) hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the Contractor shall replace it with new and identical equipment. The cost of furnishing and installing the replaced equipment shall be borne by the Contractor at no additional charge to the contract. The Contractor may institute action to recover damages from a responsible third party. If at any time the Contractor fails to perform all work as specified herein to keep the traffic signal installation in proper operating condition or if the Engineer cannot contact the Contractor's designated personnel, the Engineer shall have the State's Electrical Maintenance Contractor perform the maintenance work. The Contractor shall be responsible for all of the State's Electrical Maintenance Contractor's costs and liquidated damages of \$1000 per day per occurrence. The State's Electrical Maintenance Contractor shall bill the Contractor for the total cost of the work. The Contractor shall pay this bill within thirty (30) days of the date of receipt of the invoice or the cost of such work will be deducted from the amount due the Contractor. The Contractor shall allow the Electrical Maintenance Contractor to make reviews of the Existing Traffic Signal Installation that has been transferred to the Contractor for Maintenance.
7. Any proposed activity in the vicinity of a highway-rail grade crossing must adhere to the guidelines set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD) regarding work in temporary traffic control zones in the vicinity of highway-rail grade crossings which states that lane restrictions, flagging, or other operations shall not create conditions where vehicles can be queued across the railroad tracks. If the queuing of vehicles across the tracks cannot be avoided, a uniformed law enforcement officer or flagger shall be provided at the crossing to prevent vehicles from stopping on the tracks, even if automatic warning devices are in place.
8. Equipment included in this item that is damaged or not operating properly from any cause shall be replaced with new equipment meeting current District One traffic signal specifications and provided by the Contractor at no additional cost to the Contract and/or owner of the traffic signal system, all as approved by the Engineer. Final replacement of damaged equipment must meet the approval of the Engineer prior to or at the time of final inspection otherwise the traffic signal installation will not be accepted. Cable splices outside the controller cabinet shall not be allowed.
9. Automatic Traffic Enforcement equipment, such as Red Light Enforcement cameras, detectors, and peripheral equipment, damaged or not operating properly from any cause, shall be the responsibility of the municipality or the Automatic Traffic Enforcement Company per Permit agreement.
10. The Contractor shall be responsible to clear snow, ice, dirt, debris or other condition that obstructs visibility of any traffic signal display or access to traffic signal equipment.

11. The Contractor shall maintain the traffic signal in normal operation during short or long term loss of utility or battery back-up power at critical locations designated by the Engineer. Critical locations may include traffic signals interconnected to railroad warning devices, expressway ramps, intersection with an SRA route, critical corridors or other locations identified by the Engineer. Temporary power to the traffic signal must meet applicable NEC and OSHA guidelines and may include portable generators and/or replacement batteries. Temporary power to critical locations shall not be paid for separately but shall be included in the contract.
12. Temporary replacement of damaged or knockdown of a mast arm pole assembly shall require construction of a full or partial span wire signal installation or other method approved by the Engineer to assure signal heads are located overhead and over traveled pavement. Temporary replacement of mast arm mount signals with post mount signals will not be permitted.

Basis of Payment.

This work will be paid for at the contract unit price per each for MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION. Each intersection will be paid for separately. Maintenance of a standalone and or not connected flashing beacon shall be paid for at the contract unit price for MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION. Each flashing beacon will be paid for separately.

**REBUILD EXISTING HANDHOLE**

Effective: January 1, 2002

Revised: January 1, 2015

This item shall consist of rebuilding and bringing to grade a handhole at a location shown on the plans or as directed by the Engineer. The work shall consist of removing the handhole frame and cover and the walls of the handhole to a depth of eight (8) inches below the finished grade.

Upon completion of the above work, four (4) holes, four (4) inches in depth and, one half (1/2) inch in diameter, shall be drilled into the remaining concrete; one hole centered on each of the four handhole walls. Four (4) #3 steel dowels, eight (8) inches in length, shall be furnished and shall be installed in the drilled holes with a masonry epoxy.

All concrete debris shall be removed from State right-of-way to a location approved by the Engineer.

The area adjacent to each side of the handhole shall be excavated to allow forming. All steel hooks, handhole frame, cover, and concrete shall be provided to construct a rebuilt handhole according to applicable portions of the current District One Traffic Signal Specifications. (The existing frame and cover shall be replaced if it was damaged during removal or as determined by the Engineer.)

Basis of Payment.

This work shall be paid for at the contract unit price each for REBUILD EXISTING HANDHOLE, which price shall be payment in full for all labor, materials, and equipment necessary to complete the work described above and as indicated on the drawings.

**TEMPORARY PAVEMENT**

Effective: March 1, 2003  
Revised: April 10, 2008

Description. This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.

The contractor shall use either Portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both Portland cement concrete and HMA are shown in the plans.

Articles 355.08 and 406.11 of the Standard Specifications shall not apply.

The removal of the Temporary Pavement, if required, shall conform to Section 440 of the Standard Specification.

Method of Measurement. Temporary pavement will be measured in place and the area computed in square yards (square meters).

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for TEMPORARY PAVEMENT and TEMPORARY PAVEMENT (INTERSTATE).

Removal of temporary pavement will be paid for at the contract unit price per square yard (square meter) for PAVEMENT REMOVAL.

### **AGGREGATE SURFACE COURSE FOR TEMPORARY ACCESS**

Effective: April 1, 2001

Revised: January 2, 2007

Revise Article 402.10 of the Standard Specifications to read:

**“402.10 For Temporary Access.** The contractor shall construct and maintain aggregate surface course for temporary access to private entrances, commercial entrances and roads according to Article 402.07 and as directed 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 directed by the Engineer.

- (a) Private Entrance. The minimum width shall be 12 ft (3.6 m). The minimum compacted thickness shall be 6 in. (150 mm). 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 (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The maximum grade shall be six percent, except as required to match the existing grade.
- (c) Road. The minimum width shall be 24 ft (7.2 m). The minimum compacted thickness shall be 9 in. (230 mm). The grade and elevation shall be the same as the removed pavement, except as required to meet the grade of any new pavement constructed.

Maintaining the temporary access shall include relocating and/or regrading the aggregate surface course 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.”

Add the following to Article 402.12 of the Standard Specifications:

“Aggregate surface course for temporary access will be measured for payment as each for every private entrance, commercial entrance or road constructed for the purpose of temporary access. If a residential drive, commercial entrance, or road 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.”

Revise the second paragraph of Article 402.13 of the Standard Specifications 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 (ROAD).

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.”

**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.”

## **EMBANKMENT II**

Effective: March 1, 2011

Revised: November 1, 2013

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

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

### **CONSTRUCTION REQUIREMENTS**

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

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

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

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

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

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

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

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

**SLIPFORM PAVING (D-1)**

Effective: November 1, 2014

Revise Article 1020.04 Table 1, Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 1/2 to 1 1/2 in.”

Revise Article 1020.04 Table 1 (metric), Note (5) of Standard Specifications to read:

“The slump range for slipform construction shall be 13 to 40 mm.”

## ADJUSTMENTS AND RECONSTRUCTIONS

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

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

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

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

Revise Article 603.05 to read:

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

Revise Article 603.06 to read:

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

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

Revise the first sentence of Article 603.07 to read:

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

**FRICION AGGREGATE (D-1)**

Effective: January 1, 2011

Revised: April 29, 2016

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.

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

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination</u> <sup>5/</sup> : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA Low ESAL	Stabilized Subbase or Shoulders	<u>Allowed Alone or in Combination</u> <sup>5/</sup> : Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag <sup>1/</sup> Crushed Concrete
HMA High ESAL Low ESAL	Binder IL-19.0 or IL-19.0L  SMA Binder	<u>Allowed Alone or in Combination</u> <sup>5/ 6/</sup> : Crushed Gravel Carbonate Crushed Stone <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Concrete <sup>3/</sup>
HMA High ESAL Low ESAL	C Surface and Leveling Binder IL-9.5 or IL-9.5L  SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination</u> <sup>5/</sup> : Crushed Gravel Carbonate Crushed Stone <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag <sup>4/</sup> Crushed Concrete <sup>3/</sup>

Use	Mixture	Aggregates Allowed	
HMA High ESAL	D Surface and Leveling Binder IL-9.5  SMA Ndesign 50 Surface	<u>Allowed Alone or in Combination</u> <sup>5/</sup> : Crushed Gravel Carbonate Crushed Stone (other than Limestone) <sup>2/</sup> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag <sup>4/</sup> Crushed Concrete <sup>3/</sup>	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		25% Limestone	Dolomite
		50% Limestone	Any Mixture D aggregate other than Dolomite
75% Limestone	Crushed Slag (ACBF) or Crushed Sandstone		
HMA High ESAL	E Surface IL-9.5  SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> <sup>5/ 6/</sup> :  Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag  No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>	<i>With...</i>
		50% Dolomite <sup>2/</sup>	Any Mixture E aggregate
		75% Dolomite <sup>2/</sup>	Crushed Sandstone, Crushed Slag (ACBF), Crushed Steel Slag, or Crystalline Crushed Stone
75% Crushed Gravel <sup>2/</sup> or Crushed Concrete <sup>3/</sup>	Crushed Sandstone, Crystalline Crushed Stone, Crushed Slag (ACBF), or Crushed Steel Slag		

Use	Mixture	Aggregates Allowed	
HMA High ESAL	F Surface IL-9.5  SMA Ndesign 80 Surface	<u>Allowed Alone or in Combination</u> <sup>5/ 6/</sup> :  Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag No Limestone.	
		<u>Other Combinations Allowed:</u>	
		<i>Up to...</i>  50% Crushed Gravel <sup>2/</sup> , Crushed Concrete <sup>3/</sup> , or Dolomite <sup>2/</sup>	<i>With...</i>  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 (limestone) and/or crushed gravel 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.”
- 6/ Combining different types of aggregate will not be permitted in SMA Ndesign 80.”

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

Effective: June 26, 2006

Revised: April 1, 2016

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

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

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

Note 1. GTR shall be produced from processing automobile and/or light truck tires by the ambient grinding method. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall contain no free metal particles or other materials. A mineral powder (such as talc) meeting the requirements of AASHTO M 17 may be added, up to a maximum of four percent by weight of GTR to reduce sticking and caking of the GTR particles. When tested in accordance with Illinois modified AASHTO T 27, a 50 g sample of the GTR shall conform to the following gradation requirements:

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

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

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

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

“(c) RAP Materials (Note 5) .....1031”

Add the following note to 1030.02 of the Standard Specifications:

Note 5. 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.

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

Effective: January 1, 2013

Revised: January 1, 2018

**1) Design Composition and Volumetric Requirements**

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

"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 1004.03(c) of the Standard Specifications to read:

"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 <sup>1/</sup>
	IL-9.5	CA 16, CA 13 <sup>3/</sup>
HMA Low ESAL	IL-19.0L	CA 11 <sup>1/</sup>
	IL-9.5L Stabilized Subbase or Shoulders	CA 16
SMA <sup>2/</sup>	1/2 in. (12.5mm) Binder & Surface	CA13 <sup>3/</sup> , CA14 or CA16
	IL 9.5 Surface	CA16, CA 13 <sup>3/</sup>

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 last paragraph of Article 1102.01 (a) (5) of the Standard Specifications to read:

“IL-4.75 and Stone Matrix Asphalt (SMA) mixtures which contain aggregate having absorptions greater than or equal to 2.0 percent, or which contain steel slag sand, shall have minimum surge bin storage plus haul time of 1.5 hours.”

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) <sup>1/</sup> ; HMA Shoulders <sup>2/</sup>

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)	
(g) Performance Graded Asphalt Binder (Note 2) .....	1032
(h) Fibers (Note 3)	
(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 full-depth 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 1 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:

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

High ESAL, MIXTURE COMPOSITION (% PASSING) <sup>1/</sup>										
Sieve Size	IL-19.0 mm		SMA <sup>4/</sup> IL-12.5 mm		SMA <sup>4/</sup> IL-9.5 mm		IL-9.5 mm		IL-4.75 mm	
	min	max	min	max	min	max	min	max	min	max
1 1/2 in. (37.5 mm)										
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 <sup>5/</sup>	16	32 <sup>5/</sup>	34 <sup>6/</sup>	52 <sup>2/</sup>	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 <sup>3/</sup>	7.5	9.5 <sup>3/</sup>	4	6	7	9 <sup>3/</sup>
Ratio Dust/Asphalt Binder		1.0		1.5		1.5		1.0		1.0

- 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 μm) sieve shall be ≤ 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.

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

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

VOLUMETRIC REQUIREMENTS High ESAL				
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %
	IL-19.0	IL-9.5	IL-4.75 <sup>1/</sup>	
50	13.5	15.0	18.5	65 – 78 <sup>2/</sup>
70			65 - 75	
90				

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

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

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

“(3) SMA Mixtures.

Volumetric Requirements SMA <sup>1/</sup>			
Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
80 <sup>4/</sup>	3.5	17.0 <sup>2/</sup>	75 - 83
		16.0 <sup>3/</sup>	

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 ≥ 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.

Add to the end of Article 1030.05 (d) (2) a. of the Standard Specifications:

“During production, the Contractor shall test SMA mixtures for draindown according to AASHTO T305 at a frequency of 1 per day of production.”

Delete last sentence of the second paragraph of Article 1102.01(a) (4) b. 2.

Add to the end of Article 1102.01 (a) (4) b. 2.:

“As an option, collected dust (baghouse) may be used in lieu of manufactured mineral filler according to the following:

- (a.) Sufficient collected dust (baghouse) is available for production of the SMA mix for the entire project.
- (b.) A mix design was prepared based on collected dust (baghouse).

**2) Design Verification and Production**

Revise Article 1030.04 (d) of the Standard Specifications to read:

“(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.

Illinois Modified AASHTO T 324 Requirements <sup>1/</sup>

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

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 first paragraph of 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 at the beginning of each construction year according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”. At the request of the Producer, the Engineer may waive the test strip if previous construction during the current construction year has demonstrated the constructability of the mix using Department test results.”

Add the following after the sixth paragraph in Article 1030.06 (a) of the Standard Specifications:

“The Hamburg Wheel test shall also be conducted on all HMA mixtures from a sample taken 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.

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”

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 fourth paragraph of Article 406.14 of the Standard Specifications with the following:

“Stone matrix asphalt will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, of the mixture composition and  $N_{design}$  specified; and POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and  $N_{design}$  specified.”

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

Effective: November 1, 2012

Revise: January 1, 2018

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 Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Shingle (RAS) Sources”, by weight of RAS. All RAS used shall come from a Central Bureau of Materials approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve. RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
  - (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
  - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

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

- (a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. “Non- Quality, FRAP -#4 or Type 2 RAS”, etc...).
- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, 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, HMA (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 in. (75 mm) 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, 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 HMA (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 Central Bureau of Materials 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  $\leq 1000$  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 test 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)	$\pm 6 \%$
No. 8 (2.36 mm)	$\pm 5 \%$
No. 30 (600 $\mu\text{m}$ )	$\pm 5 \%$
No. 200 (75 $\mu\text{m}$ )	$\pm 2.0 \%$
Asphalt Binder	$\pm 0.3 \%$
$G_{mm}$	$\pm 0.03$ <sup>1/</sup>

- 1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity".

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

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

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

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

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

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

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

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

The Engineer will notify the Contractor of observed deficiencies.

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

Test Parameter	Acceptable Limits of Precision	
	FRAP	RAS
% Passing: <sup>1/</sup>		
1/2 in.	5.0%	
No. 4	5.0%	

No. 8	3.0%	4.0%
No. 30	2.0%	4.0%
No. 200	2.2%	4.0%
Asphalt Binder Content	0.3%	3.0%
G <sub>mm</sub>	0.030	

1/ Based on washed extraction.

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

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

**1031.05 Quality Designation of Aggregate in RAP and FRAP.**

- (a) RAP. The aggregate quality of the RAP for homogeneous, 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, HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
- (2) RAP from HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
- (3) RAP from Class I, 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 laboratory prequalified by the Department for the specified testing. The consultant laboratory 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 Central Bureau of Materials Aggregate Lab for MicroDeval Testing, according to ITP 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 the 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 percent 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.

Max Asphalt Binder Replacement for FRAP with RAS Combination

HMA Mixtures <sup>1/ 2/ 4/</sup>	Maximum % ABR		
	Binder/Leveling Binder	Surface	Polymer Modified <sup>3/</sup>
30L	50	40	30
50	40	35	30
70	40	30	30
90	40	30	30
4.75 mm N-50			40
SMA N-80			30

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the percent asphalt binder replacement shall not exceed 50 % of the total asphalt binder in the mixture.
- 2/ When the binder replacement exceeds 15 % 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 % 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 %, the required virgin asphalt binder grade shall be PG64-28.

- 3/ When the ABR for SMA or IL-4.75 is 15 % or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.
- 4/ When FRAP or RAS is used alone, the maximum percent asphalt binder replacement designated on the table shall be reduced by 10 %.

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

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

The RAP, FRAP and RAS stone specific gravities ( $G_{sb}$ ) shall be according to the "Determination of Aggregate Bulk (Dry) Specific Gravity ( $G_{sb}$ ) or Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)" procedure in the Department's Manual of Test Procedures for Materials.

**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 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  $\pm 0.5$  percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.
- (b) HMA Plant Requirements. HMA plants utilizing FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAS and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
  - f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
  - g. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.
  - h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)
  - i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
  - j. Accumulated mixture tonnage.
  - k. Dust Removed (accumulated to the nearest 0.1 ton (0.1 metric 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 Wedge Shoulders, Type B.** 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 shall be according to the current Central Bureau of Materials Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”.
- (b) Gradation. The RAP material shall meet the gradation requirements for CA 6 according to Article 1004.01(c), except the requirements for the minus No. 200 (75 µm) sieve shall not apply. The sample for the RAP material shall be air dried to constant weight prior to being tested for gradation.”

## TEMPORARY INFORMATION SIGNING

Effective: November 13, 1996

Revised: January 2, 2007

### Description.

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:

	<u>Item</u>	<u>Article/Section</u>
a.)	Sign Base (Notes 1 & 2)	1090
b.)	Sign Face ( Note 3)	1091
c.)	Sign Legends	1092
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 of Article 1106.01.

Note 4. The overlay panels shall be 0.08 inch (2 mm) thick.

## GENERAL 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.

### Method of Measurement.

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.

### Basis Of Payment.

This work shall be paid for at the contract unit price per square foot (square meter) for TEMPORARY INFORMATION SIGNING.

## REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

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

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is pre-qualified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

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

All contaminated materials shall be managed as either "uncontaminated soil" or non-special waste. This work shall include monitoring and potential sampling, analytical testing, and management of a material contaminated by regulated substances. The Environmental Firm shall continuously monitor all soil excavation for worker protection and soil contamination. **Phase I Preliminary Engineering information is available through the District's Environmental Studies Unit.** Soil samples or analysis without the approval of the Engineer will be at no additional cost to the Department. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit whichever is less.

The Contractor shall manage any excavated soils and sediment within the following areas:

### Site 3104-1 (Marathon Gas Station)

- Station 100+85 to Station 101+25 (CL Bicycle Path), 0 to 10 feet LT, 0 to 20 feet RT (Marathon Gas Station, PESA Site 3104-1, 1080 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene.
- Station 101+25 to Station 101+80 (CL Bicycle Path), 0 to 10 feet LT, 0 to 20 feet RT (Marathon Gas Station, PESA Site 3104-1, 1080 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.

### Site 3104-4 (Residences)

- Station 102+40 to Station 103+30 (CL Bicycle Path), 0 to 10 feet LT, 0 to 20 feet RT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.
- Station 103+30 to Station 105+65 (CL Bicycle Path), 0 to 20 feet LT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Lead and Manganese.
- Station 105+65 to Station 108+55 (CL Bicycle Path), 0 to 20 feet LT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article

669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.

- Station 108+55 to Station 109+20 (CL Bicycle Path), 0 to 20 feet LT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 111+30 to Station 113+40 (CL Bicycle Path), 0 to 10 feet LT, 0 to 20 feet RT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.
- Station 113+40 to Station 114+25 (CL Bicycle Path), 0 to 10 feet LT, 0 to 20 feet RT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.
- Station 114+25 to Station 114+95 (CL Bicycle Path), 0 to 10 feet LT, 0 to 30 feet RT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene and Manganese.
- Station 116+75 to Station 118+00 (CL Bicycle Path), 0 to 20 feet LT, 0 to 20 feet RT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.
- Station 118+00 to Station 119+00 (CL Bicycle Path), 0 to 20 feet LT, 0 to 20 feet RT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.
- Station 119+00 to Station 120+30 (CL Bicycle Path), 0 to 20 feet LT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, Lead and Manganese.
- Station 120+30 to Station 124+00 (CL Bicycle Path), 0 to 20 feet LT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Iron, Benzo(a)pyrene, Lead and Manganese.
- Station 124+00 to Station 125+00 (CL Bicycle Path), 0 to 20 LT (Residences, PESA Site 3104-4, 722-792 W. Maple Avenue, 461-585 Dublin Drive, 855-979 Raleigh Road, 700 Beach Plaza, and 597 Lucerne Court, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.

Site 3104-11 (Residence)

- Station 125+35 to Station 126+75 (CL Bicycle Path), 0 to 15 feet LT, 0 to 20 RT (Residences, PESA Site 3104-11, 713 Beach Plaza, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09.

Contaminants of concern sampling parameters: Benzo(a)pyrene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Lead.

- Station 126+75 to Station 127+15 (CL Bicycle Path), 0 to 20 RT (Residences, PESA Site 3104-11, 713 Beach Plaza, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene.

#### Site 3104-13 (Loch Lomond)

- Station 127+15 to Station 128+10 (CL Bicycle Path), 0 to 20 RT (Loch Lomond, PESA Site 3104-13, 300 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene.
- Station 128+10 to Station 128+85 (CL Bicycle Path), 0 to 20 LT, 0 to 20 RT (Loch Lomond, PESA Site 3104-13, 300 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.
- Station 128+85 to Station 129+65 (CL Bicycle Path), 0 to 20 LT, 0 to 20 RT (Loch Lomond, PESA Site 3104-13, 300 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.

#### Site 3104-15 (Our Lord's Little Ones)

- Station 130+75 to Station 131+55 (CL Bicycle Path), 0 to 15 feet LT, 0 to 25 feet RT (Loch Lomond, PESA Site 3104-15, 220 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.

#### Site 3104-18 (Lincoln School)

- Station 131+55 to Station 132+10 (CL Bicycle Path), 0 to 10 feet LT, 0 to 25 feet RT (Lincoln School, PESA Site 3104-18, 200 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Lead.
- Station 132+10 to Station 132+60 (CL Bicycle Path), 0 to 5 feet LT, 0 to 25 feet RT (Lincoln School, PESA Site 3104-18, 200 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene and Dibenzo(a,h)anthracene.
- Station 132+60 to Station 133+10 (CL Bicycle Path), 0 to 5 feet LT, 0 to 25 feet RT (Lincoln School, PESA Site 3104-18, 200 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Manganese.
- Station 133+10 to Station 133+50 (CL Bicycle Path), 0 to 5 feet LT, 0 to 25 feet RT (Lincoln School, PESA Site 3104-18, 200 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene, Dibenzo(a,h)anthracene and Manganese.
- Station 133+50 to Station 134+20 (CL Bicycle Path), 0 to 5 feet LT, 0 to 25 feet RT (Lincoln School, PESA Site 3104-18, 200 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene and Manganese.

Site 3104-19 (Mixed-Use Building)

- Station 134+20 to Station 134+90 (CL Bicycle Path), 0 to 5 feet LT, 0 to 20 feet RT (Mixed-Use Building, PESA Site 3104-19, 126-134 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene.

Site 3104-21 (Residence)

- Station 135+35 to Station 136+00 (CL Bicycle Path), 0 to 5 feet LT, 0 to 20 feet RT (Residence, PESA Site 3104-21, 110 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene.

Site 3104-23 (Residential Building)

- Station 136+00 to Station 137+20 (CL Bicycle Path), 0 to 5 feet LT, 0 to 20 feet RT (Residential Building, PESA Site 3104-23, 32-48 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)pyrene.

Site 3104-25 (North American Solutions)

- Station 137+80 to Station 138+30 (CL Bicycle Path), 0 to 5 feet LT, 0 to 20 feet RT (North American Solutions, PESA Site 3104-25, 32-48 W. Maple Avenue, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.

Site 3104-27 (Century 21 Market Place)

- Station 138+30 to Station 139+30 (CL Bicycle Path), 0 to 5 feet LT, 0 to 20 feet RT (North American Solutions, PESA Site 3104-27, 700 N. Lake Street, Mundelein). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Manganese.
- Station 139+75 to Station 140+10 (CL Bicycle Path), 0 to 5 feet LT, 0 to 20 feet RT (North American Solutions, PESA Site 3104-27, 700 N. Lake Street, Mundelein). This material meets the criteria of Article 669.09(a)(2) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Lead.

## **IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION (TPG)**

Effective: August 1, 2012

Revised: February 1, 2014

In addition to the Contractor's equal employment opportunity affirmative action efforts undertaken as elsewhere required by this Contract, the Contractor is encouraged to participate in the incentive program to provide additional on-the-job training to certified graduates of IDOT funded pre-apprenticeship training programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

Participation pursuant to IDOT's requirements by the Contractor or subcontractor in this Training Program Graduate (TPG) Special Provision entitles the Contractor or subcontractor to be reimbursed at \$15.00 per hour for training given a certified TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for the TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this Special Provision.

**METHOD OF MEASUREMENT:** The unit of measurement is in hours.

**BASIS OF PAYMENT:** This work will be paid for at the contract unit price of \$15.00 per hour for certified 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 (ONE). During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision \$15.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.

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:

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



Storm Water Pollution Prevention Plan



Route FAU 1238	Marked Route IL Route 176 (Maple Avenue)	Section 15-00101-00-BT
Project Number H5LE(048)	County Lake	Contract Number 61E17

This plan has been prepared to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit No. ILR10 (Permit ILR10), issues 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.

Print Name Bill Emmerich	Title Village Engineer	Agency Village of Mundelein
Signature 		Date 1/11/18

I. Site Description

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

North parkway of IL Route 176 (Maple Ave) between Midlothian Road and US Route 45 in the Village of Mundelein, Lake County, Illinois 42 deg 27'58.98" N 88 deg 01'54.30" W

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

Scope of work includes, but is not limited to, hot-mix asphalt bike path, force main relocation, water main replacement, concrete curb and gutters, parkway restoration, drainage appurtenances and all incidental and collateral work necessary to complete the project.

C. Provide the estimated duration of this project:

6 months

D. The total area of the construction site is estimated to be 1.25 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 1.25 acres.

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

0.70

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

Surficial soils along the project corridor are generally identified as Beecher Silt Loam (298B) with 2-4% slopes, Wauconda Silt Loam (978A) with 0-2% slopes, Markham Silt Loam (531C2) with 4-6% slopes, eroded, and Ozaukee Silt Loam (530D2) with 6-12% slopes, eroded.

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

There are no wetlands located within the area of disturbance proposed with this project.

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

No erosive areas are anticipated, provided stabilization measures are installed in accordance with the erosion control plan and this storm water pollution prevention plan.

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

Soils will be disturbed along the entire stretch of roadway and water main improvements. Maximum slopes in this residential area will not exceed 1:3.

Temporary erosion control seeding, perimeter erosion barrier, inlet and pipe protection and temporary ditch checks will be utilized to meet BMP requirements. Perimeter erosion barrier will be installed prior to any earth disturbing activities. Temporary erosion control seeding will be applied to exposed areas within 7 days of disturbance. Permanent seeding will be placed after final grading has been completed.

Temporary ditch checks will be installed after excavation and ditch grading. The perimeter erosion barrier will be removed once permanent stabilization has been established.

- J. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent off site sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

- K. Identify who owns the drainage system (municipality or agency) this project will drain into:

The drainage system is owned by the Village of Mundelein and consists of roadside swales and abbreviated closed drainage system.

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

Lake County

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

Loch Lomond in Lake County is the ultimate receiving water. The roadside ditches are not listed on the 2012 IEPA 303(d) list as impaired. The potential that construction activities performed onsite will impact Loch Lomond is reduced by the construction BMP's (temporary erosion control seeding, erosion control blanket, temporary ditch checks, perimeter erosion barrier, etc.) in the contract documents. It is unlikely the quantities of phosphorus (total), mercury or polychlorinated biphenyls will be discharged from the project. Portable toilets will be placed away from inlets and water courses.

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

Any areas within the defined project location but outside the construction limits shall remain undisturbed.

- O. The following sensitive environmental resources are associated with this project, and may have the potential to be impacted by the proposed development:

- Floodplain
- Wetland Riparian
- Threatened and Endangered Species
- Historic Preservation
- 303(d) Listed receiving waters for suspended solids, turbidity, or siltation
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity, or siltation
- Applicable Federal, Tribal, State or Local Programs
- Other

1. 303(d) Listed receiving waters (fill out this section if checked above):

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

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

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

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

2. TMDL (fill out this section if checked above)

- 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:

- c. If a specific numeric waste load allocation has been established that would apply to the project's discharges, provide a description of the necessary steps to meet the allocation:

P. The following pollutants of concern will be associated with this construction project:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Soil Sediment             | <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) |
| <input checked="" type="checkbox"/> Concrete                  | <input checked="" type="checkbox"/> Antifreeze / Coolants  |
| <input checked="" type="checkbox"/> Concrete Truck waste      | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment               |
| <input checked="" type="checkbox"/> Concrete Curing Compounds | <input type="checkbox"/> Other (specify) _____   |
| <input checked="" type="checkbox"/> Solid waste Debris        | <input type="checkbox"/> Other (specify) _____   |
| <input type="checkbox"/> Paints                               | <input type="checkbox"/> Other (specify) _____   |
| <input type="checkbox"/> Solvents                             | <input type="checkbox"/> Other (specify) _____   |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides  | <input type="checkbox"/> Other (specify) _____   |

II. Controls

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;
3. 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:

- |   |  |
|---|--|
| <input type="checkbox"/> Preservation of Mature Vegetation            | <input checked="" type="checkbox"/> Erosion Control Blanket / Mulching |
| <input type="checkbox"/> Vegetated Buffer Strips                      | <input type="checkbox"/> Sodding                                       |
| <input checked="" type="checkbox"/> Protection of Trees               | <input checked="" type="checkbox"/> Geotextiles                        |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding | <input type="checkbox"/> Other (specify) _____                         |
| <input type="checkbox"/> Temporary Turf (Seeding, Class 7)            | <input type="checkbox"/> Other (specify) _____                         |
| <input type="checkbox"/> Temporary Mulching                           | <input type="checkbox"/> Other (specify) _____                         |
| <input checked="" type="checkbox"/> Permanent Seeding                 | <input type="checkbox"/> Other (specify) _____                         |

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

Temporary erosion control seeding shall be applied in accordance with the Special Provision within 7 days to all areas disturbed by construction. Seed mixture will depend on the time of year it is applied. Oats will be applied from April 1st to June 15th and hard Red Winter Wheat from August 1st to November 1st. Additional stabilization requirements can be found in the Sedimentation and Erosion Control portion of the General Notes. Perimeter erosion barrier will be installed to keep sediment from leaving the site. Temporary ditch checks will be installed after rough grading to prevent sediment from filling the ditches and entering the storm sewer.

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

All parkway areas disturbed by construction will be stabilized as soon as permitted with permanent seeding following finish grading. After storm sewers have been installed inlet protection will keep sediment from entering the new open drainage system until the site has been adequately stabilized.

- 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 stabilization practices will be used for this project:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier    | <input type="checkbox"/> Rock Outlet Protection  |
| <input type="checkbox"/> Temporary Ditch Check                   | <input checked="" type="checkbox"/> Riprap       |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input type="checkbox"/> Gabions                 |
| <input type="checkbox"/> Sediment Trap                           | <input type="checkbox"/> Slope Mattress          |
| <input type="checkbox"/> Temporary Pipe Slope Drain              | <input type="checkbox"/> Retaining Walls         |
| <input type="checkbox"/> Temporary Sediment Basin                | <input type="checkbox"/> Slope Walls             |
| <input type="checkbox"/> Temporary Stream Crossing               | <input type="checkbox"/> Concrete Revetment Mats |

- |  |  |
|--|--|
| <input type="checkbox"/> Stabilized Construction Exits | <input type="checkbox"/> Level Spreaders       |
| <input type="checkbox"/> Turf Reinforcement Mats       | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Permanent Check Dams          | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Permanent Sediment Basin      | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Aggregate Ditch               | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Paved Ditch                   | <input type="checkbox"/> Other (specify) _____ |

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

Perimeter Erosion Barrier - Prior to commencement of any grading activities, a continuous silt fence shall be placed adjacent to construction areas to intercept sheet flow of water borne silt and sediment and prevent it from leaving the construction site. The locations requiring silt fence are designated on the Erosion Control Plans.

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

No structural practices will remain after construction.

**D. Treatment Chemicals**

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

If yes above, identify where and how polymer flocculents 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.

- 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 & Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

- Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Description of permanent storm water management controls:

Permanent measures for storm water management controls will be placed as soon as possible during construction. The drainage patterns will not be altered.

Prior to final project close-out, the adjacent pipe culverts and storm sewers shall be cleaned of all silt and debris as required by applicable local codes and state standards.

**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:

Not applicable

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 time frame
  - 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
  - Time frame 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 Cleaning and Maintenance - Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
  - Dewatering Activities - Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
  - Polymer Flocculants and Treatment Chemicals - Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
  - Additional measures indicated in the plan.

### III. Maintenance

When requested by the Contractor, the Resident Engineer will provide general maintenance guides to the Contractor for the practices associated with this project. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. It will be Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution runoff in compliance with environmental law and EPA Water Quality Regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site. On a weekly basis, the Engineer shall inspect the project to determine whether erosion control efforts are in place and effective and if other additional control measures are necessary. Sediment collected during construction by the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer.

All erosion and sediment control measures should be checked weekly and after each significant rainfall (0.5 inch or greater in a 24-hour period) or equivalent snowfall. Additionally, during winter months (if applicable), all measures should be checked after each significant snowmelt. The following items should be checked:

1. Seeding - All erodible bare earth areas will be temporarily seeded and inspected on a weekly basis to minimize the amount of erodible surface within the proposed project limits.
2. Perimeter Erosion Barrier.

Additionally, all locations where vehicles enter and exit the construction site and all other areas subject to erosion should also be inspected periodically. Inspection of these areas shall be made at least once every seven (7) days and within 24 hours of the end of each 0.5 inch or greater rainfall or equivalent snowfall.

All maintenance of the erosion and sediment control measures will be the responsibility of the Contractor. This maintenance shall be in accordance with the IDOT Erosion and Sediment Control Field Guide for Construction Inspection (dated July 1, 2010) and IDOT's Best Management Practices - Maintenance Guides.

The temporary erosion control systems shall remain in place with proper maintenance until the permanent erosion controls are in place, working properly and seeding has been established. Once the permanent erosion control systems have taken hold and are functional, the temporary items shall be removed along with any trapped sediment and any disturbed areas shall be reseeded.

#### **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 e-mail at: [epa.swnoncomp@illinois.gov](mailto: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:

Not applicable
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#### 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.



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 Contractors/subcontractor completing this form.

Route FAU 1238	Marked Route IL Route 176 (Maple Avenue)	Section 15-00101-00-BT
Project Number H5LE(048)	County Lake	Contract Number 61E17

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. ILR10 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  	Signature  
Title  	Date  
Name of Firm  	Telephone  
Street Address  	City/State/Zip  

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



Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Uncontaminated Soil Certification
by Licensed Professional Engineer or Licensed Professional Geologist
for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation
LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAU 1238/IL Route 176 Office Phone Number, if available:

Physical Site Location (address, including number and street):
3104-1(1080 W Maple);3104-4 (722-792 W Maple);3104-11 (713 Beach Plaza); 3104-13 (300 W Maple);3104-18(200 W Maple);3104-19(126-134 W Maple);3104-21 (110 W Maple); 3104-23(32-48 W Maple);3104-25(26 W Maple); 3104-27 (700 N. Lake Street)
City: Mundelein State: IL Zip Code: 60060

County: Lake Township: Fremont

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.274568 Longitude: -88.010839
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS Map Interpolation Photo Interpolation Survey Other

ISGS Public Land Survey System - Approximate Center of multiple addresses

IEPA Site Number(s), if assigned: BOL: BOW: BOA:

II. Owner/Operator Information for Source Site

Table with 2 columns: Site Owner and Site Operator. Fields include Name, Street Address, PO Box, City, State, Zip Code, Phone, and Contact/Email.

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 each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms

Project Name: FAU 1238/IL Route 176

Latitude: 42.274568 Longitude: -88.010839

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Refer to Figure 4-1.1 through 4-1.7 in the Final PSI Report and borings 3104-1-02 and 1-03 (Sta100+60 to 101+75,left); 4-01 and 4-02 (Sta 102+50 to 105+50, left); 4-06(Sta108+60 to 109+10, left); 4-07 and 4-08 (Sta 111+25 to 113+25, left); 4-11 (Sta 116+75 to 118+00,left); 4-18 (Sta 124+00 to 125+00,left); 11-01 and 11-02 and 13-01(Sta 125+25 to 128+75,left); 18-01(Sta131+50 to 132+10, left);18-02(Sta 132+10 to 132+50,left); 18-04 (Sta 133+25 to 133+50,left);19-01(Sta 134+25 to 134 +75,left); 21-01 and 23-01 (Sta 135+25 to 137+25,left); 25-02 (Sta 137+75 to 138+25,left); 27-04(Sta 139+75 to 140+05.2,left).

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

Refer to Tables 4-2 and 4-3 in the Final PSI Report for results summary and First Environmental Laboratories, Inc. reports #17-7200 and 18-0028. Site specific table of results is attached to this form.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Jeremy J. Reynolds, P.G. (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

*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))*

Company Name: Huff & Huff, Inc. / GZA GeoEnvironmental, Inc.

Street Address: 915 Harger Road, Suite 330

City: Oak Brook State: IL Zip Code: 60523

Phone: 630-684-9100

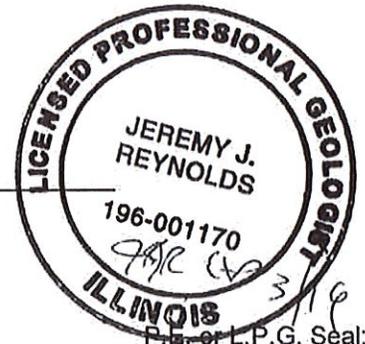
Jeremy J. Reynolds, P.G.  
Printed Name:



Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

2/20/18

Date:



P.E. or L.P.G. Seal:

## ADJUSTING FRAMES AND GRATES (BDE)

Effective: April 1, 2017

Add the following to Article 602.02 of the Standard Specifications:

- “(s) High Density Expanded Polystyrene Adjusting Rings  
with Polyurea Coating (Note 4) ..... 1043.04  
(t) Expanded Polypropylene (EPP) Adjusting Rings (Note 5) ..... 1043.05

Note 4. High density expanded polystyrene adjusting rings with polyurea coating shall meet the design load requirements of AASHTO HS20/25. The rings may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). They shall be installed and sealed underneath the frames according to the manufacturer’s specifications.

Note 5. Riser rings fabricated from EPP may be used to adjust the frames and grates of drainage and utility structures up to a maximum of 6 in. (150 mm). An adhesive meeting ASTM C 920, Type S, Grade N5, Class 25 shall be used with EPP adjustment rings. The top ring of the adjustment stack shall be a finish ring with grooves on the lower surface and flat upper surface. The joints between all manhole adjustment rings and the frame and cover shall be sealed using the approved adhesive. In lieu of the use of an adhesive, an internal or external mechanical frame-chimney seal may be used for watertight installation. EPP adjustment rings shall not be used with heat shrinkable infiltration barriers.”

Add the following to Section 1043 of the Standard Specifications:

**“1043.04 High Density Expanded Polystyrene Adjusting Rings with Polyurea Coating.** High density expanded polystyrene adjustment rings with polyurea coating shall be designed and tested to meet or exceed an HS25 wheel load according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M306 HS-25). The raw material suppliers shall provide certifications of quality or testing using the following ASTM standards, and upon request, certify that only virgin material was used in the manufacturing of the expanded polystyrene rings.

Physical Property	Test Standard	Value	
		3.0 lb/cu ft	4.5 lb/cu ft
Compression Resistance at 10% deformation	ASTM D 1621	50 - 70	70 - 90
at 5% deformation		45 - 60	60 - 80
at 2% deformation		15 - 20	20 - 40
Flexural Strength	ASTM D 790	90 - 120	130 - 200
Water Absorption	ASTM D 570	2.0%	1.7%
Coefficient of Linear Expansion	ASTM D 696	2.70E-06 in./in./°F	2.80E-06 in./in./°F
Sheer Strength	ASTM D 732	55	80

Tensile Strength	ASTM D 1623	70 - 90	130 - 140
Water Vapor Transmission	ASTM C 355	0.82 – 0.86 perm – in.	

High density expanded polystyrene adjustment rings with polyurea coating shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to  $\pm 0.063$  in. ( $\pm 1.6$  mm). Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface.

**1043.05 Expanded Polypropylene (EPP) Adjusting Rings.** The EPP adjusting rings shall be manufactured using a high compression molding process to produce a minimum finished density of 7.5 lb/cu ft (120 g/l). The EPP rings shall be made of materials meeting ASTM D 3575 and ASTM D 4819-13. The grade adjustments shall be designed and tested according to the AASHTO Standard Specifications for Highway Bridges (AASHTO M 306 HS-25).

Grade rings shall contain upper and lower keyways (tongue and groove) for proper vertical alignment and sealing. The top ring, for use directly beneath the cast iron frame, shall have keyways (grooves) on the lower surface with a flat upper surface.

Adhesive or sealant used for watertight installation of the manhole grade adjustment rings shall meet ASTM C 920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A, and O.

EPP adjustment rings shall have no void areas, cracks, or tears. The actual diameter or length shall not vary more than 0.125 in. (3 mm) from the specified diameter or length. Variations in height are limited to  $\pm 0.063$  in. ( $\pm 1.6$  mm). Variations shall not exceed 0.25 in. (6 mm) from flat (dish, bow, or convoluting edge) or 0.125 in. (3 mm) for bulges or dips in the surface.”

80382

## COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revise Article 107.40(b) of the Standard Specifications to read:

“(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

- (1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.
- (2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.
- (3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days.”

Revise Article 107.40(c) of the Standard Specifications to read:

“(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

- (1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

- (2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the Contractor’s yard or another job and the cost to re-mobilize, whichever is less.

Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

- (3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13.”

Revise Article 108.04(b) of the Standard Specifications to read:

“(b) No working day will be charged under the following conditions.

- (1) When adverse weather prevents work on the controlling item.
- (2) When job conditions due to recent weather prevent work on the controlling item.
- (3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.
- (4) When delays caused by utility or railroad adjustments prevent work on the controlling item.
- (5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.
- (6) When any condition over which the Contractor has no control prevents work on the controlling item.”

Revise Article 109.09(f) of the Standard Specifications to read:

- “(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited.”

Add the following to Section 109 of the Standard Specifications.

**“109.13 Payment for Contract Delay.** Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

- (a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.
- (b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.
  - (1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to \$5,000,000	One Project Superintendent
Over \$ 5,000,000 - up to \$25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over \$25,000,000 - up to \$50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over \$50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid. For working day contracts the payment will be made according to Article 109.04. For completion date contracts, an adjustment will be determined as follows.

Extended Traffic Control occurs between April 1 and November 30:

$$\text{ETCP Adjustment (\$)} = \text{TE} \times (\% / 100 \times \text{CUP} / \text{OCT})$$

Extended Traffic Control occurs between December 1 and March 31:

$$\text{ETCP Adjustment (\$)} = \text{TE} \times 1.5 (\% / 100 \times \text{CUP} / \text{OCT})$$

Where: TE = Duration of approved time extension in calendar days.

% = Percent maintenance for the traffic control, % (see table below).

CUP = Contract unit price for the traffic control pay item in place during the delay.

OCT = Original contract time in calendar days.

Original Contract Amount	Percent Maintenance
Up to \$2,000,000	65%
\$2,000,000 to \$10,000,000	75%
\$10,000,000 to \$20,000,000	85%
Over \$20,000,000	90%

When an ETCP adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

## 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 <sup>1/</sup>	600-749	2002
	750 and up	2006
June 1, 2011 <sup>2/</sup>	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006
June 1, 2012 <sup>2/</sup>	50-99	2004
	100-299	2003
	300-599	2001
	600-749	2002
	750 and up	2006

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* (<http://www.epa.gov/cleandiesel/verification/verif-list.htm>), or verified by the California Air Resources Board (CARB) (<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>); 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.

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## **DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (DBE)**

Effective: September 1, 2000

Revised: April 2, 2018

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

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

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

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

**OVERALL GOAL SET FOR THE DEPARTMENT.** As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a

good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. 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 18.00 % of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:

<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

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

In order to assure the timely award of the contract, the low bidder shall submit:

- (a) The bidder shall submit a DBE Utilization Plan on completed Department forms SBE 2025 and 2026.
  - (1) The final Utilization Plan must be submitted within five calendar days after the date of the letting in accordance with subsection (a)(2) of Bidding Procedures herein.

- (2) To meet the five day requirement, the bidder may send the Utilization Plan electronically by scanning and sending to [DOT.DBE.UP@illinois.gov](mailto:DOT.DBE.UP@illinois.gov) or faxing to (217) 785-1524. The subject line must include the bid Item Number and the Letting date. The Utilization Plan should be sent as one .pdf file, rather than multiple files and emails for the same Item Number. It is the responsibility of the bidder to obtain confirmation of email or fax delivery.

Alternatively, the Utilization Plan may be sent by certified mail or delivery service within the five calendar day period. If a question arises concerning the mailing date of a Utilization Plan, the mailing date will be established by the U.S. Postal Service postmark on the certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service when the Utilization Plan is received by the Department. It is the responsibility of the bidder to ensure the postmark or receipt date is affixed within the five days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Utilization Plan is to be submitted to:

Illinois Department of Transportation  
Bureau of Small Business Enterprises  
Contract Compliance Section  
2300 South Dirksen Parkway, Room 319  
Springfield, Illinois 62764

The Department will not accept a Utilization Plan if it does not meet the five day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Utilization Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration.

- (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 Utilization 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 scanned or 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 Utilization 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 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 subsection (c)(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. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period in order to cure the deficiency.
- (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 reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the

Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
  - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.
- (e) DBE as a material supplier:

- (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
- (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
- (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

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

- (a) NO AMENDMENT. 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) CHANGES TO WORK. 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 or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then 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) SUBCONTRACT. 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) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
- (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
  - (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
  - (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.
- (e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE 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) of this part. 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 DBE 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 1200 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 subcontractor 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) FINAL PAYMENT. 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 Resident 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) ENFORCEMENT. 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) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

## **EQUIPMENT PARKING AND STORAGE (BDE)**

Effective: November 1, 2017

Replace the first paragraph of Article 701.11 of the Standard Specifications with the following.

**“701.11 Equipment Parking and Storage.** During working hours, all vehicles and/or nonoperating equipment which are parked, two hours or less, shall be parked at least 8 ft (2.5 m) from the open traffic lane. For other periods of time during working and for all nonworking hours, all vehicles, materials, and equipment shall be parked or stored as follows.

- (a) When the project has adequate right-of-way, vehicles, materials, and equipment shall be located a minimum of 30 ft (9 m) from the pavement.
- (b) When adequate right-of-way does not exist, vehicles, materials, and equipment shall be located a minimum of 15 ft (4.5 m) from the edge of any pavement open to traffic.
- (c) Behind temporary concrete barrier, vehicles, materials, and equipment shall be located a minimum of 24 in. (600 mm) behind free standing barrier or a minimum of 6 in. (150 mm) behind barrier that is either pinned or restrained according to Article 704.04. The 24 in. or 6 in. measurement shall be from the base of the non-traffic side of the barrier.
- (d) Behind other man-made or natural barriers meeting the approval of the Engineer.”

80388

**HOT-MIX ASPHALT – OSCILLATORY ROLLER (BDE)**

Effective: August 1, 2018

Add the following to Article 406.03 of the Standard Specifications:

“(j) Oscillatory Roller .....1101.01”

Revise Table 1 and Note 3/ of Table 1 in Article 406.07(a) of the Standard Specifications to read:

“TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA				
	Breakdown Roller (one of the following)	Intermediate Roller	Final Roller (one or more of the following)	Density Requirement
Level Binder: (When the density requirements of Article 406.05(c) do not apply.)	P <sup>3/</sup>	--	V <sub>S</sub> , P <sup>3/</sup> , T <sub>B</sub> , T <sub>F</sub> , 3W, O <sub>T</sub>	To the satisfaction of the Engineer.
Binder and Surface <sup>1/</sup>  Level Binder <sup>1/</sup> : (When the density requirements of Article 406.05(c) apply.)	V <sub>D</sub> , P <sup>3/</sup> , T <sub>B</sub> , 3W, O <sub>T</sub> , O <sub>B</sub>	P <sup>3/</sup> , O <sub>T</sub> , O <sub>B</sub>	V <sub>S</sub> , T <sub>B</sub> , T <sub>F</sub> , O <sub>T</sub>	As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7).
IL-4.75 and SMA <sup>4/5/</sup>	T <sub>B</sub> , 3W, O <sub>T</sub>	--	T <sub>F</sub> , 3W, O <sub>T</sub>	
Bridge Decks <sup>2/</sup>	T <sub>B</sub>	--	T <sub>F</sub>	As specified in Articles 582.05 and 582.06.

3/ A vibratory roller (V<sub>D</sub>) or oscillatory roller (O<sub>T</sub> or O<sub>B</sub>) may be used in lieu of the pneumatic-tired roller on mixtures containing polymer modified asphalt binder.”

Add the following to EQUIPMENT DEFINITION in Article 406.07(a) contained in the Errata of the Supplemental Specifications:

“O<sub>T</sub> - Oscillatory roller, tangential impact mode. Maximum speed is 3.0 mph (4.8 km/h) or 264 ft/min (80 m/min).

O<sub>B</sub> - Oscillatory roller, tangential and vertical impact mode, operated at a speed to produce not less than 10 vertical impacts/ft (30 impacts/m).”

Add the following to Article 1101.01 of the Standard Specifications:

“(h) Oscillatory Roller. The oscillatory roller shall be self-propelled and provide a smooth operation when starting, stopping, or reversing directions. The oscillatory roller shall be able to operate in a mode that will provide tangential impact force with or without vertical impact force by using at least one drum. The oscillatory roller shall be equipped with water tanks and sprinkling devices, or other approved methods, which shall be used to wet the drums to prevent material pickup. The drum(s) amplitude and frequency of the tangential and vertical impact force shall be approximately the same in each direction and meet the following requirements:

- (1) The minimum diameter of the drum(s) shall be 48 in. (1200 mm);
- (2) The minimum length of the drum(s) shall be 66 in. (1650 mm);
- (3) The minimum unit static force on the drum(s) shall be 125 lb/in. (22 N/m);
- (4) The minimum force on the oscillatory drum shall be 18,000 lb (80 kN); and
- (5) Self-adjusting eccentrics, and reversible eccentrics on non-driven drum(s).”

80399

## **HOT-MIX ASPHALT – TACK COAT (BDE)**

Effective: November 1, 2016

Revise Article 1032.06(a) of the Standard Specifications to read:

“(a) Anionic Emulsified Asphalt. Anionic emulsified asphalts shall be according to AASHTO M 140. SS-1h emulsions used as a tack coat shall have the cement mixing test waived.”

80376

## LIGHTS ON BARRICADES (BDE)

Effective: January 1, 2018

Revise Article 701.16 of the Standard Specifications to read:

**“701.16 Lights.** Lights shall be used on devices as required in the plans, the traffic control plan, and the following table.

Circumstance	Lights Required
Daylight operations	None
First two warning signs on each approach to the work involving a nighttime lane closure and “ROUGH GROOVED SURFACE” (W8-I107) signs	Flashing mono-directional lights
Devices delineating isolated obstacles, excavations, or hazards at night (Does not apply to patching)	Flashing bi-directional lights
Devices delineating obstacles, excavations, or hazards exceeding 100 ft (30 m) in length at night (Does not apply to widening)	Steady burn bi-directional lights
Channelizing devices for nighttime lane closures on two-lane roads	None
Channelizing devices for nighttime lane closures on multi-lane roads	None
Channelizing devices for nighttime lane closures on multi-lane roads separating opposing directions of traffic	None
Channelizing devices for nighttime along lane shifts on multilane roads	Steady burn mono-directional lights
Channelizing devices for night time along lane shifts on two lane roads	Steady burn bi-directional lights
Devices in nighttime lane closure tapers on Standards 701316 and 701321	Steady burn bi-directional lights
Devices in nighttime lane closure tapers	Steady burn mono-directional lights
Devices delineating a widening trench	None
Devices delineating patches at night on roadways with an ADT less than 25,000	None
Devices delineating patches at night on roadways with an ADT of 25,000 or more	None

Batteries for the lights shall be replaced on a group basis at such times as may be specified by the Engineer.”

Delete the fourth sentence of the first paragraph of Article 701.17(c)(2) of the Standard Specifications.

Revise the first paragraph of Article 603.07 of the Standard Specifications to read:

**“603.07 Protection Under Traffic.** After the casting has been adjusted and Class SI concrete has been placed, the work shall be protected by a barricade for at least 72 hours.”

80392

**MANHOLES, VALVE VAULTS, AND FLAT SLAB TOPS (BDE)**

Effective: January 1, 2018

Revised: March 2, 2018

Description. Manholes, valve vaults, and flat slab tops manufactured according to the current or previous Highway Standards listed below will be accepted on this contract:

<u>Product</u>	<u>Current Standard</u>	<u>Previous Standard</u>
Precast Manhole Type A, 4' (1.22 m) Diameter	602401-04	602401-03
Precast Manhole Type A, 5' (1.52 m) Diameter	602402	602401-03
Precast Manhole Type A, 6' (1.83 m) Diameter	602406-08	602406-07
Precast Manhole Type A, 7' (2.13 m) Diameter	602411-06	602411-05
Precast Manhole Type A, 8' (2.44 m) Diameter	602416-06	602416-05
Precast Manhole Type A, 9' (2.74 m) Diameter	602421-06	602421-05
Precast Manhole Type A, 10' (3.05 m) Diameter	602426	n/a
Precast Valve Vault Type A, 4' (1.22 m) Diameter	602501-03	602501-02
Precast Valve Vault Type A, 5' (1.52 m) Diameter	602506	602501-02
Precast Reinforced Concrete Flat Slab Top	602601-05	602601-04

When manufacturing to the current standards, the following revisions to the Standard Specifications shall apply:

Revise Article 602.02(g) of the Standard Specifications to read:

“(g) Structural Steel (Note 4) .....1006.04

Note 4. All components of the manhole joint splice shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.”

Add the following to Article 602.02 of the Standard Specifications:

“(s) Anchor Bolts and Rods (Note 5) .....1006.09

Note 5. The threaded rods for the manhole joint splice shall be according to the requirements of ASTM F 1554, Grade 55, (Grade 380).”

Add the following paragraph after the first paragraph of Article 602.07 of the Standard Specifications:

“Threaded rods connecting precast sections shall be brought to a snug tight condition.”

Revise the second paragraph of Article 1042.10 of the Standard Specifications to read:

“Catch basin Types A, B, C, and D; Manhole Type A; Inlet Types A and B; Drainage Structures Types 1, 2, 3, 4, 5, and 6; Valve Vault Type A; and reinforced concrete flat slab top

(Highway Standard 602601) shall be according to AASHTO M 199 (M 199M), except the minimum wall thickness shall be 3 in. (75 mm). Additionally, catch basins, inlets, and drainage structures shall have a minimum concrete compressive strength of 4500 psi (31,000 kPa) at 28 days and manholes, valve vaults, and reinforced concrete flat slab tops shall have a minimum concrete compressive strength of 5000 psi (34,500 kPa) at 28 days.”

80393

## **PAYMENTS TO SUBCONTRACTORS (BDE)**

Effective: November 2, 2017

Add the following to the end of the fourth paragraph of Article 109.11 of the Standard Specifications:

“If reasonable cause is asserted, written notice shall be provided to the applicable subcontractor and/or material supplier and the Engineer within five days of the Contractor receiving payment. The written notice shall identify the contract number, the subcontract or material purchase agreement, a detailed reason for refusal, the value of payment being withheld, and the specific remedial actions required of the subcontractor and/or material supplier so that payment can be made.”

80390

## PORTLAND CEMENT CONCRETE (BDE)

Effective: November 1, 2017

Revise the Air Content % of Class PP Concrete in Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

"TABLE 1. CLASSES OF CONCRETE AND MIX DESIGN CRITERIA		
Class of Conc.	Use	Air Content %
PP	Pavement Patching Bridge Deck Patching (10)	
	PP-1	4.0 - 8.0"
	PP-2	
	PP-3	
	PP-4	
	PP-5	

Revise Note (4) at the end of Table 1 Classes of Concrete and Mix Design Criteria in Article 1020.04 of the Standard Specifications to read:

"(4) For all classes of concrete, the maximum slump may be increased to 7 in (175 mm) when a high range water-reducing admixture is used. For Class SC, the maximum slump may be increased to 8 in. (200 mm). For Class PS, the maximum slump may be increased to 8 1/2 in. (215 mm) if the high range water-reducing admixture is the polycarboxylate type."

80389

**PORTLAND CEMENT CONCRETE SIDEWALK (BDE)**

Effective: August 1, 2017

Revise the first paragraph of Article 424.12 of the Standard Specifications to read:

**“424.12 Method of Measurement.** This work will be measured for payment in place and the area computed in square feet (square meters). Curb ramps, including side curbs and side flares, will be measured for payment as sidewalk. No deduction will be made for detectable warnings located within the ramp.”

80385

## **PROGRESS PAYMENTS (BDE)**

Effective: November 2, 2013

Revise Article 109.07(a) of the Standard Specifications to read:

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

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics' Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610), progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.”

80328

## **SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)**

Effective: April 2, 2018

Add the following to Section 109 of the Standard Specifications.

**“109.14 Subcontractor and Disadvantaged Business Enterprise Payment Reporting.**  
The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor’s submitted DBE utilization plan.

The report shall be made through the Department’s on-line subcontractor payment reporting system within 21 days of making the payment.”

80397

## SUBCONTRACTOR MOBILILATION PAYMENTS (BDE)

Effective: November 2, 2017

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

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

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%

80391

**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 specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g. by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor’s records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved by not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the Illinois Department of Transportation and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the Engineer, reimbursement will be made for training of persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirement of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program.

It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily complete.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

METHOD OF MEASUREMENT The unit of measurement is in hours.

BASIS OF PAYMENT This work will be paid for at the contract unit price of 80 cents per hour for TRAINEES. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

20338

## **WARM MIX ASPHALT (BDE)**

Effective: January 1, 2012

Revised: April 1, 2016

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

### 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.

"(11) Equipment for Warm Mix Technologies.

- a. Foaming. Metering equipment for foamed asphalt shall have an accuracy of  $\pm 2$  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.

80288

## **WEEKLY DBE TRUCKING REPORTS (BDE)**

Effective: June 2, 2012

| Revised: April 2, 2015

| The Contractor shall submit 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 for DBE goal credit.

| The report shall be submitted to the Engineer on Department form "SBE 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

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.

80302

**WORKING DAYS (BDE)**

Effective: January 1, 2002

The Contractor shall complete the work within **75** working days.

80071

**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 on-the-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 non-minority group members and women employed in each work classification on the project;

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

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#).

The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### **III. NONSEGREGATED FACILITIES**

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### **IV. DAVIS-BACON AND RELATED ACT PROVISIONS**

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### **1. Minimum wages**

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

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each

classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

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

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a

separate account assets for the meeting of obligations under the plan or program.

## 2. Withholding

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

## 3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee ( e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web 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 wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### b. Trainees (programs of the USDOL).

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

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

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

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

##### d. Apprentices and Trainees (programs of the U.S. DOT).

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

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

#### **10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

#### **V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one

and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the 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 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 contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

\* \* \* \* \*

## **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 contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

\* \* \* \* \*

#### **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.

\* \* \* \* \*

#### **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.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

## Contract Provision - Cargo Preference Requirements

In accordance with Title 46 CFR § 381.7 (b), the contractor agrees—

“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”

Provisions (1) and (2) apply to materials or equipment that are acquired solely for the project. The two provisions do not apply to goods or materials that come into inventories independent of the project, such as shipments of Portland cement, asphalt cement, or aggregates, when industry suppliers and contractors use these materials to replenish existing inventories.

