

# 7

**Letting September 20, 2019**

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



**Contract No. 61F85  
DUPAGE County  
Section 16-00045-00-MS (Clarendon Hills)  
Route MUN\_1003 (Prospect Avenue)  
Project PKDA-808 ()  
District 1 Construction Funds**

Prepared by

Checked by

F

(Printed by authority of the State of Illinois)



- 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. September 20, 2019 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. 61F85  
DUPAGE County  
Section 16-00045-00-MS (Clarendon Hills)  
Project PKDA-808 ()  
Route MUN\_1003 (Prospect Avenue)  
District 1 Construction Funds**

**Streetscape to include sidewalk replacement, curb and gutter replacement, lighting improvements, landscaping, pavement imprinting and resurfacing. Project is located on Prospect Avenue from Ann Street to Burlington Avenue in the Village of Clarendon Hills.**

- 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

Omer Osman,  
Acting Secretary

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2019

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 1-1-19)

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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
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
80404		Coarse Aggregate Quality for Micro-Surfacing and Cape Seals	Jan. 1, 2019	
80384	116	X Compensable Delay Costs	June 2, 2017	April 1, 2019
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	120	X Construction Air Quality – Diesel Retrofit	June 1, 2010	Nov. 1, 2014
80387		Contrast Preformed Plastic Pavement Marking	Nov. 1, 2017	
80029	123	X Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Mar. 2, 2019
80402	133	X Disposal Fees	Nov. 1, 2018	
80378		Dowel Bar Inserter	Jan. 1, 2017	Jan. 1, 2018
80405		Elastomeric Bearings	Jan. 1, 2019	
* 80415	135	X Emulsified Asphalts	Aug. 1, 2019	
80388	138	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	139	X Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	Aug. 1, 2018
80398		Hot-Mix Asphalt – Longitudinal Joint Sealant	Aug. 1, 2018	Jan. 1, 2019
80406		Hot-Mix Asphalt – Mixture Design Verification and Production (Modified for I-FIT Projects)	Jan. 1, 2019	
80399	141	X Hot-Mix Asphalt – Oscillatory Roller	Aug. 1, 2018	Nov. 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	Jan. 1, 2019
80392	143	X Lights on Barricades	Jan. 1, 2018	
80336		Longitudinal Joint and Crack Patching	April 1, 2014	April 1, 2016
80411		Luminaires, LED	April 1, 2019	
80393	145	X Manholes, Valve Vaults, and Flat Slab Tops	Jan. 1, 2018	Mar. 1, 2019
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
* 80412		Obstruction Warning Luminaires, LED	Aug. 1, 2019	
80349	147	X Pavement Marking Blackout Tape	Nov. 1, 2014	April 1, 2016
80371	149	X Pavement Marking Removal	July 1, 2016	
80390	150	X Payments to Subcontractors	Nov. 2, 2017	
80389	151	X Portland Cement Concrete	Nov. 1, 2017	
80359		Portland Cement Concrete Bridge Deck Curing	April 1, 2015	Nov. 1, 2017



<u>File Name</u>	<u>Pg.</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80300		Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	April 1, 2016
80328	152	X Progress Payments	Nov. 2, 2013	
34261		Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	153	X 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, 2019
80407	155	X Removal and Disposal of Regulated Substances	Jan. 1, 2019	
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
80408		Steel Plate Beam Guardrail Manufacturing	Jan. 1, 2019	
* 80413		Structural Timber	Aug. 1, 2019	
80397	167	X Subcontractor and DBE Payment Reporting	April 2, 2018	
80391	168	X Subcontractor Mobilization Payments	Nov. 2, 2017	April 1, 2019
* 80317		Surface Testing of Hot-Mix Asphalt Overlays	Jan. 1, 2013	Aug. 1, 2019
80298	169	X Temporary Pavement Marking	April 1, 2012	April 1, 2017
20338		Training Special Provision	Oct. 15, 1975	
80403		Traffic Barrier Terminal, Type 1 Special	Nov. 1, 2018	
80409	172	X Traffic Control Devices – Cones	Jan. 1, 2019	
80410		Traffic Spotters	Jan. 1, 2019	
80318		Traversable Pipe Grate for Concrete End Sections	Jan. 1, 2013	Jan. 1, 2018
80288	173	X Warm Mix Asphalt	Jan. 1, 2012	April 1, 2016
80302	175	X Weekly DBE Trucking Reports	June 2, 2012	April 2, 2015
* 80414		Wood Fence Sight Screen	Aug. 1, 2019	
80071	176	X Working Days	Jan. 1, 2002	

The following special provisions are in the 2019 Supplemental Specifications and Recurring Special Provisions.

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location(s)</u>	<u>Effective</u>	<u>Revised</u>
80382	Adjusting Frames and Grates	Articles 602.02(s) and (t), 1043.04, and 1043.05	April 1, 2017	
80366	Butt Joints	Article 406.08(c)	July 1, 2016	
80386	Calcium Aluminate Cement for Class PP-5 Concrete Patching	Article 1001.01(e)	Nov. 1, 2017	
80396	Class A and B Patching	Articles 442.06(a)(1) and (2)	Jan. 1, 2018	Nov. 1, 2018
80377	Portable Changeable Message Signs	Articles 701.20(h) and 1106.02(i)	Nov. 1, 2016	April 1, 2017
80385	Portland Cement Concrete Sidewalk	Article 424.12	Aug. 1, 2017	

The following special provision has been deleted from use.

<u>File Name</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80376	Hot-Mix Asphalt – Tack	Nov. 1, 2016	
80401	Portland Cement Concrete Pavement Connector for Bridge Approach Slab	Aug. 1, 2018	

## **STATE OF ILLINOIS**

### **SPECIAL PROVISIONS**

The following Special Provisions supplement the “Standard Specifications for Road and Bridge Construction” adopted April 1<sup>st</sup>, 2016 (hereinafter referred to as the Standard Specifications); the latest edition of the “Illinois Manual on Uniform Traffic Control Devices for Streets and Highways” in effect on the date of invitation for bids; and the “Supplemental Specifications and Recurring Special Provisions” indicated on the check sheet provided herein, all of which apply to and govern the construction of

Prospect Avenue  
Ann Street to Burlington Avenue  
Section: 16-00045-00-MS  
Project No.: PKDA(808)  
Job No.: C-91-332-19  
Contract No.: 61F85  
DuPage County

In case of conflict with any part or parts of said documents, these Special Provisions shall take precedence and shall govern.

### **LOCATION OF PROJECT**

The improvement is located in the Village of Clarendon Hills, DuPage County. The Project starts just north of the Prospect/Railroad/Ann Street intersection and the north side of the BNSF Railroad tracks and proceeds north to a point just north of Burlington Avenue. The project also includes Burlington Avenue from Prospect Avenue to Golf Avenue and Golf Avenue north of Burlington Avenue. The total gross and net length of the improvement is 645.5 feet (0.12 miles).

### **DESCRIPTION OF PROJECT**

The work consists of pavement resurfacing, pavement patching, pavement widening, curb and gutter, drainage structures, storm sewer, sidewalk, ADA ramps, pavement markings, signing, streetscape elements, benches, trash receptacles, new and relocated street lights, landscaping, plazas, other streetscape elements, along with all incidental and collateral work necessary to complete the project as shown on the plans and as described herein.

## **CONTRACTOR COOPERATION**

It is anticipated that this contract will be constructed concurrently with other projects in the same area. The projects that may be under contract concurrent with this project is as follows:

### ***Metra Station Improvement Project***

The Contractor shall schedule their work in order to minimize any conflicts that may arise between contracts as specified in Article 105.08 of the Standard Specifications. No additional compensation will be allowed for delays or inconveniences resulting from activities of other contractors.

## **REMOVAL OF MISCELLANEOUS ITEMS**

The Contractor shall, with the approval of the Engineering, remove and dispose of existing fences, gates, signs (except traffic signs) concrete, brush or other miscellaneous items which may interfere with the proposed construction, and are not paid for separately. These items shall be removed and disposed of outside the limits of the right-of-way at locations provided by the Contractor, and this work shall be considered as included in the cost of Earth Excavation.

Any existing features and appurtenances that are to remain and are damaged or removed by the Contractor shall be repaired or replaced by the Contractor at his/her expense.

## **REMOVAL OF EXISTING PAVEMENT AND APPURTENANCES**

When portions of existing pavements or appurtenances are to remain in place, or adjacent existing pavements or appurtenances are to remain in place, the Contractor shall form a perpendicular straight joint by full-depth machine sawing at the ends and all edges of portions to be removed to prevent surface spalling when the existing pavement or appurtenance is removed. Any damage to the existing pavement or appurtenance to remain in place shall be repaired or removed and replaced by the Contractor at his/her own expense, as directed by the Engineer. This work will not be measured or paid for separately, but shall be considered included in the item being removed.

## **PROTECTION OF EXISTING TREES**

The Contractor shall be responsible for taking measures to minimize damage to the tree limbs, tree trunks, and tree roots at each work site. All such measures shall be included in the contract price for other work except that payment will be made for TEMPORARY FENCE and TREE ROOT PRUNING.

All work, materials and equipment shall conform to Section 201 and 1081 of the Standard Specifications except as modified herein.

### **A. Tree Trimming:**

1. All tree branches that are less than 12 feet above the surface of the trail shall be removed by the Contractor. The Contractor shall perform the work in accordance

with Article 201.05(c) for woody plant maintenance, tree care operations pruning, trimming, repairing, maintaining and removing trees and cutting brush. This work shall be included in the cost of mobilization and will not be paid for as separate items.

B. Earth Saw Cut of Tree Roots (Root Pruning):

1. Whenever proposed excavation falls within a drip-line of a tree, the Contractor shall:
  - a. Root prune 6-inches behind and parallel to the proposed edge of trench a neat, clean vertical cut to a minimum depth directed by the Engineer through all affected tree roots.
  - b. Root prune to a maximum width of 4-inches using a "Vermeer" wheel, or other similar machine. Trenching machines will not be permitted.
  - c. Exercise care not to cut any existing utilities.
  - d. If during construction it becomes necessary to expose tree roots which have not been pre-cut, the Engineer shall be notified and the Contractor shall provide a clean, vertical cut at the proper root location, nearer the tree trunk, as necessary, by means of hand-digging and trimming with chain saw or hand saw. Ripping, shredding, shearing, chopping or tearing will not be permitted.
  - e. Top Pruning: When thirty percent (30%) or more of the root zone is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.
2. Whenever curb and gutter is removed for replacement, or excavation for removal of or construction of a structure is within the drip line/root zone of a tree, the Contractor shall:
  - a. Root prune 6-inches behind the curbing so as to neatly cut the tree roots.
  - b. Depth of cut shall be 12 inches for curb removal and replacement and 24 inches for structural work. Any roots encountered at a greater depth shall be neatly saw cut at no additional cost.
  - c. Locations where earth saw cutting of tree roots is required will be marked in the field by the Engineer.
3. All root pruning work is to be performed through the services of a licensed arborist to be approved by the Engineer.

Root pruning will be paid for at the contract unit price each for TREE ROOT PRUNING, which price shall be payment for all labor, materials and equipment.

Tree limb pruning will be paid for at the contract unit price per each for TREE PRUNING (1 TO 10 INCH DIAMETER) and/or TREE PRUNING (OVER 10 INCH DIAMETER), price shall include labor, materials, and equipment.

C. Temporary Fence:

1. The Contractor shall erect a temporary fence around all trees within the construction area to establish a "tree protection zone" before any work begins or any material is delivered to the jobsite. No work is to be performed (other than root pruning), materials stored or vehicles driven or parked within the "tree protection zone".
2. The exact location and establishment of the "tree protection zone" fence shall be approved by the Engineer prior to setting the fence.
3. The fence shall be erected on three sides of the tree at the drip-line of the tree or as determined by the Engineer.
4. All work within the "tree protection zone" shall have the Engineer's prior approval. All slopes and other areas not regarded should be avoided so that unnecessary damage is not done to the existing turf, tree root system ground cover.
5. The grade within the "tree protection zone" shall not be changed unless approved by the Engineer prior to making said changes or performing the work.

The fence shall be similar to wood lath snow fence (48 inches high), plastic poly-type or and other type of highly visible barrier approved by the Engineer. This fence shall be properly maintained and shall remain up until final restoration, unless the Engineer directs removal otherwise. Tree fence shall be supported using T-Post style fence posts. **Utilizing re-bar as a fence post will not be permitted.**

Temporary fence will be paid for at the contract unit price per foot for TEMPORARY FENCE, which price shall include furnishing, installing, maintaining, and removing.

D. Tree Limb Pruning:

1. The Contractor shall inspect the work site in advance and arrange with the Roadside Development Unit (847.705.4171) to have any tree limbs pruned that might be damaged by equipment operations at least one week prior to the start of construction. Any tree limbs that are broken by construction equipment after the initial pruning must be pruned correctly within 72 hours.
2. Top Pruning: When thirty percent (30%) or more of the root zone of a tree is pruned, an equivalent amount of the top vegetative growth or the plant material shall be pruned off within one (1) week following root pruning.

Tree limb pruning will be paid for at the contract unit price per each for TREE PRUNING (1 TO 10 INCH DIAMETER) and/or TREE PRUNING (OVER 10 INCH DIAMETER), price shall include labor, materials, and equipment.

E. Removal of Driveway Pavement and Sidewalk:

1. In order to minimize the potential damage to the tree root system(s), the Contractor will not be allowed to operate any construction equipment or machinery within the "tree protection zone" located between the curb or edge of pavement and the right-of-way property line.
2. Sidewalk to be removed in the areas adjacent to the "tree protection zones" shall be removed with equipment operated from the street pavement. Removal equipment shall be Gradall (or similar method), or by hand or a combination of these methods. The method of removal shall be approved by the Engineer prior to commencing any work.
3. Any pavement or pavement related work that is removed shall be immediately disposed of from the area and shall not be stockpiled or stored within the parkway area under any circumstances.

F. Backfilling:

1. Prior to placing the topsoil and/or sod, in areas outside the protection zone, the existing ground shall be disked to a depth no greater than one (1"), unless otherwise directed by the Engineer. No grading will be allowed within the drip-line of any tree unless directed by the Engineer.

G. Damages:

1. In the event that a tree not scheduled for removal is injured such that potential irreparable damage may ensue, as determined by the Roadside Development Unit, the Contractor shall be required to remove the damage tree and replace it on a three to one (3:1) basis, at his own expense. The Roadside Development Unit will select replacement trees from the pay items already established in the contract.
2. The Contractor shall place extreme importance upon the protection and care of trees and shrubs which are to remain during all times of this improvement. It is of paramount importance that the trees and shrubs which are to remain are adequately protected by the Contractor and made safe from harm and potential damage from the operations and construction of this improvement. If the Contractor is found to be in violation of storage or operations within the "tree protection zone" or construction activities not approved by the Engineer, a penalty shall be levied against the Contractor with the monies being deducted from the contract. The amount of the penalty shall be two hundred fifty dollars (\$250.00) per occurrence per day.

## **EROSION CONTROL BLANKET**

Description: Work shall be performed in accordance with Section 251 of the Standard Specifications for Road and Bridge Construction and subsequent special provisions.

Contractor will be required to install erosion control blanket in the areas receiving 'Wetland Type Perennial Plants'. The erosion control blanket shall be a machine-produced mat of 70% agricultural straw and 30% coconut fiber with a functional longevity of up to 18 months. The blanket shall be of consistent thickness with the straw and coconut evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with a 100% biodegradable woven natural organic fiber netting. The netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands to form an approximate 0.50 x 1.0 in. (1.27 x 2.54 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

Location: Blanket is only required where 'Perennial Plants, Wetland Type' are being installed. Refer to contract drawings for locations.

Method of Measurement: EROSION CONTROL BLANKET will be measured per square yard.

Basis of Payment: EROSION CONTROL BLANKET will be paid for at the contract unit price per square yard. This shall include all labor, materials, equipment for all work involved installing the erosion control blanket.

## **PAVEMENT IMPRINTING**

Description: This work shall consist of the layout and imprinting of a crosswalk pattern, as shown on the details, into the street surface course using TrafficPatterns XD an imprinted aggregate reinforced preformed thermoplastic pavement marking system.

Construction Requirements: The product shall be installed per the latest revision of the manufacturer's application procedures. The project specifications and procedures shall be an imprinted aggregate reinforced preformed thermoplastic pavement marking system TrafficPatterns XD.

The color shall be 'Santa Fe' and the pattern shall be herringbone with a soldier bond course. The white lines on the outside of the crosswalk shall be a preformed thermoplastic material.

Method of Measurement: This work will be measured for payment in place and the area calculated in square yards.

Basis of Payment: This work will be measured for payment at the contract unit price per square yard for PAVEMENT IMPRINTING, complete and in place, which price shall include all costs to furnish, transport, and place all materials required including all specified preformed thermoplastic.

### **BENCH REMOVAL**

This item consists of the removal and disposal of existing benches from the locations shown in the plans. The bench and any connecting hardware to the foundation or sidewalk including bolts shall be removed in their entirety. Holes or excavations resulting from the removal operation shall be backfilled with suitable material and compacted to the satisfaction of the Engineer.

BENCH REMOVAL, shall be measured per each, and shall be paid for at the contract unit price per each, measured as specified, which payment shall constitute full compensation for removal and disposal of existing benches and accessories, including hardware; backfilling and compacting the resulting holes or excavations; and furnishing all materials, labor, equipment, tools, necessary to complete the work as specified. Removal of the underlying sidewalk or concrete pad shall be paid for as BENCH REMOVAL.

### **BRICK WALL REMOVAL**

This item consists of the removal and disposal of existing stone and/or brick walls at the locations shown in the plans. The stone blocks or bricks shall be removed in their entirety including any located below grade. The removal shall also include any foundation that the wall rests upon. Railings mounted on the wall shall also be removed along with any connecting hardware. Holes or excavations resulting from the removal operation shall be backfilled with suitable material and compacted to the satisfaction of the Engineer.

BRICK WALL REMOVAL, shall be measured per foot, and shall be paid for at the contract unit price per foot, measured as specified, which payment shall constitute full compensation for removal and disposal of existing stone block or brick walls, foundations, railings, and hardware; backfilling and compacting the resulting holes or excavations; and furnishing all materials, labor, equipment, tools, necessary to complete the work as specified.

### **REMOVE EXISTING BUMPER BLOCKS**

This item consists of the removal and disposal of existing vehicle bumper blocks at the locations shown in the plans. The bumper blocks shall be removed in their entirety including any connecting pins attaching them to the pavement. The bumper blocks shall be disposed of by the Contractor.

REMOVE EXISTING BUMPER BLOCKS, shall be measured per each, and shall be paid for at the contract unit price per each, measured as specified, which payment shall constitute full compensation for removal and disposal of existing vehicle bumper blocks and pavement pins; and furnishing all materials, labor, equipment, tools, necessary to complete the work as specified.



## **BUMPER BLOCKS**

This item consists of the placement of vehicle bumper blocks at the locations shown in the plans. The bumper blocks shall be one piece concrete blocks approved by the Engineer. The blocks shall be connected to the pavement with one foot long steel rods placed flush with the top of the precast holes in the blocks.

BUMPER BLOCKS, shall be measured per each, and shall be paid for at the contract unit price per each, measured as specified, which payment shall constitute full compensation for supplying and installing bumper blocks and pavement pins; and furnishing all materials, labor, equipment, tools, necessary to complete the work as specified.

## **COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT**

This work shall be performed according to the details shown on the plans and the applicable sections of Section 440 and Section 606 of the Standard Specifications.

All paved surfaces adjacent to the curbs and curb and gutters to be removed shall be saw cut to prevent damage to the pavement during removal operations unless otherwise shown to be removed. Any bituminous surface replacement of existing surface to remain shall be included in the cost of this item. A depressed or barrier curb and gutter shall be installed as shown on the details and shall conform to the dimensions of the existing curb and gutter.

Basis of Payment: This work shall be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT.

## **LIGHTING UNIT A, COMPLETE**

Description. This item shall consist of furnishing, testing as required, and installing a complete assembly of landscape lighting, mounting, concrete foundation, and luminaires suitable for exterior lighting as specified herein.

General. The lighting fixture, base, anchor base, luminaire mounting, luminaries shall be a complete assembly and designed and installed as indicated on the plans.

Luminaire The luminaire shall be Ecosense F170 series for exterior building lighting as shown on the fixture schedules.

Finish The luminaries and bracket arm assembly shall all be painted black using a powder coat paint process. The paint finish procedures shall be submitted with catalog cuts at the time of contract award.

Warranty Five-year limited warranty.

Listings UL listed, suitable for wet locations.

Method of Measurement. The assembly furnished and installed will be measured as each. Basis of Payment. This item shall be paid at the contract unit price each for LIGHTING UNIT A, COMPLETE, which shall be payment in full for the material and work described herein.

### **LIGHTING UNIT B, COMPLETE**

Description. This item shall consist of furnishing, testing as required, and installing a complete assembly of exterior lighting, mounting, concrete foundation, and luminaires suitable for exterior lighting as specified herein.

General. The lighting fixture, base, anchor base, luminaire mounting, luminaries shall be a complete assembly and designed and installed as indicated on the plans.

Luminaire The luminaire shall be Ecosense F080 series for exterior flag lighting as shown on the fixture schedules.

Finish The luminaries and bracket arm assembly shall all be painted black using a powder coat paint process. The paint finish procedures shall be submitted with catalog cuts at the time of contract award.

Warranty Five-year limited warranty.

Listings UL listed, suitable for wet locations.

Method of Measurement. The assembly furnished and installed will be measured as each. Basis of Payment. This item shall be paid at the contract unit price each for LIGHTING UNIT B, COMPLETE, which shall be payment in full for the material and work described herein.

### **LIGHTING UNIT C, COMPLETE**

Description. This item shall consist of furnishing, testing as required, and installing a complete assembly of exterior lighting, mounting, concrete foundation, and luminaires suitable for exterior lighting as specified herein.

General. The lighting fixture, base, anchor base, luminaire mounting, luminaries shall be a complete assembly and designed and installed as indicated on the plans.

Luminaire The luminaire shall be Ecosense F170 series for exterior monument lighting as shown on the fixture schedules.

Finish The luminaries and bracket arm assembly shall all be painted black using a powder coat paint process. The paint finish procedures shall be submitted with catalog cuts at the time of contract award.

Warranty Five-year limited warranty.

Listings UL listed, suitable for wet locations.

Method of Measurement. The assembly furnished and installed will be measured as each. Basis of Payment. This item shall be paid at the contract unit price each for LIGHTING UNIT C, COMPLETE, which shall be payment in full for the material and work described herein.

### **LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 200 AMP**

Description: This work will consist of furnishing and installing Stainless Steel Weatherproof cabinet with time clock and circuit breakers as shown in drawings for lighting and receptacles as indicated on the plans and diagrams. This work shall be performed according to section 825 of the standard specifications. This work includes the concrete foundation and work pad.

Material: The cabinet shall meet all requirements of Material Specification of IDOT.

Method of Measurement: The cabinet furnished and installed will be measured as each.

Basis of Payment: This work will be paid for at the contract unit price each for LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 200 AMP. Such price will be payment in full for furnishing, installing, and testing, and will include all material, labor, necessary to complete the work as per the contract plans.

### **OUTLET SPECIAL**

Description: This work will consist of furnishing and installing GFIC 20 Amp duplex receptacle in weatherproof enclosure mounted 24 inches above grade (using uni-strut) as shown in drawings. The enclosure shall be corrosion resistant and the cover shall be per NEC 406.8.B.2.a. The installation shall be vandal proof and suitable for use only by authorized persons.

Material: The receptacle and enclosure shall meet all requirements of Material Specification of IDOT and shall be UL listed/labeled.

Method of Measurement: The receptacle furnished and installed will be measured as each.

Basis of Payment: This work will be paid for at the contract unit price each for **OUTLET SPECIAL**. Such price will be payment in full for furnishing, installing, and testing, and will include all material, labor, necessary to complete the work as per the contract plans.

### **POWER PEDESTALS**

Description: This work will consist of furnishing and installing pedestal with (3) GFIC 20 Amp duplex receptacle in weatherproof bollard enclosure that is 36 inches high. The enclosure shall be UL listed for wet location and corrosion resistant and the cover shall be per NEC 406.8.B.2.a. The installation shall be vandal proof and suitable for use only by authorized persons.

Material: The receptacle and pedestal shall meet all requirements of Material Specification of IDOT and shall be UL listed/labeled.

Method of Measurement: The pedestal outlet with 12 inches concrete foundation furnished and installed will be measured as each.

Basis of Payment: This work will be paid for at the contract unit price each for **POWER PEDESTALS**. Such price will be payment in full for furnishing, installing, and testing, and will include all material including foundation, labor, necessary to complete the work as per the contract plans.

### **REMOVAL OF LIGHTING UNIT, SALVAGE**

Description: This work will consist of disconnecting and removing existing pole and luminaire as shown in drawings. This work shall include, but not limited to, coordinate with Village maintenance personnel, removal of luminaires, poles, all unused lighting circuit conductors, lighting controllers and seal all holes/openings as applicable. The luminaires/poles should be properly cleaned, individually boxed, labeled and returned to Village storage facility as directed. Contractor shall remove all other equipment from the site as shown on plans.

Method of Measurement: The removal will be measured as EACH.

Basis of Payment: This work will be paid for at the contract unit price per each for REMOVAL OF LIGHTING UNIT, SALVAGE. Such price will be payment in full for disconnecting, and removing, cleaning and boxing existing luminaires, and will include all material, labor, necessary to complete the work as per the contract plans.

### **REMOVE EXISTING SERVICE INSTALLATION**

Description: This work will consist of disconnecting and removing existing electrical service installations as shown in drawings. This work shall include, but not limited to, coordination with ComEd, disconnecting existing wires, removal of existing splice boxes, removing conduit and seal all holes/openings as applicable.

Method of Measurement: The removal will be measured as each.

Basis of Payment: This work will be paid for at the contract unit price per each for REMOVE EXISTING SERVICE INSTALLATION. Such price will be payment in full for disconnecting and removing equipment, wires, and conduit, and will include all material, labor, necessary to complete the work as per the contract plans.

### **MONUMENT TYPE A**

This item consists of the relocation of a metal plaque on an existing brick and stone monument at the locations shown in the plans. The plaque shall be carefully removed and stored in a safe and secure location prior to its remounting onto a new concrete monument as shown on the plans. The existing bricks and stones shall be removed and discarded.

MONUMENT TYPE A, shall be measured per each, and shall be paid for at the contract unit price per each, which payment shall constitute full compensation for relocation of the existing plaque and remounting onto a new concrete monument, removal of the existing stone and brick

monument, construction of the new concrete monument, and furnishing all materials, labor, equipment, and tools necessary to complete the work as specified.

### **PIPE UNDERDRAINS (SPECIAL)**

Material: Pipe material shall be per Section 1040.03 (b) of the Standard Specifications except as noted below.

All PVC sewer pipes and fittings shall have a minimum acceptable Standard Dimension Ratio (SDR) or Dimension Ratio (DR) of 26. The pipe shall be made of PVC plastic, having a minimum cell classification of 12454 per ASTM D 1784, and shall have a minimum pipe stiffness of forty-six (46) lbs. per inch.

Gravity sewer pipe and fittings having diameters 6" to 15" shall be in accordance with ASTM D 3034. The joints shall be solvent cemented joints per ASTM D 2855 or flexible elastomeric seals per ASTM D3212 and F 477.

Provide four rows of perforations meeting AASHTO M278 specifications.

Method of Measurement: PIPE UNDERDRAINS (SPECIAL) will be measured on a linear foot basis horizontally from end to end in accordance with Section 31-2 of the Standard Specifications for Sewer and Water construction in Illinois. The riser portion of pipe laterals from catch basins will be measured along the horizontal length of the sewer. Fittings for laterals will not be measured separately.

Basis of Payment: This work will be paid for at the contract unit price per foot for PIPE UNDERDRAINS (SPECIAL) of the diameter specified. The unit price shall include all labor, materials, equipment and cost necessary for excavation, installation of sewer pipe, backfilling and compaction necessary to complete this item.

### **CATCH BASIN (TYPE AND SIZE SPECIFIED)**

Description: This item shall consist of furnishing and placing or constructing cast-in-place or precast concrete catch basins together with the necessary steps, frames, grates and lids as detailed in the plans at locations defined by the plan. The work shall include all labor, materials, equipment and cost necessary for excavation, installation of catch basins, backfilling and compaction necessary to complete this item.

Proposed invert elevations have been provided on the drawings. The Contractor shall be responsible for determining the size of precast flat top or cone section necessary to adjust the structure to final grade prior to beginning excavation for the structure.

Cast-in-place catch basins shall conform to detailed shop drawings submitted to the Engineer prior to the beginning of work and shall conform to the dimensional requirements specified. The materials, concrete mixture, curing process, compressive strength, and concrete base construction shall conform to Section 52-2 of the Standard Specifications for Water and Sewer Construction in Illinois.

Precast concrete catch basins, including the preformed flexible gaskets and mastic joint sealer, shall conform to Section 52-4 of the Standard Specifications for Water and Sewer Construction in Illinois.

Castings shall conform to the requirements of gray iron castings as specified in ASTM A 48. IDOT Type I frames shall be install for all catch basins. The placement of castings shall be according to Section 52-6.02 of the Standard Specifications for Water and Sewer Construction in Illinois.

A rubber boot connection conforming to ASTM C-923 shall be provided at all pipe connections to the catch basin as shown in the catch basin details.

Concrete adjusting rings shall conform to the requirements of Section 1043 of the latest edition of the IDOT Standard Specifications.

The backfill material shall be CA-6 and shall be installed in accordance with the Special Provision for TRENCH BACKFILL. The installation of backfill material shall be included in the unit price of the catch basin. All excavations shall be backfilled, whether by temporary or permanent means, by the end of each work day.

Connections from new sewers into the new catch basin structure shall be included in the cost of this item.

Basis of Payment: The furnishing and constructing of catch basins shall be per each CATCH BASIN of the type, diameter size, frame type, and lid type as specified.

## **TRENCH DRAIN**

Description: This work shall consist of the preparation; excavation; furnishing and installation of the sidewalk trench drain including concrete channel, reinforcement, trench grate and frame, and other appurtenances, as required by the plans and specifications.

Materials: Materials shall be according to the following.

Portland Cement Concrete shall be class SI per Section 1020 of the Standard Specifications.

Preformed expansion joint fillers shall be per Section 1051 of the Standard Specifications.

Trench Grate shall be cast iron meeting ASTM A48 Class 35B, AASHTO M105 Class 35B, AASHTO M306, and the Illinois Accessibility Code.

All trench grates and frames shall have text permanently cast onto the product. Frames and covers shall have the approved foundry's name, part number, country of origin, and production date for tracking purposes.

Castings shall be uniform quality, free from sand holes, gas holes, shrinkage, cracks, and other surface defects. Castings shall be ground smooth and well cleaned by shot blasting. As- cast dimensions may vary within accepted foundry tolerances as outlined in the Iron Casting Handbook published by the American Foundry Society, Inc. Nominally, casting dimensional

tolerances shall be +/- 1/16" per foot. Castings shall be provided without coatings, unless otherwise specified.

Proof load testing shall be in accordance with AASHTO M 306. Castings shall have a minimum load rating of light duty (2,500-16,000 lbs).

Open area shall be a minimum of 64 square inches.

Refer to plans for frame and other requirements.

Basis of Payment: This work will be paid for at the contract unit price per each for TRENCH DRAIN.

### **BIORETENTION SYSTEM**

Description: This work shall consist of the preparation; dewatering; excavation; furnishing and installation of bioretention soil mix, coarse aggregate, geotextile; and the installation of perforated PVC pipe underdrain, as required by the plans and specifications. The basins shall be constructed at the locations shown on the plans.

Materials: Coarse aggregate shall be open-graded crushed stone, gradation CA-7, meeting the requirements of Article 1004 of the Standard Specifications, unless otherwise specified. Aggregates shall be sound crushed stone or crushed gravel. Gravel depths shall be per the Bioretention System detail included in the plans.

Bioretention soil mix shall consist of 50% sand (IDOT FA2), 30% planting soil with minimal clay content, and 20% shredded hardwood mulch per the DuPage County Best Management Practices Manual Practice Standard 3.2.2.2 Vegetated Swale. A minimum depth of 18" of bioretention soil mix shall be used in all bioretention areas.

Non-woven geotextile, specifically manufactured as a drainage geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:

- 1) Grab Tensile Strength: 110 lbf (490 N); ASTM D 4632.
- 2) Tear Strength: 40 lbf (178 N); ASTM D 4533.
- 3) Puncture Resistance: 50 lbf (222 N); ASTM D 4833.
- 4) Water Flow Rate: 150 gpm per sq. ft. (100 L/s per sq. m); ASTM D 4491.
- 5) Apparent Opening Size: No. 50 (0.3mm); ASTM D 4751.

Execution: Bioretention areas shall be installed in all areas shown on the plans.

Excavation shall be performed in accordance with Section 202 of the IDOT Standard Specifications. Detailed grading and minimum and maximum slopes are shown in the plans and Bioretention System detail.

Do not allow water to accumulate in excavations. Remove water from excavations to prevent soil changes detrimental to the stability of subgrades. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from the site. Dewatering will not be paid for separately but shall be included in the cost of this work.

Protect bioretention areas from compaction by construction traffic and other construction activities. Stockpiling shall not be allowed in bioretention areas. Do not compact the native subgrade in bioretention areas.

Place geotextile fabric on subgrade as indicated. Place CA-7 aggregate base course in maximum 8-inch lifts. CA-7 aggregate base course shall be compacted according to AASHTO guidelines for installing open graded aggregates. CA-7 shall not be over-compacted, which may cause particle abrasion and introduction of fine material into base course. Place perforated underdrain in location and slope as indicated on the plans. Plans indicate general location and arrangement of underdrain sewer. Location and arrangement of piping layout take into account many design considerations. Install piping as indicated, to extent practical. Place geotextile fabric between CA-7 and bioretention soil mix. Place bioretention soil mix. Lightly compact by wetting or rolling. Do not roll compact wet bioretention soil.

Install erosion control measures as shown on plans. Install landscape gravel as shown on landscape plan. Install bioretention planting material as shown on plans.

CA-7 aggregate or bioretention soil contaminated by construction site runoff, sediment, or other foreign materials shall be removed and replaced at no additional expense to the Owner. After placement of amended bioretention soil, bioretention areas shall be protected from construction traffic.

Method of Measurement: This work will be measured on a square foot basis.

Basis of Payment: This work will be paid for at the contract unit price per square foot for BIORETENTION SYSTEM A and BIORETENTION SYSTEM B. All work associated with the bioretention system as shown on the plans and as described above shall be included for payment unless it is specifically included with a separate pay item.

Pipe Underdrain shall be paid for separately. Planting material and landscape gravel shall be paid for separately. See landscape plans.

## **CONCRETE STAIRS**

Description: This work shall consist of the preparation; excavation; furnishing and installation of the Concrete Stairs including Portland cement concrete, gravel base, reinforcement, and other appurtenances, as required by the plans and specifications.

Materials: Materials shall be according to the following.

Portland Cement Concrete shall be class SI per Section 1020 of the Standard Specifications.

Preformed expansion joint fillers shall be per Section 1051 of the Standard Specifications.

Epoxy-coated reinforcing bars shall meet ASTM A 775/A 775M or ASTM A 934/A 934M with ASTM A 615/A 615M, Grade 60 deformed bars.

Method of Measurement: This work will be measured for payment on a lump sum basis.



Basis of Payment: This work will be paid for at the lump sum price for CONCRETE STAIRS. All work associated with the concrete stairs as shown on the plans and as described above shall be included for payment unless it is specifically included with a separate pay item.

Pipe Handrail shall be paid for separately.

### **PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL**

Description: Work shall be performed in accordance with Section 420, 421 and 424 of the Standard Specifications for Road and Bridge Construction and subsequent special provisions except as modified herein.

This work consists of furnishing all labor, materials, tools, and equipment necessary to install integral color portland cement concrete pavement and exposed aggregate portland cement on a sub-base granular material, Type B, as shown on the Contract Plans or as directed by the Engineer.

#### Submittals:

1. Concrete Mix Designs: Certified report identifying the design mixes, mix proportions, and additional design information meeting the requirements of Section 1020 of the Standard Specifications and this special provision.
2. Prefomed Fiber Joint filler meeting the requirements of Section 1051.04 of the Standard Specifications.
3. Joint Sealant product data and color chart
4. Product Data: For each product indicated.
5. Exposed Aggregate: Submit color blend in 1-quart bag
6. Samples for Initial Selection: Manufacturer's color charts.
7. Sample Panels: 5 foot by 5 foot, sample panel to demonstrate finish, color, and texture of decorative concrete paving. Up to (5) samples shall be provided for each specialty paving.
8. Exposed aggregate portland cement concrete
9. Exposed aggregate portland cement concrete with integral color
10. Qualification Data: For Installer specified in Quality Assurance Article, including names and addresses of completed projects, Engineers, and owners.
11. Material Test Reports: From testing agency indicating compliance of concrete materials, admixtures, and similar items with requirements.

#### Quality Assurance:

1. Installer Qualifications. Qualified decorative concrete installer with a minimum of 5 years of experience installing decorative colored concrete and exposed aggregate concrete.
2. Source limitations. Obtain products from same source throughout project.
3. Mockups. Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - a. Northeast corner of Prospect Avenue and Burlington Avenue shall serve as mockup for basis of design quality and workmanship. Mockup shall include full-thickness sections of integral color portland cement concrete pavement and exposed

- aggregate concrete to demonstrate range of finishes and workmanship, typical joints, integral color; pattern and texture; and curing. Approved mockups set quality standards for comparison with remaining work. Owner and Landscape Architect to approve mockups.
- b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Engineer specifically approves such deviations in writing.
  - c. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
  - d. Mockups that are not approved shall be removed and a new mockup created until final mockup is approved by Engineer. Removal and reconstruction of mockups shall be included in cost of PORTLAND CEMENT SIDEWALK, 5" SPECIAL.
5. Pre-installation Conference. Conduct conference at Project Field Office. Review methods and procedures related to decorative concrete paving, including but not limited to the following:
- a. Concrete mixture design.
  - b. Placement procedures. Including verification of field conditions and limits of construction. Final layout and dimensions of decorative sidewalk to be reviewed and approved by Engineer prior to placement of concrete.
  - c. Quality control of concrete materials and decorative concrete paving construction practices.
  - d. Require representatives of each entity directly concerned with decorative concrete paving to attend, including the following:
    - i. Contractor's superintendent.
    - ii. Engineer
    - iii. QC testing agency responsible for concrete design mixtures.
    - iv. Ready-mix concrete manufacturer.
    - v. Manufacturer's representative of decorative concrete paving system

Admixtures:

1. Integral Concrete Colorant: Shall conform to the requirements of ACI 303.1, ASTM C979, ASTM C494 and ASSHTO M194, factory pre-measured powdered mix in self dissolving packaging, consisting of non-fading finely-ground synthetic mineral-oxide coloring pigments and water reducing wetting agent.
  - a. Manufacturers: Subject to compliance with requirements.
2. Color: To be a mid-gray. Refer to drawings for representative image. Final color shall be determined at based from poured samples. Color shown on contract documents is RGB 82,82,74.

3. Do not use calcium chloride or admixtures containing calcium chloride with coloring agents that are limeproof and ultra-violet resistant.
4. Raw pigments are not an equivalent and may not be substituted.

Curing Compound:

1. Integral Concrete Curing Compound: Curing compound shall comply with ASTM C309 and be of same manufacturer as colored admixture, for use with integrally colored concrete.
  - a. Manufacturers: Subject to compliance with requirements.

Integral Concrete Mixes:

1. The pay item's use shall determine the class of concrete in accordance with Section 1020 of the Standard Specifications, with the exception that the minimum cement factor shall be 6.05 cwt. The coarse aggregate to be used shall contain no more than two percent by weight (mass) of deleterious materials. Deleterious materials shall include substances whose disintegration is accompanied by an increase in volume which may cause spalling of the concrete. Class SI Concrete shall conform to article 1020.04 of the Standard Specifications for Road and Bridge Construction, and as follows:
2. All admixtures proposed in the concrete mix shall be coordinated with decorative concrete manufacture's requirements.
3. Add integral concrete colorant according to manufacturer's instructions.
4. Maintain mix characteristics for all concrete required to have matching finish.

Exposed Aggregate:

1. Selected, hard, and durable; washed; free of materials with deleterious reactivity to cement or that cause staining; from a single source, with gap-graded coarse aggregate as follows:
  - a. Size: 1/8" to 3/4" diameter range.
  - b. Shape: Rough edge
  - c. Color: Shall be 40/40/20 mix of charcoal, whites, and mid grays. Refer to drawings for representative image. Final color shall be determined from the manufacturer's full range of colors and mockup installation.

Placing Of Concrete: Placing of concrete will be in accordance with Section 424.06 of the Standard Specifications for Road and Bridge Construction. Do not add water once placing has begun. Do not re-tamp concrete that has started to set. After placing and initial bull-floating, no further finishing should be performed until the bleed water has dissipated, after which final finishing can take place.

Finish: All exposed surfaces of PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL shall be a sand blast. Finishing techniques must be consistent. Differing finishing techniques will change the appearance of the color.

Allow concrete to cure to sufficient strength so that it will not be damaged by blasting but not less than seven days. Use light or medium sandblasting to surfaces as indicated on the plans to remove cement mortar from surface and expose aggregate to match originally approved mockup and example in contract documents.

1. Blasting Operations and Requirements:
  - a. Repair and patch tie holes and defective areas. Remove fins and other projections.
  - b. Apply sandblasted finish to all surfaces of concrete to view in finished project.
  - c. Perform sandblasting at least 72 hours after placement of concrete and compressive strength of concrete exceeds 2000 psi. Coordinate with formwork construction, concrete placement schedule, and formwork removal to ensure that surfaces to be blast finished are blasted at the same age for uniform results.
  - d. Determine type of nozzle, nozzle pressure, and blasting techniques required to achieve specified finish.
  - e. Abrasive blast corners and edge of patterns carefully, using back-up boards, to maintain uniform corner or edge line.
2. Depth of Cut: use an abrasive grit of proper type and gradation to expose aggregate and surrounding matrix surface to achieve specified finish as follows:
  - a. Medium Sand Blast Finish: Expose coarse aggregate with a minimum 3/16" and maximum 1/4" reveal
3. Treating Surface Imperfections:
  - a. Mix patching compound or grout material with dust created by grinding operations, manufacturer's tint, or sand to match color of adjacent concrete surfaces.
  - b. Fill surface imperfections including, but not limited to, holes, surface damage, small and micro cracks, air holes, pop-outs, and voids with grout to eliminate micro pitting in finished work.
  - c. Work compound and treatment until color differences between concrete surface and filled surface imperfections are not reasonably noticeable when viewed from 10 feet away under lighting conditions that will be present after construction.

Joints: The pavement joints shall be tooled with edger no less than 1/4" deep and have 1/4" radius. The Contractor shall provide a working field drawing depicting the locations of all staging and construction joints to the Engineer for review and approval prior to placement of concrete. Both the staging and construction joints shall conform to the scoring pattern as shown on the drawings and/or in accordance with the standard specifications. The joint pattern shall be established and approved by the Engineer prior to pouring of the concrete. 3/4 in (20 mm) thick expansion joints shall also occur between pavement and curbs, walls, structures, integral color concrete and footings.

Expansion Joints: Expansion joints shall be in accordance with Section 424.07 of the Standard Specifications for Road and Bridge Construction and as shown on the plans. Joint sealer shall be self-leveling cold-poured joint sealer with performance complying with the following products: Sealant color shall match the color of PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL. Sealant color shall be selected by the Engineer from the manufacturer's available colors.

Field Quality Control: Remove and replace concrete which does not satisfy the performance requirements of specification included in contract, which does not conform to grades and profiles shown on the Drawings, contains cracks, spalling or other defects which impairs the

strength, safety or appearance of the work, or has been damaged or discolored during construction. Protect the Work from damage until accepted.

The contractor is responsible for protecting fresh concrete. Any damage to the new sidewalk from graffiti, footsteps, rain, etc. should be corrected immediately. No payment for the sidewalk will be made until the corrections are made. All corrections including removal and replacement will be at the contractor's expense. Skim patches, grinding, and cover coats will not be permitted as an acceptable means for repairing defects in concrete finish.

Method of Measurement: PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL shall be measured in place in square feet of paving. SUB-BASE GRANULAR MATERIAL, TYPE B 6" shall be measured installed per square yard.

Basis of Payment: PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL shall be paid for at the contract unit price, which price shall include payment for mock ups, joints including bituminous preformed joint filler with joint sealant, furnishing and installing all required concrete including integral color, aggregate, earth excavation, and backfill as required to perform the work as specified herein. SUB-BASE GRANULAR MATERIAL, TYPE B shall be paid for separately.

### **PIPE HAND RAIL, SPECIAL**

Description: Work shall be performed in accordance with Section 509 of the Standard Specifications for Road and Bridge Construction and subsequent special provisions except as modified herein.

Add the following to 509.04

Contractor must submit shop drawing as stated in Article 505.03. Contractor shall further note individual shop drawings are required for all sections of handrail.

1. South stairs
2. North stairs
3. Sidewalk adjacent to building

Submit one (1) sample, approximately 4-inches long, of rails and picket having proposed finish system. Sample shall include texturized handrail.

Delete Article 509.05 (d)

### **Materials**

Refer to drawings for design intent.

Posts: 1.5" square steel by 12 gauge

Rails: 1" square steel by 12 gauge

Pickets" ¾" square

Color: Powdercoated black with coating

### **Fabrication:**

Fabricate of welded construction, to forms and profiles indicated.

Fabricate true to line and square with accurate angles and surfaces and straight edges. Weld corners and seams continuously, complying with AWS recommendations using MIG or TIG welding process. Grind exposed welds smooth and flush to match and blend with adjoining surfaces

Fabricate joints in a manner to exclude water or provide weep holes where water may accumulate

Finish:

1. Blast fabricated assemblies and accessories to near white no more than 8 hours prior to the coating process. Clean in a heated two-stage process including spray washing and cleaning, utilizing a total immersion cleaning process each stage utilizing a heated alkaline cleaner to remove all grease, dirt or other contaminants
2. Rinse by totally immersing assemblies and assemblies in a continuously overflowing rinse tank and then totally immerse in a continuously overflowing conditioner to prepare surface for coating.

Coating:

1. Totally immerse assemblies and accessories in a heated zinc phosphate solution.
2. Rinse by total immersion in a continuously overflowing rinse tank to remove excess zinc phosphate solution.
3. Totally immerse in a continuously overflowing tank containing cathodic epoxy heavy metal free cationic electrode position coating. Rinse by total immersion in a continuously overflowing tank to remove excess coat solution. Handrail portion shall be texturized to provide grip when holding rail.
4. Final rinse, dry, and inspect each assembly and accessory
5. Apply two uniform color coats by polyester TGIC powder coating by means of electrostatic deposition to a total thickness of 8 mils.
6. Apply a final coat of clear UV stabilized polyester TGIC powder coating.
  - a. Between each of the powder coats, cure by heating to the manufacturer's recommended temperature and hold until the cure is complete. Monitor temperature in the curing oven so that the temperature held within the coating manufacturers recommended temperature range.

Mounting:

Posts shall be cored into concrete, minimum 3" embedment. Apply epoxy non-shrink grout to fill voids. Grout shall match color of concrete.

Method of Measurement: PIPE HANDRAIL, SPECIAL will be measured per FOOT.

Basis of Payment: PIPE HANDRAIL SPECIAL will be paid for at the contract unit price per foot. This shall include all labor, materials, equipment for all work involved installing pipe handrails.

## **BENCHES**

Description: Provide materials and labor for the installation of cast stone benches as indicated on the drawings and specified herein.

### Submittals

Product Data: For each type of product indicated.

For cast stone units, include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

Concrete Mix Designs: Certified report identifying the design mixes, mix proportions, and additional design information.

Samples for Initial Selection: Manufacturer's color charts.

Shop Drawings: Show fabrication and installation details for cast stone units. Include dimensions, details of reinforcement and anchorages if any, and indication of finished faces.

Include elevations showing layout of units and locations of joints and anchors.

### Samples:

Samples for Initial Selection: For colored mortar.

Samples for Verification:

1. For each color and texture of cast stone required, **10 inches** square in size. Contractor should assume (5) different samples for final color/finish selection.
2. For colored mortar. Make Samples using same sand and mortar ingredients to be used on Project. Label Samples to indicated types and amounts of pigments used.
3. Full-Size Samples: For each color texture and shape of cast stone unit required after color/finish section has been made. Approved Samples may be installed in the Work.
4. Make available for Architect's review at Project site or at manufacturing plant, if acceptable to Architect.

Qualification Data: For manufacturer.

Include copies of material test reports for completed projects, indicating compliance of cast stone with ASTM C 1364.

Material Test Reports: For each mix required to produce cast stone, based on testing according to ASTM C 1364, including test for resistance to freezing and thawing.

Provide test reports based on testing within previous two years.

### Quality Assurance

Manufacturer Qualifications: A qualified manufacturer of cast stone units similar to those indicated for this Project, that has sufficient production capacity to manufacture required units, and is a plant certified by the Cast Stone Institute the Architectural Precast Association or the Precast/Prestressed Concrete Institute for Group A, Category AT.

Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

Source Limitations for Cast Stone: Obtain cast stone units through single source from single manufacturer.

Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color, from one manufacturer for each cementitious component and from one source or producer for each aggregate.

Pre-installation/fabrication Conference: Conduct conference at site to review methods and procedures related to Cast Stone Masonry, including but not limited to the following:

Concrete mixture design  
Final color selection and finish  
Field measurements and product placement  
Quality control of concrete materials and construction practices

Delivery, Storage, And Handling

Coordinate delivery of cast stone to avoid delaying the Work and to minimize the need for on-site storage.

Pack, handle, and ship cast stone units in suitable packs or pallets.

Lift with wide-belt slings; do not use wire rope or ropes that might cause staining. Move cast stone units, if required, using dollies with wood supports.

Store cast stone units on wood skids or pallets with nonstaining, waterproof covers, securely tied. Arrange to distribute weight evenly and to prevent damage to units. Ventilate under covers to prevent condensation.

Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

Store mortar aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

Project Conditions

Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Comply with cold-weather construction requirements in ACI 530.1/ASCE 6/TMS 602.

Hot-Weather Requirements: Comply with hot-weather construction requirements in ACI 530.1/ASCE 6/TMS 602.

Cast Stone Materials

General: Comply with ASTM C 1364 and the following:

Portland Cement: ASTM C 150, Type I or Type III, containing not more than 0.60 percent total alkali when tested according to ASTM C 114. Provide white cement as required to produce cast stone color indicated.



Coarse Aggregates: ½” to ¼” gray limestone complying with ASTM C 33; gradation and colors as needed to produce required cast stone textures and colors.

Fine Aggregates: White silica sand complying with ASTM C 33, gradation and colors as needed to produce required cast stone textures and colors.

Color Pigment: Gray color. (RGB Color 82, 82, 74) ASTM C 979, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, free of carbon black, nonfading, and resistant to lime and other alkalis. Color to be approved by Engineer as coordinated with Owner’s Representative and Landscape Architect. Refer to contract drawings for color example.

Admixtures: Use only admixtures specified or approved in writing by Architect.

Do not use admixtures that contain more than 0.1 percent water-soluble chloride ions by mass of cementitious materials. Do not use admixtures containing calcium chloride.

Use only admixtures that are certified by manufacturer to be compatible with cement and other admixtures used.

Air-Entraining Admixture: ASTM C 260. Add to mixes for units exposed to the exterior at manufacturer’s prescribed rate to result in an air content of 4 to 6 percent, except do not add to zero-slump concrete mixes.

Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

Water-Reducing, Retarding Admixture: ASTM C 494/C 494M, Type D.

Water-Reducing, Accelerating Admixture: ASTM C 494/C 494M, Type E.

Reinforcement: Deformed steel bars complying with ASTM A 615/A 615M, **Grade 60**. Use galvanized or epoxy-coated reinforcement when covered with less than **1-1/2 inches** of cast stone material.

Epoxy Coating: ASTM A 775/A 775M.

Galvanized Coating: ASTM A 767/A 767M.

Embedded Anchors and Other Inserts: Fabricated from stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666, Type 304.

#### Cast Stone Units

Provide cast stone units complying with ASTM C 1364 using either the vibrant dry tamp or wet-cast method.

Provide units that are resistant to freezing and thawing as determined by laboratory testing according to ASTM C 666/C 666M, Procedure A, as modified by ASTM C 1364.

Fabricate units with sharp arris and accurately reproduced details, with indicated texture on all exposed surfaces unless otherwise indicated.

Slope exposed horizontal surfaces 1:12 to drain unless otherwise indicated.

Provide drips on projecting elements unless otherwise indicated.

Skate deterrents shall be cast into place – refer to contract drawings for details.

Fabrication Tolerances:

Variation in Cross Section: Do not vary from indicated dimensions by more than **1/8 inch**.

Variation in Length: Do not vary from indicated dimensions by more than 1/360 of the length of unit or **1/8 inch**, whichever is greater, but in no case by more than **1/4 inch**.

Warp, Bow, and Twist: Not to exceed 1/360 of the length of unit or **1/8 inch**, whichever is greater.

Location of Grooves, False Joints, Holes, Anchorages, and Similar Features: Do not vary from indicated position by more than **1/8 inch** on formed surfaces of units and **3/8 inch** on unformed surfaces.

Cure units as follows:

Cure units in enclosed moist curing room at 95 to 100 percent relative humidity and temperature of **100 deg F** for 12 hours or **70 deg F** for 16 hours.

Keep units damp and continue curing to comply with one of the following:

No fewer than five days at mean daily temperature of **70 deg F** or above.

No fewer than six days at mean daily temperature of **60 deg F** or above.

No fewer than seven days at mean daily temperature of **50 deg F** or above.

No fewer than eight days at mean daily temperature of **45 deg F** or above.

Acid etch units after curing to remove cement film from surfaces to be exposed to view.

Colors and Textures: Provide units with fine-grained texture and gray color. Color to be approved by Owner's Representative and Landscape Architect by physical sample.

Mortar Materials

Provide mortar materials that comply standard Masonry specifications for mortar.

Mortar Cement: ASTM C 1329.

Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979. Use only pigments with a record of satisfactory performance in masonry mortar.

Aggregate for Mortar: ASTM C 144.

For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.

For joints less than **1/4 inch** thick, use aggregate graded with 100 percent passing the **No. 16** sieve.

Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

Water: Potable.

#### Accessories

Anchors: Type and size indicated, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.

Dowels: **1/2-inch** diameter, round bars, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.

Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cast stone manufacturer and expressly approved by cleaner manufacturer for use on cast stone and adjacent masonry materials.

#### Mortar Mixes

Do not use admixtures including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

Do not use calcium chloride in mortar or grout.

Use mortar cement mortar unless otherwise indicated.

Comply with ASTM C 270, Proportion Specification.

For setting mortar, use Type S.

Pigmented Mortar: Use colored cement product – color to match bench

Pigments shall not exceed 5 percent of mortar cement by weight.

Mortar color to match the cast masonry stone units.

Application: Use pigmented mortar for exposed mortar joints.

#### Setting Bed

Thickened Portland cement concrete slab underlay cast masonry units, refer to drawings for thickness. This shall be included in the cost of the bench.

Portland cement concrete to match standard requirements.

#### Examination

Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

Proceed with installation only after unsatisfactory conditions have been corrected.

#### Setting Anchored Cast Stone

Set cast stone as indicated on Drawings. Set units accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.

Install anchors, supports, fasteners, and other attachments indicated or necessary to secure units in place.

Set cast stone supported on clip or continuous angles on resilient setting shims. Use material of thickness required to maintain uniform spacing.

Benches shall be set on thickened concrete edge with ½" threaded stainless steel dowel set in epoxy. Cost of thickened concrete walk edge shall be included in the cost of the bench.

#### Installation Tolerances

Variation from Plumb: Do not exceed **1/8 inch in 10 feet** maximum.

Variation from Level: Do not exceed **1/8 inch in 10 feet** maximum.

Variation in Plane between Adjacent Surfaces (Lipping): Do not vary from flush alignment with adjacent units or adjacent surfaces indicated to be flush with units by more than **1/16 inch**, except where variation is due to warpage of units within tolerances specified.

#### Adjusting and Cleaning

Remove and replace stained and otherwise damaged units and units not matching approved Samples. Cast stone may be repaired if methods and results are approved by Architect.

Replace units in a manner that results in cast stone matching approved Samples, complying with other requirements, and showing no evidence of replacement.

In-Progress Cleaning: Clean cast stone as work progresses.

Remove mortar fins and smears before tooling joints.

Final Cleaning: After mortar is thoroughly set and cured, clean exposed cast stone as follows:

Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

Test cleaning methods on sample; leave one sample uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of cast stone.

Protect adjacent surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.

Wet surfaces with water before applying cleaners; remove cleaners promptly by rinsing thoroughly with clear water.

Clean cast stone by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.

Clean cast stone with proprietary acidic cleaner applied according to manufacturer's written instructions.

Method of Measurement: BENCHES shall be measured shall be measured installed per each.

Basis of Payment: BENCHES shall be paid for at the contract unit price, which price shall include: all samples, mock ups, all labor, materials, equipment for all work involved. Thickened edge of concrete shall be included in the cost of this pay item.

## **BICYCLE RACKS**

Description: This work must consist of furnishing and installing new bicycle racks at the locations specified in the Contract plans or as directed by the Engineer.

General requirements:

Each bicycle rack will be placed at the location indicated in the plans. The locations will be field marked and verified for approval by the Engineer.

Materials: Materials must conform to the details below:

Style: Basis of design as shown on drawings

Finish: Powdercoated, manufacturer's standard silver color. Provide standard color swatches for final selection by Owner.

Size: Height and width as noted on drawings, 2" x 2" x 1/4" square steel tubing.

Mounting: In-ground mount

Submittals:

Product data. Submit bicycle rack shop drawings or catalog cut.

Certifications. Submit manufacturer's certification that the tubing and coatings meet the project specifications. Prior to production, the manufacturer of the bicycle racks is to submit certification that the steel to be used follows the "Steel Products Procurement Act".

Installation: Bicycle Racks must be located according to the plans and as designated by the Engineer. Locations of racks to be verified in the field.

Method of Measurement: BICYCLE RACKS will be measured per each bike rack.

Basis of Payment: BICYCLE RACKS will be paid for at the contract unit price for each bicycle rack. This shall include all labor, materials, and equipment for all work involved. Cost of associated footings shall be considered part of the required materials.

## **LANDSCAPE EDGING**

Description: This work must consist of furnishing and installing landscape edging at the locations specified in the Contract plans or as directed by the Engineer.

Materials: Materials must conform to the details below:

Finish: Powdercoated black steel

Size: 5" tall header x minimum 1/8" thickness. Sections shall be no less than 8' long

Mounting. Manufacturer supplied steel stakes – 15” minimum length installed at maximum 24” o.c.

Submittals:

Product data. Submit shops drawings or catalog cut.

Locations: Refer to contract drawings for locations

Method of Measurement: LANDSCAPE EDGING will be measured per foot.

Basis of Payment: LANDSCAPE EDGING will be paid for at the contract unit price per foot. This shall include all labor, materials, equipment for all work involved installing the landscape edging.

### **LANDSCAPING GRAVEL**

Description: This work shall consist of furnishing and placing decorative landscape gravel over a prepared base in all areas as shown on the plans.

Materials: Landscape gravel shall be weathered limestone; irregularly shaped, with natural surfaces. Stones shall be hard, durable, free from cracking, flaking and deterioration. Desired colors include: brown, tan, cream, and gray. Stone shall range in size from 6” to 12” diameter – an even distribution of sizes is required. Total depth shall be between 12-15”. Refer to contract drawings for representative image.

Submittals: Submit full-size samples of stone representing full range of dimensions, color and finish indicated.

Installation: Landscaping gravel shall be loosely installed over compacted CA-6 aggregate subbase and non-woven needle punched 8 oz. filter fabric. Take care not to damage fabric when installing gravel. Avoid breaking or damaging stone during installation. Stone shall sit 1” below adjacent concrete walks.

Method of Measurement: LANDSCAPING GRAVEL will be measured in place per square yard installed.

Basis of Payment: The work under this item will be paid for at the contract unit price per square yard for LANDSCAPING GRAVEL. This shall include all labor, equipment, materials and incidental work necessary to complete the work as specified.

### **MULCH PLACEMENT 3”**

This work shall be done in accordance with the applicable portion of Section 253.02 (c) and Section 1081.06 of the Standard Specifications for Road and Bridge Construction.

Description: This work shall consist of furnishing, transporting, and spreading approved shredded hardwood bark mulch around existing the existing tree on Golf Road, as noted on the plans. Diameter of ring shall be 5’

Materials: Hardwood bark mulch shall be clean, finely shredded mixed-hardwood bark free of sticks, leaves, stones, dirt clods, and other debris. Individual wood chips shall not exceed 2 inches in the largest dimension.

Submittals: A mulch sample and request for material inspection must be supplied to the Engineer for approval prior to performing any work 72 hours prior to application.

Installation: The grade, depth, and condition of the area must be approved by the Engineer prior to placement. The Contractor shall remove and properly dispose of all weeds, litter and plant debris before mulching. Mulch shall not be in contact with the base of tree trunks.

All finished mulch areas shall be left smooth and level to maintain uniform surface and appearance.

After the mulch placement, any debris or piles of material shall be immediately removed from the right of way, including raking excess mulch out of turf areas.

Method of Measurement: MULCH PLACEMENT 3" will be measured per square yard.

Basis of Payment: MULCH PLACEMENT 3" will be paid for at the contract unit price per square yard.

## **PERENNIAL PLANTS**

This work shall consist of furnishing and installing perennial plantings and as shown in the details on the plans and only at locations as directed by the Engineer.

Add the following to Article 254.02 Materials:

All plants shall be healthy, vigorous, and true to species and variety. All materials shall be provided by a certified nursery and shall be free of pests and disease. All plant materials shall comply with State and federal laws with respect to inspection for plant diseases and infestations. Written approval shall be necessary for substitutions.

Plants shall be obtained as close to possible to the project site. Written approval will be required for substitutions and plant material purchased outside a 200-mile radius of the site.

Delete Article 254.03(b) Planting Time and substitute the following:

Plants shall only be planted between May 1 and June 15. Approval from the Engineer must be received for all planting dates.

Add the following to Article 254.04 Transporting and Storing Plants:

Each species should be handled and packed in the manner approved for the plant, having regard for the soil climatic conditions at the time and place of digging and delivery, and for the time that will be consumed for transit and delivery.

Plant materials shall be packed to ensure adequate protection against damage during transit. The plants shall be protected with wet material to ensure that the plant materials are delivered in a moist and cool condition. The vehicle should be ventilated to prevent overheating.

Plant materials shall be stored in a shaded area. Watering shall occur to maintain plant vigor during on-site storage.

An on-site inspection will be made prior to the installation of plant material. Any plant material not meeting specification (that being of good health) must be moved off the site.

Delete Article 254.05 Layout of Planting and substitute the following:

When plants are specified to be planted in prepared soil planting beds, the planting bed shall be approved by the Engineer prior to planting. Bed limits shall be painted or flagged. Individual plants layout shall be marked prior to installation. The Engineer will contact the Roadside Development Unit at (847) 705-4171 for layout.

Delete Article 254.06 (b) Planting Procedures and substitute the following:

When planting perennials in areas as shown on the plans or as directed by the Engineer, the following work shall be performed prior to planting:

- Trees and shrubs must be installed first to establish proper layout and to avoid damage to other plantings.

Install plants through erosion control blanket (wetland type plants only have blanket) with planting bar. Planting holes shall be as deep or slightly deeper than the plug roots to allow placing the plant without bending roots. Plant shall be placed flush with the earth surface. Hole shall be filled with soil carefully to avoid damage to roots and to leave no voids and pressed to firm earth surface.

Contractor shall provide and maintain all equipment necessary for planting, including watering equipment, water, and hoses. Immediately after planting, thoroughly water plant beds. Do not wash soil onto crowns of plants. The soil surface should be damp for the first three weeks following planting.

Delete Article 254.08 (b) Period of Establishment and substitute the following:

Plants must undergo a 30-day period of establishment. Additional watering shall be performed not less than three times a week for four weeks following installation. Water shall be applied at the rate of at least 2 gallons per square foot. Should excess moisture prevail, the Engineer may delete any or all of the additional watering cycles. In severe weather, the Engineer may require additional watering.

A spray nozzle that does not damage small plants must be used when watering native plants. Water shall be applied at the base of the plant to keep as much water as possible off plant leaves. The plants to be watered and the method of application will be approved by the Engineer. The Contractor will not be relieved in any way from the responsibility for unsatisfactory plants due to the amount of watering.



Add the following to Article 254.09 Method of Measurement:

Disposal of debris (rock, stones, concrete, bottles, plastic bags, etc.) removed from the plug plantings as specified in Article 202.03.

Delete Article 253.17 Basis of Payment and substitute the following:

- a) The unit price shall include the cost of all materials, equipment, labor, plant care, removal, disposal required to complete the work as specified herein and to the satisfaction of the Engineer.

### **PERENNIAL PLANT CARE**

Description: This work shall consist of weeding, replenishing mulch, trimming and other perennial plant care work items for each work cycle as described herein and as directed by the Engineer. The work required for each work cycle shall be scheduled to be complete and acceptable at the time of inspection.

Inspection Date: Perennial plant care will be inspected on the date specified in the plans. The work required for each work cycle must be 100 percent complete on the inspection date. Partial inspections will not be made.

#### **Work Cycle Requirements:**

- Perennial plant beds must be 100 percent weed-free and clear of litter and debris to be acceptable. Control weeds in landscaped areas by pulling the entire plant and roots. (The Contractor may apply a pre-emergent herbicide, approved by the Engineer, during Spring perennial plant care cycles). Disturbed areas shall be raked level and mulch adjusted.
- Dead flowers, stems, and leaves must be trimmed and removed.
- Monitor mulch depths to maintain a two-inch (50 mm) depth around perennial plants (no more, no less). Rake mulch any away from perennial crowns.
- Finely shredded hardwood bark mulch must be replenished to maintain a two-inch (50 mm) depth around perennial plants, if necessary. Hardwood mulch shall not exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones and clods. (Mulch must be approved by the Engineer prior to placement).
- Remove litter and other debris. All drain inlets must be kept clean and draining freely. All walls, pavement, curb and gutters, and concrete pads are to be left clean and swept free of all debris.
- Plants must be free of insect infestations and sprayed if necessary.
- Beds must have a neatly spaded edge between the mulched bed and the turf.
- Mulch must be raked out of turf surrounding the mulched bed.
- All debris that results from this operation must be removed from the right-of-way and disposed of in accordance with Article 202.03 at the end of each day.
- Trim dead tips of vines and ground covers.
- In the spring (March/April), cut back ornamental grasses to six (6) inches in height. Cut down any perennial left up over the winter to a height of six (6) inches or less and remove any dead leaves around the crowns of the plants. Rake beds free of accumulated debris, dead leaves, and other material, leaving mulch in place and being careful not to damage emerging bulb foliage and flowers. Rake back any mulch that covers plant crowns.

- Fall clean-up (October 15 – November 15; depending upon weather conditions and condition of plant material), cut back perennials leaving 3 to 4 inches height foliage as soon as foliage has died back or at discretion of the Engineer. Do not cut into plant crowns. Do not cut back any perennial with winter interest (ornamental grasses, Echinacea/Rudbeckia seed heads).

Method of Measurement: The work will be measured for payment of surface area cared for to the satisfaction of the Engineer on the inspection date specified in the plans. The area will be computed in square yards. Measurement for payment of this work will be performed on the inspection date specified in the plans.

If the inspection discloses any work as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with such instructions and correct the unsatisfactory work on the inspection date. Work that is not acceptable on the inspection date will not be measured for payment. Individual perennial plant areas within a perennial plant bed will not be measured for payment if any portion of the perennial plant bed has not been cared for to the satisfaction of the Engineer. Each perennial plant care work cycle specified in the plans will be measure separately for payment.

Basis of Payment: This work will be paid for at the contract unit price per square yards for PERENNIAL PLANT CARE, which price shall include all materials, equipment, labor, removal, disposal required to complete the work as specified herein and to the satisfaction of the Engineer.

## **PLANTING WOODY PLANTS**

This work shall consist of planting woody plants as specified in Section 253 of the Standard Specifications with the following revisions:

### **Delete Article 253.03 Planting Time and substitute the following:**

Spring Planting. This work shall be performed between March 15th and May 31st except that evergreen planting shall be performed between March 15th and April 30th in the northern zone.

### **Add the following to Article 253.03 (a) (2) and (b):**

All plants shall be obtained from Illinois Nurserymen's Association or appropriate state chapter nurseries. All trees and shrubs shall be dug prior to leafing out (bud break) in the spring or when plants have gone dormant in the fall, except for the following species which are only to be dug prior to leafing out in the spring:

- Maple (Acer spp.)
- Buckeye (Aesculus spp.)
- Serviceberry (Amelanchier spp.)
- Birch (Betulus spp.)
- American Hornbeam (Carpinus caroliana)
- Hickory (Carya spp.)
- Hackberry (Celtis occidentalis)
- Eastern Redbud (Cercis canadensis)

- Hawthorn (Crataegus spp.)
- Walnut (Juglans spp.)
- Tuliptree (Liriodendron spp.)
- Crabapple (Malus spp.)
- Black Tupelo (Nyssa sylvatica)
- American Hophornbeam (Ostrya virginiana)
- Oak (Quercus spp.)
- Sassafras (Sassafras albidum)
- Baldcypress (Taxodium distichum)
- American Linden (Tilia americana)

Fall Planting. This work shall be performed between October 1 and November 30 except that evergreen planting shall be performed between August 15 and October 15.

Planting dates are dependent on species of plant material and weather. Planting might begin or end prior or after above dates as approved by the Engineer. Do not plant when soil is muddy or during frost.

**Add the following to Article 253.05 Transportation:**

Cover plants during transport to prevent desiccation. Plant material transported without cover shall be automatically rejected. During loading and unloading, plants shall be handled such that stems are not stressed, scraped or broken and that root balls are kept intact.

**Delete the third sentence of Article 253.07 and substitute the following:**

Trees must be installed first to establish proper layout and to avoid damage to other plantings such as shrubs and perennials.

The Contractor shall be responsible for all plant layout. The layout must be performed by qualified personnel. The planting locations must be laid out as shown in the landscape plan. This will require the use of an engineer's scale to determine some dimensions. Tree locations within each planting area shall be marked with a different color stake/flag and labeled to denote the different tree species. Shrub beds limits must be painted.

All utilities shall have been marked prior to contacting the Roadside Development Unit. The Engineer will contact the Roadside Development Unit at (847) 705-4171 to approve the layout prior to installation. Allow a minimum of seven (7) working days prior to installation for approval.

**Delete the first paragraph to Article 253.08 Excavation of Plant Holes and substitute with the following:**

Protect structures, utilities, sidewalks, bicycle paths, knee walls, fences, pavements, utility boxes, other facilities, lawns and existing plants from damage caused by planting operations. Excavation of the planting hole may be performed by hand, machine excavator, or auger.

The excavated material shall not be stockpiled on turf, in ditches, or used to create enormous water saucer berms around newly installed trees or shrubs. Remove all excess excavated subsoil from the site and dispose as specified in Article 202.03.

**Delete the second sentence of Article 253.08 Excavation of Plant Holes (a) and the third paragraph of Article 253.08(b) and substitute with the following:**

Excavation of planting hole width. Planting holes for trees, shrubs, and vines shall be three times the diameter of the root mass and with 45-degree sides sloping down to the base of the root mass to encourage rapid root growth. Roots can become deformed by the edge of the hole if the hole is too small and will hinder root growth.

Planting holes dug with an auger shall have the sides cut down with a shovel to eliminate the glazed, smooth sides and create sloping sides.

Excavation of planting hole depth. The root flare shall be visible at the top of the root mass. If the trunk flare is not visible, carefully remove soil from around the trunk until the root flare is visible without damaging the roots. Remove excess soil until the top of the root mass exposes the root collar.

The root flare shall always be slightly above the surface of the surrounding soil. The depth of the hole shall be equal to the depth of the root mass minus 2" allowing the tree or shrub to sit 2" higher than the surrounding soil surface for trees.

For stability, the root mass shall sit on existing undisturbed soil. If the hole was inadvertently dug too deep, backfill and recompact the soil to the correct depth.

Excavation of planting hole on slopes. Excavate away the slope above the planting hole to create a flattened area uphill of the planting hole to prevent the uphill roots from being buried too deep. Place the excess soil on the downslope of the planting hole to extend the planting shelf to ensure roots on the downhill side of the tree remain buried. The planting hole shall be three times the diameter of the root mass and saucer shaped. The hole may be a bit elongated to fit the contour of the slope as opposed to the typical round hole on flat ground.

Add backfill to create a small berm on the downhill portion of the planting shelf to trap water and encourage movement into the soil to increase water filtration around the tree. Smooth out the slope above the plant where you have cut into the soil so the old slope and the new slope transition together smoothly.

**Add the following to Article 253.08 Excavation of Plant Holes (b):**

When planting shrubs in shrub beds as shown on the plans or as directed by the Engineer, spade a planting bed edge at approximately a 45-degree angle and to a depth of approximately 3-inches around the perimeter of the shrub bed prior to placement of the mulch. Remove any debris created in the spade edging process and dispose of as specified in Article 202.03.

**Delete Article 253.09 (b) Pruning and substitute with the following:**

Deciduous Shrubs. Shrubs shall be pruned to remove dead, conflicting, or broken branches and shall preserve the natural form of the shrub.

**Delete the third and fourth paragraphs of Article 253.10 Planting Procedures and Article 253.10 (a) and substitute the following:**

Approved watering equipment shall be at the site of the work and in operational condition PRIOR TO STARTING the planting operation and DURING all planting operations OR PLANTING WILL NOT BE ALLOWED.

All plants shall be placed in a plumb position and avoid the appearance of leaning. Confirm the tree is straight from two directions prior to backfilling.

Before the plant is placed in the hole, any paper or cardboard trunk wrap shall be removed. Check that the trunk is not damaged. Any soil covering the tree's root flare shall be removed to expose the root crown prior to planting.

Check the depth of the root ball in the planting hole. With the root flare exposed, the depth of the hole shall be equal to the depth of the root mass minus 2" allowing the tree or shrub to sit 2" higher than the surrounding soil surface for trees. The root flare shall always be slightly above the surface of the surrounding soil. For stability, the root ball shall sit on existing undisturbed soil. If the hole was inadvertently dug too deep, backfill and recompact the soil to the correct depth.

After the plant is placed in the hole, all cords and burlap shall be removed from the trunk. Remove the wire basket from the top three quarters (3/4) of the root ball. The remaining burlap shall be loosened and scored to provide the root system quick contact with the soil. All ropes or twine shall be removed from the root ball and tree trunk. All materials shall be disposed of properly.

The plant hole shall be backfilled with the same soil that was removed from the hole. Clay soil clumps shall be broken up as much as possible. Where rocks, gravel, heavy clay or other debris are encountered, clean top soil shall be used. Do not backfill excavation with subsoil.

The hole shall be 1/3 filled with soil and firmly packed to assure the plant remains in plumb, then saturated with water. After the water has soaked in, complete the remaining backfill in 8" lifts, tamping the topsoil to eliminate voids, and then the hole shall be saturated again. Maintain plumb during backfilling. Backfill to the edge of the root mass and do not place any soil on top of the root mass. Visible root flare shall be left exposed, uncovered by the addition of soil.

**Add the following to Article 253.10 (b):**

After removal of the container, inspect the root system for circling, matted or crowded roots at the container sides and bottom. Using a sharp knife or hand pruners, prune, cut, and loosen any parts of the root system requiring corrective action.

**Delete the first sentence of Article 253.10(e) and substitute with the following:**

Water Saucer. All plants placed individually and not specified to be bedded with other plants, shall have a water saucer constructed of soil by mounding up the soil 4-inches high x 8-inches wide outside the edge of the planting hole.

**Delete Article 253.11 and substitute the following:**

Individual trees, shrubs, shrub beds, and vines shall be mulched within 48 hours after being planted. No weed barrier fabric will be required for tree and shrub plantings. Pre-emergent herbicide will be used instead of weed barrier fabric. The pre-emergent herbicide shall be

applied prior to mulching. See specification for Weed Control, Pre-Emergent Granular Herbicide.

The mulch shall consist of wood chips or shredded tree bark not to exceed two (2) inches in its largest dimension, free of foreign matter, sticks, stones, and clods. Mulch shall be aged in stockpiles for a minimum of four (4) months where interior temperatures reach a minimum of 140-degrees. The mulch shall be free from inorganic materials, contaminants, fuels, invasive weed seeds, disease, harmful insects such as emerald ash borer or any other type of material detrimental to plant growth. A sample must be supplied to the Roadside Development Unit for approval prior to performing any work. Allow a minimum of seven (7) working days prior to installation for approval.

Mulch shall be applied at a depth of 4-inches around all plants within the entire mulched bed area or around each individual tree forming a minimum 6-foot diameter mulch ring around each tree. An excess of 4-inches of mulch is unacceptable and excess shall be removed. Mulch shall not be tapered so that no mulch shall be placed within 6-inches of the shrub base or trunk to allow the root flare to be exposed and shall be free of mulch contact.

Care shall be taken not to bury leaves, stems, or vines under mulch material. All finished mulch areas shall be left smooth and level to maintain uniform surface and appearance. After the mulch placement, any debris or piles of material shall be immediately removed from the right of way, including raking excess mulch out of turf areas in accordance with Article 202.03.

**Delete Article 253.12 Wrapping and substitute the following:**

Within 48 hours after planting, screen mesh shall be wrapped around the trunk of all deciduous trees with a caliper of 1-inch or greater. Multi-stem or clump form trees, with individual stems having a caliper of 1-inch or greater, shall have each stem wrapped separately. The screen mesh shall be secured to itself with staples or single wire strands tied to the mesh. Trees shall be wrapped at time of planting, before the installation of mulch. The lower edge of the screen wire shall be in continuous contact with the ground and shall extend up to a minimum of 36-inches or to the lowest major branch, whichever is less. Replacement plantings shall not be wrapped.

**Delete Article 253.13 Bracing and substitute with the following:**

Unless otherwise specified by the Engineer, within 48 hours after planting all deciduous and evergreen trees, with the exception of multi-stem or clump form specimens, over 8-feet in height shall require three 6-foot long steel posts equally spaced from each other and adjacent to the outside of the ball. The posts shall be driven vertically to a depth of 18-inches below the bottom of the hole. The anchor plate shall be aligned perpendicular to a line between the tree and the post. The tree shall be firmly attached to each post with a double guy of 14-gauge steel wire. The portion of the wire in contact with the tree shall be encased in a hose of a type and length approved by the Engineer.

During the life of the contract, within 72 hours the Contractor shall straighten any tree that deviates from a plumb position. The Contractor shall adjust backfill compaction and install or adjust bracing on the tree as necessary to maintain a plumb position. Replacement trees shall not be braced.

**Delete the second sentence of the first paragraph of Article 253.14 Period of Establishment and substitute the following:**

This period shall begin in April and end in November of the same year.

**Delete the first paragraph of Article 253.15 Plant Care and substitute the following:**

From planting until final acceptance of planting, the Contractor shall properly care for all plants including watering, weeding, adjusting braces, repairing water saucers, spraying insect infected plants, or other work which is necessary to maintain the health, vigor and satisfactory appearance of the plantings. The Contractor shall provide plant care a minimum of every two weeks, or within three days following notification by the Engineer. Water shall be applied at a reasonable velocity and distance such as to cause no harm to the plant or displacement of mulch or soil. All requirements for plant care shall be considered as included in the cost of the contract.

**Delete the first paragraph of Article 253.15 Plant Care (a) and substitute with the following:**

During plant care watering shall be performed at least every two weeks during the months of April through November. The Contractor shall apply a minimum of 35 gallons of water per tree, 25 gallons per large shrub, 15 gallons per small shrub, and 4 gallons per vine. The Engineer may direct the Contractor to adjust the watering rate and frequency depending upon weather conditions.

**Add the following to Article 253.15 Plant Care (c):**

The contractor shall correct any vine growing across the ground plane that should be growing up desired vertical element (noise wall, retaining wall, fence, knee wall, etc.). Work may include but is not limited to carefully weaving vines through fence and/or taping vines to vertical elements.

**Add the following to Article 253.15 Plant Care (d):**

The contractor shall inspect all trees, shrubs, and vines for pests and diseases at least every two weeks during the months of initial planting through final acceptance. Contractor must identify and monitor pest and diseases and determine action required to maintain the good appearance, health and, top performance of all plant material. Contractor shall notify the Engineer with their inspection findings and recommendations within twenty-four hours of findings. The recommendations for action by the Contractor must be reviewed and by the Engineer for approval/rejection. All approved corrective activities will be included in the cost of the contract and shall be performed within 48 hours following notification by the Engineer.

**Delete Article 253.16 Method of Measurement and substitute with the following:**

Trees, shrubs, evergreens, vines, and seedlings will be measured as each individual plant.

- (a) This work will be measured for initial payment, in place, for plant material found to be in live and healthy condition by June 1.
- (b) This work will be measured for final payment, in place, for plant material found to be in live and healthy condition upon final acceptance by the department.

- (c) Pre-emergent Herbicide will be measured for payment as specified in Weed Control, Pre-emergent Granular Herbicide.

**Delete Article 253.17 Basis of Payment and substitute the following:**

This work will be paid for at the contract unit price per each for TREES, SHRUBS, EVERGREENS, or VINES, of the species, root type, and plant size specified; and per unit for SEEDLINGS.

The unit price shall include the cost of all materials, mulch, equipment, labor, plant care, watering, and disposal required to complete the work as specified herein and to the satisfaction of the Engineer. Payment will be made according to the following schedule.

- (a) Initial Payment. Upon completion of planting, mulch, wrapping, and bracing 75 percent of the pay item(s) will be paid.
- (b) Final Payment. After the successful completion of all required replacement plantings, clean-up work and receipt of the "Final Acceptance of Landscape Work" memorandum from the Bureau of Maintenance, or upon execution of a third-party bond, the remaining 25 percent of the pay item(s) will be paid.
- (c) The placement of Pre-emergent Herbicide shall be paid for at the contract unit price for WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE.

**WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE**

Description: This work shall consist of spreading a pre-emergent granular herbicide in areas as shown on the plans or as directed by the Engineer. This item will be used in mulched plant beds and mulch rings.

Materials: The pre-emergent granular herbicide shall contain the chemicals Trifluralin 2% active ingredient and Isoxaben with 0.5% active ingredient. The herbicide label shall be submitted to the Engineer for approval at least seventy-two (72) hours prior to application.

Method: The pre-emergent granular herbicide shall be used in accordance with the manufacturer's directions on the package. The granules are to be applied prior to mulching.

Apply the granular herbicide using a drop or rotary-type designed to apply granular herbicide or insecticides. Calibrate application equipment to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first. Apply the granular herbicide at the rate of 100 lbs/acre (112 kg/ha) or 2.3 lbs/1000 sq. ft. (11.2 kg/1000 sq. meters).

Method of Measurement: Pre-emergent granular herbicide will be measured in place in Pounds (Kilograms) of Pre-emergent Granular Herbicide applied. Areas treated after mulch placement shall not be measured for payment.



**Basis of Payment:** This work will be paid for at the contract unit price per pound (kilogram) of WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE which price shall include all materials, equipment, and labor necessary to complete the work as specified.

### **PLANTING SOIL MIX, FURNISH AND PLACE**

Work under this item must be performed in accordance with Division 200 and Section 211 of the Standard Specifications for Road and Bridge Construction and subsequent special provisions except as herein modified.

**Description:** This work must consist of locating, stockpiling, testing, preparing, and placing planting soil including finish grading. All operations and materials to be furnished within this Item must be included PLANTING SOIL MIX FURNISH AND PLACE.

It must include the excavation of all planting sites and plant beds and tree pits, of the necessary volume of existing material to specified depths and disposing of debris and the material removed, and removal and disposal of spoil; root removal only as directed by the Engineer; grading the area; furnishing the planting soil and other soil mix ingredients, mixing them and preparing them for placement; and placing required soil mix volumes; raking and preparing the soil mix for planting. This work must also include the excavation of the volume of existing material at locations where proposed trees will be planted. It also includes any plant under drainage layers, and excess excavation and disposal of material required to accommodate drainage layers, as shown on the plans, which may be required by the Engineer.

**General Requirements:** Notify Utility Owner and have Utility Owner stake all locations of utilities prior to any excavation operations. Contractor must be responsible for location of all utilities prior to any disruption of grade. Adequate advance notification and clearance by Utilities Alert Network (JULIE) is required for all planting sites.

The excavation and placement of planting soil mix, after settlement, must be the entire length and width of beds, to the following depths:

Curbed Planters: Excavate to full dimensions shown on the Drawings. Add approved planting soil mix to volumes shown on the Drawings and compact as shown and specified herein.

Provide all excavations of plant beds and tree pits. Excavate to full dimensions shown on the Drawings. Excavation and grading around protected existing tree roots and plant materials must be done by hand. Remove all excavated materials and legally dispose off site. Note that excavation of all areas is incidental to this item.

Notify Engineer immediately if unusual subgrade conditions exist, such as old foundations or uncharted utilities are discovered. Notify Engineer immediately if conditions do not allow enough space for required soil depths.

Provide soil tests, sandy loam planting soil, sand and all other specified materials to be used as ingredients for preparing planting soil mix for all areas. All landscape areas indicated on the plans must be filled with planting soil mix. Suitable fill in all landscape areas must be defined as PLANTING SOIL, FURNISH AND PLACE. Additional or alternate materials must meet the approval of the Engineer.

**Submittals:**

Samples: Before any planting soil is delivered, the Contractor must furnish the Engineer soil samples and statements specified herein. The Contractor must inform the Engineer in writing, 10 days in advance of the delivery of planting soil to the job site, as to the location from which the planting soil is to be obtained, names and addresses of the Owners of the properties, the crops or plants which have been grown in the soil during the past 5 years and the depth to which the top soil is to be taken. A minimum of three (3) samples of the planting soil proposed for this work must be furnished a minimum of ten days before delivery of planting soil to the jobsite. Each sample submitted must be in a separate container, approximately one-quart in size, appropriately labeled and taken from a different location at the source. Each container must be completely filled with un-compacted planting soil. Do not deliver soil to the site until the Engineer has approved required submittals.

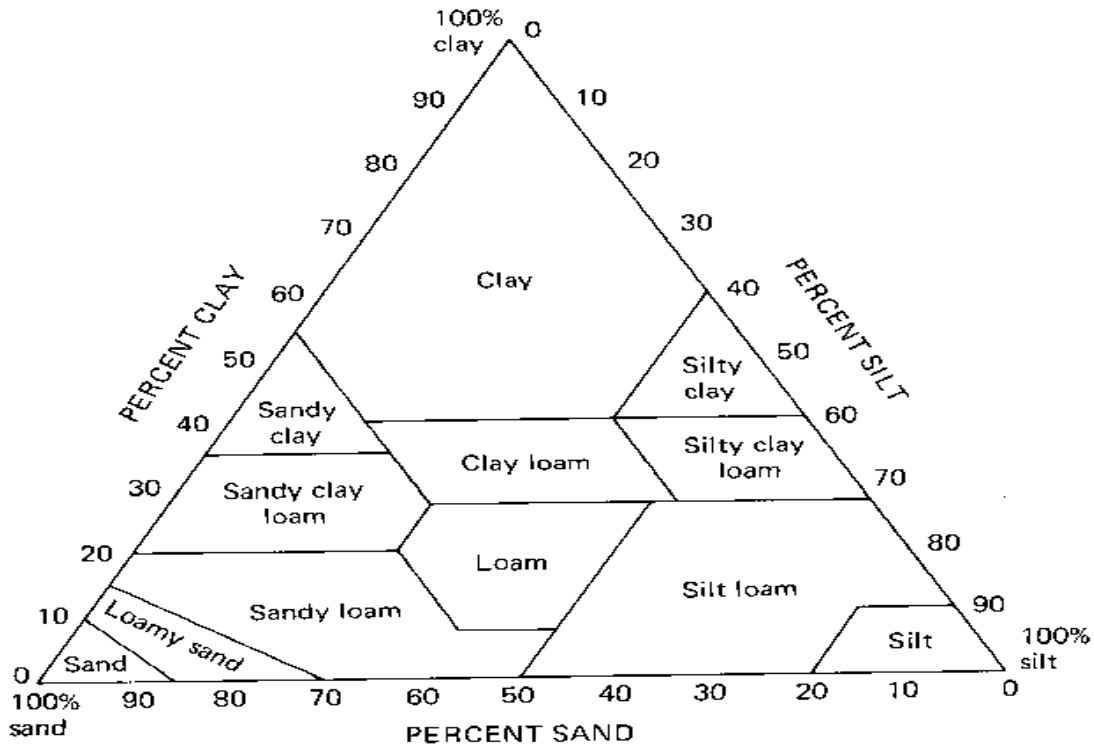
Soil Testing: Planting soil must be tested and approved prior to preparing planting soil mix and prior to delivery to the site. Planting soil that is mixed or delivered to the site prior to testing and approval by the Engineer will be rejected. The Contractor must submit a horticultural soil test to the Engineer showing the results of a mechanical sieve test which demonstrates that the planting soil is sandy loam, having less than 50% preponderance of clay and silt, a pH tests evidencing compliance with pH requirements, and other test results as specified below.

The Contractor must employ a soil testing agency acceptable to the Engineer and which uses methods approved by the Association of Agricultural Chemists. A minimum of three (3) samples must be taken from different locations of proposed planting soil source.

The planting soil test must report and the appropriate ranges are as follows:

1. Chemical Analysis/Soil Reaction: pH between 5.5 and 7.0.
2. Mechanical Analysis: Sandy Loam as defined by the chart below.
3. Additionally the following variables are required.
  - a. Cation exchange capacity (CEC)
  - b. Soluble salts
  - c. Organic matter
  - d. Phosphorous
  - e. Available potassium
  - f. Other nutrients
  - g. Residual chemicals, herbicides, pesticides
4. Recommendations to mitigate any issues from the results in items 3a through 3g.

The mechanical analysis should show that the % sand (25% to 33%), % silt (45% to 77%), and the % clay (0% to 28%) must yield a **silt loam soil**. See the attached Textural Classes diagram. To determine the class plot a line parallel to the % clay axis starting the line at the value of the % silt. Plot another line parallel to the % sand axis starting the line at the value of the % clay. The intersection of these lines should be in the silt loam region.



**Planting Soil Quality:** Planting soil must be pulverized, natural, fertile, friable, sandy loam planting soil—possessing characteristics of rich productive A horizon planting soil in the Chicago area. Clay soils will not be acceptable. Planting soil must be obtained from naturally well-drained areas, not excessively acidic or alkaline within a tolerance of 5.5 to 7.0 pH and contain no toxic substances which may be harmful to plant or sod growth. It must be free from clay lumps, roots, stones and other debris. Planting soil must not be handled in a frozen or muddy condition. Supplemental planting soil means all planting soil imported to the site, which is required to meet finish grades shown.

All planting soil for planting must be a loamy soil rich in organic matter, without admixture of B horizon subsoil or any material toxic to plant growth. It must be free from large roots, sticks, hard clays, weeds, bush, stones, or other litter or waste materials of any kind. Acceptable planting soil must also have demonstrated, in its original location that it has the ability to sustain healthy plant growth of the species required.

**Planting Soil Mix and Amendments:** Planting soil mix must consist of a mixture of (2) two parts of well-pulverized planting soil, as approved by the Engineer upon review of soil test compliance for mechanical properties and pH range, and (1) one part coarse sand, and all amendments recommended by the Soil Test Laboratory and as specified herein.

Sand must consist of clean, sharp, well-graded, coarse sand of an FA-2 gradation, free of dust, foreign and organic matter, with a pH of 6.0 to 7.0. If approved by the Engineer, planting soil must be amended with 1) sulfur or limestone to adjust pH, quantity determined by soil test to achieve a slightly acid soil, 2) gypsum incorporated at the rate of 88 kg/92 square meters, and 3) fertilizers as recommended by the soil test laboratory.

Prepare Planting Soil Mix off the site. Do not store soil mix materials on site. Planting soil must be dry prior to amending. Clean planting soil of lumps, stones, debris and noxious weeds

before mixing. Provide supplemental pulverized planting soil and sand to achieve soil mix volumes and ratios required to meet finish grades. Mix planting soil and amendments thoroughly to provide uniform mixture, using drum-type mechanical mixer, or other means acceptable to the Engineer. Thoroughly mix all amendments by mechanical means prior to soil placement.

Soil mix must be amended full depth. Mix specified soil amendments at rates according to soil test recommendations. Mix pH adjusters with dry soil prior to adding any gypsum or fertilizers. Fertilize according to soil test recommendation, and with super-phosphate.

Sulfur must be granular as specified by the Engineer, according to the soil test recommendations and to the types of plantings in the area requiring amendments. Ground limestone (calcium carbonate) if required as specified by the Engineer, shall meet the requirements of Section 1081 of the Standard Specifications.

Gypsum must be pelletized, consisting of calcium sulfate, calcium, sulfur, and water soluble binder, with a maximum moisture content of one percent, and 95% finished pellet size passing between #4 and #14 mesh, gray in color, such as Cal-Sul, as manufactured by American Pelletizing Corporation, Des Moines, Iowa; or equivalent.

Fertilizer must be complete fertilizer, uniform in composition, free flowing and suitable for application with approved equipment. Type and application rates must be determined by testing agency soil test, but may contain the following percentages by weight: 10% nitrogen, 10% phosphorous, and 10% potassium. If recommended by testing lab, apply a soluble mixture of treated minerals, 20% available phosphoric acid, rate to be determined by testing lab.

**Inspections:** The Engineer retains the right to visually inspect planting soil mix on site before placement. The Engineer may ask that material suspected of not meeting specification be removed from the site. The Engineer may take samples of the planter soil after it has been placed. The same chemical and mechanical test will be performed. If the in place planting soil does not meet specification, than that area or planter will not be paid for. The Contractor will be given an opportunity to remedy the planting soil, so that full payment can be made.

**Preparation, Drainage Tests and Underdrainage:**

Lay out plant bed locations, mark with stakes, adjust locations if requested and obtain the Engineer's approval of locations before proceeding. Perform excavations and clean planting areas of all trash and debris before placement of soil mix. Remove and legally dispose off site all excavated materials and items removed from cleaning and preparing beds.

Test all tree and plant bed pits by filling with water prior to backfilling with soil. If excavation does not percolate within 2 hours, inform Engineer and obtain his instructions before proceeding with backfill operations.

Washed Drainage Gravel: Water-worked, hard, durable non-limestone gravel, washed free of loam, sand, clay and other foreign substances, such as pea Gravel: 3/8" minimum, 5/8" maximum.

Soil Separator: 100% continuous polymeric filament, polyester non-woven, needle-punched landscape filter fabric with a weight of 4.2 oz/yd., 70 mils thick, with needlepoint puncture. Do not use woven, knitted, heat bonded or polyethylene soil separator.

Drainage Sand: Clean, sharp, well-graded, coarse sand passing 1/4" mesh screen, free of dust, foreign and organic matter, with a pH of 5.5 to 6.5.

**Placement:**

**Structure Adjustments.** Perform or coordinate final adjustments of any utility structure.

**Bed Prep.** Clean planters of all trash and debris before placement of soil mix. Remove and legally dispose of debris off site. Repair to the satisfaction of the Engineer any portion of the sand pre-filter under drainage fabric or layers prior to installation of planting soil mix.

**Place Planting Soil Mix.** All beds must be completely backfilled with planting soil mix, raked, and prepared for planting. Provide, place, spread and rough grade specified planting soil mix for planting in all areas to be planted, to depths specified.

**Place planting soil in 6-inch lifts.** Upon installation of the first planting soil mix lift, moisten the surface at a rate of two gallons of water per square foot. Allow water to thoroughly percolate through the soil before placing the next lift. Allow soil to settle and dry at which time compact with manual pull-behind 100 pound per square foot concrete sod roller with one pass over the entire planting soil surface. Compact to 90% under all root balls and under all areas which will be paved over.

Check permeability of soil before adding second lift. Upon approval from the Engineer, install second lift of planting soil, moisten, allow for settling and compact to 90% under all root balls and under all areas which will be paved over. Place additional planting soil mix in required lifts following the same procedures, as necessary. Place enough soil mix to meet finish grades within specified tolerances, including any additional rolls to grades as described on the plans. Allow for placement and mixing of mulch, but place enough soil mix to meet finish grades within specified tolerances.

Protect soil mix from freezing prior to planting.

Final Grading: Rake smooth and finish grade all planted areas. The removal of excess material or the addition of planting soil maybe required prior to landscaping. This must be considered incidental to planting soil. Grading will be to a tolerance +/- 0.10 foot of design grades. Grade disturbed by irrigation installation must be restored to finish grade and raked smooth.

The finish surface of the soil must be free from clods, stones, sticks and debris and must conform to the lines, grades and the minimum thickness shown on the plans. Raking and rolling of the entire surface must be made until the surface reaches a finish grade condition. Existing sidewalks, curbs, structures, trees and other plant materials that are to remain in place must be protected from damage. Any damage caused by the Contractor must be replaced at the Contractor's expense. All material "tracked" down the street must be removed each day. All sidewalks, driveways, alleys and pavements must be left in a broom cleaned condition daily.

All debris, litter, tire tracks, dirt, and unintended materials must be removed, swept or washed off of all landscape and hard median surfaces and pavement on a daily basis.

**Method of Measurement:** PLANTING SOIL, FURNISH AND PLACE will be measured for payment in place and the volume computed in square yards.

**Basis of Payment:** This work will be paid for at the contract unit price per square yard for PLANTING SOIL MIX FURNISH AND PLACE, which prices must include all materials, labor, excavation and equipment necessary to complete the work.

### **REQUIRED INSPECTION OF WOODY PLANT MATERIAL**

Delete Article 1081.01(a)(5) and substitute the following:

The place of growth for all material, and subsequent inspection, must be located within 200 miles of the project.

Delete Article 1081.01(c)(1) and substitute the following:

Inspection of plant material will be made at the nursery by the Engineer, or a duly authorized representative of the Department; all plant material must be in the ground of the nursery supplying the material.

The Contractor shall provide the Engineer a minimum of 50 calendar days advance notice of the plant material to be inspected. Written certification by the Nursery will be required certifying that the plants are true to their species and/or cultivar specified in the plans.

The Department reserves the right to place identification seals on any or all plants selected. No trees shall be delivered without IDOT seal. Plant material not installed within 60 days of initial inspection will be required to be re-inspected.

### **REMOVE AND RELOCATE TREE FRAME AND GRATE**

**Description:** This work must consist of removing in reinstalling existing tree grates.

**General requirements:**

One (1) tree grate at the corner of Burlington Avenue and Prospect Avenue must be removed and preserved prior to sidewalk demolition. This grate shall be reinstalled at the west side of the village hall. Refer to contact drawings for exact location. A new cast iron frame is required to accommodate the preserved trees grate.

**Materials:** Materials must conform to the details below:

**Tree grate:** Existing to be preserved

**Frame:** ¼" thickness, cold rolled steel angle with #4 rebar studs at 18" o.c. Field measure existing frames prior to concrete demolition. Refer to detailed drawings.

**Method of Measurement:** REMOVE AND RELOCATE TREE FRAME AND GRATE will be measured per each.

**Basis of Payment:** REMOVE AND RELOCATE TREE FRAME AND GRATE will be paid for at the contract unit price per each. This shall include all labor, materials, equipment for all work involved installing the tree grates. New cast in place iron frame shall be considered part of the required materials.

## **REMOVE AND RELOCATE FLAGPOLE**

**Description:** This work must consist of removing and relocating the flagpole at the location specified in the Contract plans or as directed by the Engineer.

**General requirements:**

**Submittals:** Submit the following information for review by the engineer.

Test Reports: Submit design mix for ready mixed concrete and delivery pickets

Shop drawings of CMP foundation sleeve

**Materials:**

Preserved flagpole

Concrete: Provide minimum 3000 PSI air entrained ready mixed concrete conforming to ASTM C-94, maximum 3" slump

16-gauge CMP steel foundation sleeve. Steel shall be hot dipped galvanized.

**Installation:** Contractor shall remove and preserve existing flagpole located at the north east corner of Prospect Ave and Burlington Ave. Extreme care should be taken not to damage existing pole, flash collar or halyard components. Pole shall be stored in a safe area, away from construction activities, and set off the ground on wooden blocks. If applicable, flags shall be removed and surrendered to the Village of Clarendon Hills.

The entire existing footing shall be removed and disposed off-site.

New footing and foundation sleeve shall conform to the details shown on the Contract plans. Contractor must measure diameter of existing flagpole to adequately size the foundation sleeve. Provide forms where required due to unstable soil conditions and for perimeter of flagpole base at grade. Secure sleeve and brace to prevent displacement during concrete placement. Place concrete immediately after mixing. Compact concrete in place using vibrators. Trowel exposed concrete surfaces to a smooth, dense finish, free of trowel marks and uniform in texture and appearance. Provide positive slope for water runoff to base perimeter.

Install flagpole after concrete footing has sufficiently cured and set in steel foundation sleeve. Backfill with dry sand and tightly tamp after flagpole is set plumb and secure with hardwood wedges.

**Method of Measurement:** REMOVE AND RELOCATE FLAGPOLE will be measured per each.

**Basis of Payment:** REMOVE AND RELOCATE FLAGPOLE will be paid for at the contract unit price per each. This shall include all labor, materials, equipment for all work involved. Cost shall include existing footing, removing and storing flagpole, installing new footing and all associated components and reinstalling flagpole.

## **TRASH RECEPTACLE RELOCATION**

**Description:** This work must consist of relocating trash receptacles at the locations specified in the Contract plans or as directed by the Engineer.

**General requirements:**

Contractor must remove (5) existing trash cans as noted on the demolition drawings. Trash cans shall be stored and protected during site construction. Once flatwork is complete, contractor shall install trash cans in locations noted on the drawings.

**Materials:** Trash Receptacle supplied by Village of Clarendon Hills:

**Mounting:** Surface mount. Contractor to provide all anchoring hardware.

**Installation:** Trash receptacles shall be surface mounted to concrete walk where indicated on the plans. Anchor bolt shall be stainless steel, 1/2" diameter, minimal embedment 4"

**Method of Measurement:** TRASH RECEPTACLE RELOCATION will be measured per each trash receptacle.

**Basis of Payment:** TRASH RECEPTACLE RELOCATION will be paid for at the contract unit price for each. This shall include all labor, materials, equipment for all work involved. Cost of storage/protection and anchoring hardware shall be included in this pay item.

## **TREE GRATES**

**Description:** This work shall consist of furnishing and installing new tree grates at the locations specified in the Contract plans or as directed by the Engineer.

**General requirements:**

Each tree grate shall be placed at the location indicated in the plans. The locations shall be field marked and verified for approval by the Engineer.

All tree grate castings shall be manufactured true to pattern and component parts shall fit together in a satisfactory manner. The castings shall be of uniform pattern and quality, free from blowholes, hardspots, shrinkage distortion or other defects. Any damaged tree grate shall not be installed. The engineer will inspect the tree grates prior to installation.

**Submittals:**

**Product data:** Submit shop drawings or catalog cut sheet.

**Materials:** Materials must conform to the details below:

**Material:** Gray Iron CL35B to meet AST A48 and ADA.

**Style:** Basis of design as shown on drawings with frame

**Finish:** No finish.

**Size:** 5' x 5' x 1 1/2"

**Accessories:** 3" minimum depth of lava rock and 18 gauge hardwire mesh below tree grate within the planted bed.



Method of Measurement: TREE GRATES will be measured per each.

Basis of Payment: TREE GRATES will be paid for at the contract unit price per each. This shall include all labor, materials, equipment for all work involved installing the tree grates. Cast in place iron frame shall be considered part of the required materials.

### **HANDHOLE (SPECIAL)**

Description: This work shall consist of furnishing and installing new electrical handholes at the locations specified in the Contract plans or as directed by the Engineer.

General requirements:

Each handhole shall be placed at the location indicated in the plans. The locations shall be field marked and verified for approval by the Engineer.

All handholes shall conform to the details and dimensions shown on the plans. The material shall be heavy duty fiberglass. The castings shall be of uniform pattern and quality, free from any defects. The engineer will inspect the handholes prior to installation.

Submittals:

Product data: Submit shop drawings or catalog cut sheet.

Method of Measurement: HANDHOLES (SPECIAL) will be measured per each.

Basis of Payment: HANDHOLES (SPECIAL) will be paid for at the contract unit price per each. This shall include all labor, materials, equipment for all work involved installing the handholes.

### **BUILDING DECORATIVE METAL**

Description: This work shall consist of constructing the decorative metal signage materials and work associated with the shelter building at the location shown on the plans.

## SECTION 101402 CONCRETE-EMBEDDED FLUSH SIGNAGE

Flat Cut Metal - Letters & Logos

Part I – General

### 1.1 Scope

- A. Furnish letters and hardware necessary to install Flat Cut Metal letters and logos, shown on drawings and herein specified.
  1. Cor-Ten steel letters and circles with embeds for setting flush in cast-in-place concrete.
  2. Brushed stainless steel sundial with inset Cor-Ten steel letters.

## 1.2 Submittals

- A. Manufacturer's illustrated product literature and specifications.
- B. Shop drawings including installation details and anchor templates.
- C. Samples
  - 1. (3) 6"x6" finish samples for each material.
  - 2. (1) full-size sample of a character for each type of sign.
  - 3. (3) of each accessory, anchors and fasteners.
- C. Mock-up: As indicated in the Drawings.
- D. Installation instructions
- F. Warranty.

## 1.3 Quality Assurance

- A. Manufacturer to have a minimum of 20 years experience in manufacturing letters.
- B. All letters to be manufactured by one manufacturer.

## Part II – Products

### 2.1 Acceptable Manufacturer or Manufacturer's Representative

- A. Gemini Incorporated: [www.geminisignproducts.com](http://www.geminisignproducts.com)
- B. Impact Signs, Inc.: [www.impactsigns.com](http://www.impactsigns.com)
- C. Inpro: [www.inprocorp.com](http://www.inprocorp.com)
- D. MTH Industries: [www.mthindustries.com](http://www.mthindustries.com)

### 2.2 Materials (Metal Alloy Options & Gauge)

- A. Stainless Steel – C 316 Alloy
- B. Cor-Ten™ Steel – A588

### 2.3 General Construction

- A. Cutting
  - 1. Flat Cut: Laser or Waterjet cut (based on Metal, Gauge and Product), using computer-guided equipment.
  - 2. MINI Letters: Precision CNC cut. (under 3"high), using computer guided equipment.
  - 3. Premium Finish (over 3"high): Hand sanded or polished, face-return combinations.

### 2.4 Finishes (meeting ASTM G4A specifications)

- A. Stainless Steel (304 or 316 Alloy) Passivated following ASTM A 967 and ASTM 2700 standards, to protect against corrosion.
  - 1. Brushed face, #2-#3 finish (#4 optional) vertical grain standard; horizontal grain optional, bead-blasted returns, no clear coat-standard, optional low-gloss clear coating.

2. Polished #8 face, bead-blasted returns, no clear coat-standard, optional gloss clear coating.

B. Cor-Ten™

1. Natural rust, color will vary from letter to letter as metal oxidizes, no grain direction, bead blasted returns, no clear coat. Cor-Ten B meeting ASTM A588 and A606 Type 4 requirements.

C. Gemini standard Flat Cut Metal Letters do not have polished returns. Premium Finish Letters are available with combinations of Brushed, Polished or hand-sanded faces, straight or beveled returns (price varies by options chosen).

D. Certifications: Gemini flat cut metal products are certified for the Buy American Program, the Made in America requirements of the American Recovery Act of 2009, the EU REACH program, and qualify jobs for LEED program points.

2.5 Mounting Hardware & Options

A. Blind stud standard, available aligned for Brick, Block, or Rail. Optional Single or Double Rail, Top/Bottom Rail, Bottom angle Bracket (min. 3/8"thick), Top or Bottom Stud (min.3/8"th). Tie-backs recommended for any Top & Bottom mounts on letters over 8"high - not included.

B. Letters under 15", drilled & tapped for 10-24 threaded studs. Thin strokes, 6-32 or 4-40 threaded studs.

C. Letters 15"+, drilled & tapped for 1/4-20 studs (5056 alloy Aluminum studs with Aluminum letters, 302 alloy Stainless Steel studs with Stainless or any red metal letters). Typical studs are 2"long – longer available upon request.

D. Metal spacer sleeves available upon request, standard or custom lengths available.

2.6 Fabrication

A. Letters shall be made of materials as indicated on the Drawings.

B. Letter style and height as indicated on the Drawings.

C. Letter finish as indicated on the Drawings.

D. Mounting as indicated on the Drawings. A mounting template designating stud locations is required for mounting all letters.

Part III – Execution

3.1 Installation

A. A qualified installer shall install Flat Cut Metal letters and logos. Additional structural support may be required on larger and heavier Letters & Logos. Stronger adhesives, such as Epoxy may be required to install with studs on heavier products.

3.2 Warranty

A. Letters should be guaranteed for twenty-five (25) years against defects.

3.3 Maintenance

- A. Cleaning as needed per manufacturer recommendations.

**END OF SECTION**

Method of Measurement: Building Decorative Metal for payment on a lump sum basis. All materials and work associated with the shelter building as shown on the plans and as described above shall be included for payment unless it is specifically included with a separate pay item.

Basis of Payment: This will be paid for at the lump sum price for BUILDING DECORATIVE METAL.

### **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.

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

Effective: February 1, 1996

Revised: January 1, 2007

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

Pipe materials shall meet the requirements of Sections 40 and 41-2.01 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", except PVC pipe will not be allowed. Ductile-Iron pipe shall meet the minimum requirements for Thickness Class 50.

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

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

### **TRAFFIC CONTROL AND PROTECTION (ARTERIALS)**

Effective: February 1, 1996

Revised: March 1, 2011

Specific traffic control plan details and Special Provisions have been prepared for this contract. This work shall include all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all traffic control devices required as indicated in the plans and as approved by the Engineer.

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

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

Basis of Payment: All traffic control and protection will be paid for at the contract lump sum price for TRAFFIC CONTROL AND PROTECTION (SPECIAL).

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

### **TRAFFIC CONTROL PLAN**

Effective: September 30, 1985

Revised: January 1, 2007

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

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

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

### **STANDARDS:**

701001-02	Off-Road Operations, 2L, 2W, More Than 15' (4.5M) Away
701006-05	Off-Road Operations, 2L, 2W, 15' (4.5M) to 24" (600MM) From Pavement Edge
701301-04	Lane Closure, 2L, 2W, Short Time Operations
701311-03	Lane Closure, 2L, 2W, Moving Operations – Day Only
701501-06	Urban Lane Closure, 2L, 2W, Undivided
701606-10	Urban Single Lane Closure, Multilane, 2-Way with Mountable Median
701701-10	Urban Lane Closure, Multilane Intersection
701801-06	Sidewalk Corner or Crosswalk Closure
701901-08	Traffic Control Devices

### **DETAILS:**

TC-10 – Traffic Control and Protection for Side Roads, Intersections and Driveways

TC-16 – Short Term Pavement Marking Letters and Symbols

### **SPECIAL PROVISIONS:**

Maintenance of Roadways  
Traffic Control and Protection (Arterials)  
Public Convenience and Safety (Dist. 1)  
Equipment Parking and Storage (BDE)  
Lights on Barricades (BDE)  
Temporary Pavement Marking (BDE)  
Traffic Control Devices – Cones (BDE)

## **ADJUSTMENTS AND RECONSTRUCTIONS**

Effective: March 15, 2011

Revise the first paragraph of Article 602.04 to read:

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

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

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

Revise Article 603.05 to read:

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

Revise Article 603.06 to read:

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

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

Revise the first sentence of Article 603.07 to read:

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

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

Effective: February 22, 2012

Revised: April 1, 2016

Add the following Section to the Standard Specifications:

### **“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT**

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

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

Item	Article/Section
(a) Coarse Aggregate .....	1004.07
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2 and 3) .....	1031

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

Note 2. RAP having 100 percent passing the 1 1/2 in (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradation CS 01 is used in lower lifts. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders. The final product shall not contain more than 40 percent by weight of RAP.

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".

**303.03 Equipment.** The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer. The calibration for the mechanical feeders shall have an accuracy of  $\pm 2.0$  percent of the actual quantity of material delivered.

**303.04 Soil Preparation.** The stability of the soil shall be according to the Department's Subgrade Stability Manual for the aggregate thickness specified.

**303.05 Placing Aggregate.** The maximum nominal lift thickness of aggregate gradation CS 01 shall be 24 in. (600 mm).

**303.06 Capping Aggregate.** The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When Reclaimed Asphalt Pavement (RAP) is used, it shall be crushed and screened where 100 percent is passing the 1 1/2 in. (37.5 mm) sieve and being well graded. RAP that has been fractionated to size will not be permitted for use in capping. Capping aggregate will not be required when the aggregate subgrade improvement is used as a cubic yard pay item for undercut applications. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

**303.07 Compaction.** All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

**303.08 Finishing and Maintenance of Aggregate Subgrade Improvement.** The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.



**303.09 Method of Measurement.** This work will be measured for payment according to Article 311.08.

**303.10 Basis of Payment.** This work will be paid for at the contract unit price per cubic yard (cubic meter) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.

Add the following to Section 1004 of the Standard Specifications:

**“1004.07 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete. The top 12 inches of the aggregate subgrade improvement shall be 3 inches of capping material and 9 inches of crushed gravel, crushed stone or crushed concrete. In applications where greater than 36 inches of subgrade material is required, rounded gravel, meeting the CS01 gradation, may be used beginning at a depth of 12 inches below the bottom of pavement.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials. Non-mechanically blended RAP may be allowed up to a maximum of 5.0 percent.
- (c) Gradation.
  - (1) The coarse aggregate gradation for total subgrade thicknesses of 12 in. (300 mm) or greater shall be CS 01.

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

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

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

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

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

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

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

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

## **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.

**FRICITION 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

Use	Mixture	Aggregates Allowed	
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>	
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.	

Use	Mixture	Aggregates Allowed	
		<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
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>	<i>With...</i>
		50% Crushed Gravel <sup>2/</sup> , Crushed Concrete <sup>3/</sup> , or Dolomite <sup>2/</sup>	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 IL-9.5	CA 11 <sup>1/</sup> CA 16, CA 13 <sup>3/</sup>
HMA Low ESAL	IL-19.0L IL-9.5L Stabilized Subbase or Shoulders	CA 11 <sup>1/</sup> CA 16
SMA <sup>2/</sup>	1/2 in. (12.5mm) Binder & Surface IL 9.5 Surface	CA13 <sup>3/</sup> , CA14 or CA16  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  $\leq$  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 I or Type 2. Material shall meet requirements noted herein and the actual dosage rate will be determined by the Engineer.

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

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

“(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 N<sub>design</sub> = 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				
	Voids in the Mineral Aggregate (VMA), % minimum			Voids Filled with Asphalt Binder (VFA), %
Ndesign	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 Ndesign specified; and POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, STONE MATRIX ASPHALT, of the mixture composition and Ndesign specified.”

**PUBLIC CONVIENENCE 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.”

## **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)	± 6 %
No. 8 (2.36 mm)	± 5 %
No. 30 (600 μm)	± 5 %
No. 200 (75 μm)	± 2.0 %
Asphalt Binder	± 0.3 %
$G_{mm}$	± 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.”

**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 1

STAGE / LOCATION	TYPE	DESCRIPTION	RESPONSIBLE AGENCY	ACTION
Stage 1, Prospect and Burlington, Station 12+75, 20’ RT	Electric Pole	Power Pole along east side of existing Prospect Avenue	ComEd	Remove and Relocate 5 days

**Pre-Stage:   0   Days Total Installation**  
**Stage 1:   5   Days Total Installation**  
**Stage 2:   0   Days Total Installation**

The following contact information is what was used during the preparation of the plans as provided by the Agency/Company responsible for resolution of the conflict.

Agency/Company Responsible to Resolve Conflict	Name of contact	Address	Phone	e-mail address
ComEd	Likowa Ndobedi	1 Lincoln Center, Oakbrook Terrace, IL	630-890-0883	Likowo.ndobedi@comed.com

**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 1

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER	ACTION
Stage 1, Burlington Avenue, 30' north of north railroad track	Fiber Optic	Underground Fiber Optic cable	CenturyLink	Watch and avoid

Stage 2

STAGE / LOCATION	TYPE	DESCRIPTION	OWNER	ACTION
Stage 2, Burlington Avenue, 30' north of north railroad track	Fiber Optic	Underground Fiber Optic cable	CenturyLink	Watch and avoid

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
Centurylink	Ryan Burgeson	1305 E Algonquin Rd. Arlington Heights, IL 60005	847-954-8213	ryan.burgeson@centurylink.com



Nicor	Bruce Koppang	1844 Ferry Road Naperville, IL 60563	630-388-3046	bkoppan@southernco.com
Comcast	Martha Gieras	688 Industrial Dr. Elmhurst, IL 60126	224-229-5864	martha_gieras@comcast.com
AT&T	Janet Ahern	1000 Commerce Drive Oak Brook, IL 60523	630-573-6414	ja1763@att.com
Flagg Creek Water	Jim Liubicich		630-323-3299 x6130	JLiubicich@fcwrd.org

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.

**GENERAL ELECTRICAL REQUIREMENTS**

Effective: June 1, 2016

This special provision replaces Articles 801.01 – 801.07, 801.09 – 801-16 of the Standard Specifications.

**Definition.** Codes, standards, and industry specifications cited for electrical work shall be by definition the latest adopted version thereof, unless indicated otherwise.

Materials by definition shall include electrical equipment, fittings, devices, motors, appliances, fixtures, apparatus, all hardware and appurtenances, and the like, used as part of, or in connection with, electrical installation.

**Standards of Installation.** Materials shall be installed according to the manufacturer's recommendations, the NEC, OSHA, the NESC, and AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

**Safety and Protection.** Safety and protection requirements shall be as follows.

**Safety.** Electrical systems shall not be left in an exposed or otherwise hazardous condition. All electrical boxes, cabinets, pole handholes, etc. which contain wiring, either energized or non-energized, shall be closed or shall have covers in place and be locked when possible, during nonworking hours.

**Protection.** Electrical raceway or duct openings shall be capped or otherwise sealed from the entrance of water and dirt. Wiring shall be protected from mechanical injury.

**Equipment Grounding Conductor.** All electrical systems, materials, and appurtenances shall be grounded. Good ground continuity throughout the electrical system shall be assured, even though every detail of the requirements is not specified or shown. Electrical circuits shall have a continuous insulated equipment grounding conductor. When metallic conduit is used, it shall be bonded to the equipment grounding conductor, but shall not be used as the equipment grounding conductor.

Detector loop lead-in circuits, circuits under 50 volts, and runs of fiber optic cable will not require an equipment grounding conductor.

Where connections are made to painted surfaces, the paint shall be scraped to fully expose metal at the connection point. After the connection is completed, the paint system shall be repaired to the satisfaction of the Engineer.

Bonding of all boxes and other metallic enclosures throughout the wiring system to the equipment grounding conductor shall be made using a splice and pigtail connection. Mechanical connectors shall have a serrated washer at the contact surface.

All connections to structural steel or fencing shall be made with exothermic welds. Care shall be taken not to weaken load carrying members. Where connections are made to epoxy coated reinforcing steel, the epoxy coating shall be sufficiently removed to facilitate a mechanical connection. The epoxy coating shall be repaired to the satisfaction of the Engineer. Where connections are made to insulated conductors, the connection shall be wrapped with at least four layers of electrical tape extended 6 in. (150 mm) onto the conductor insulation.

**Submittals.** At the preconstruction meeting, the Contractor shall submit a written listing of manufacturers for all major electrical and mechanical items. The list of manufacturers shall be binding, except by written request from the Contractor and approval by the Engineer. The request shall include acceptable reasons and documentation for the change.

Major items shall include, but not limited to the following:

Type of Work (discipline)	Item
All Electrical Work	Electric Service Metering Emergency Standby System Transformers Cable Unit Duct Splices Conduit Surge Suppression System
Lighting	Tower Pole Luminaire Foundation Breakaway Device Controllers Control Cabinet and Peripherals
ITS	Controller Cabinet and Peripherals CCTV Cameras Camera Structures Ethernet Switches Detectors Detector Loop Fiber Optic Cable

Within 30 calendar days after contract execution, the Contractor shall submit, for approval, one copy each of the manufacturer's product data (for standard products and components) and detailed shop drawings (for fabricated items). Submittals for the materials for each individual pay item shall be complete in every respect. Submittals which include multiple pay items shall have all submittal material for each item or group of items covered by a particular specification, grouped together and the applicable pay item identified. Various submittals shall, when taken together, form a complete coordinated package. A partial submittal will be returned without review unless prior written permission is obtained from the Engineer.

The submittal shall be properly identified by route, section, county, and contract number.

The Contractor shall have reviewed the submittal material and affixed his/her stamp of approval, with date and signature, for each individual item. In case of subcontractor submittal, both the subcontractor and the Contractor shall review, sign, and stamp their approval on the submittal.

Illegible print, incompleteness, inaccuracy, or lack of coordination will be grounds for rejection.

**Items from multiple disciplines shall not be combined on a single submittal and transmittal. Items for lighting, signals, surveillance and CCTV must be in separate submittals since they may be reviewed by various personnel in various locations.**

The Engineer will review the submittals for conformance with the design concept of the project according to Article 105.04 and the following. The Engineer will stamp the drawings indicating their status as "Approved", "Approved as Noted", "Disapproved", or "Information Only". Since

the Engineer's review is for conformance with the design concept only, it shall be the Contractor's responsibility to coordinate the various items into a working system as specified. The Contractor shall not be relieved from responsibility for errors or omissions in the shop, working, or layout drawings by the Engineer's approval thereof. The Contractor shall still be in full compliance with contract and specification requirements.

All submitted items reviewed and marked "Disapproved" or "Approved as Noted" shall be resubmitted by the Contractor in their entirety, unless otherwise indicated within the submittal comments.

Work shall not begin until the Engineer has approved the submittal. Material installed prior to approval by the Engineer, will be subject to removal and replacement at no additional cost to the Department.

Unless otherwise approved by the Engineer, all of the above items shall be submitted to the Engineer at the same time. Each item shall be properly identified by route, section, and contract number.

**Certifications.** When certifications are specified and are available prior to material manufacture, the certification shall be included in the submittal information. When specified and only available after manufacture, the submittal shall include a statement of intent to furnish certification. All certificates shall be complete with all appropriate test dates and data.

**Authorized Project Delay.** See Article 801.08

**Maintenance transfer and Preconstruction Inspection:** General. Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall request a maintenance transfer and preconstruction site inspection, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting and/or traffic control systems which may be affected by the work. The request for the maintenance transfer and preconstruction inspection shall be made no less than seven (7) calendar days prior to the desired inspection date. The maintenance transfer and preconstruction inspection shall:

Establish the procedures for formal transfer of maintenance responsibility required for the construction period.

Establish the approximate location and operating condition of lighting and/or traffic control systems which may be affected by the work

Marking of Existing Cable Systems. The party responsible for maintenance of any existing lighting and/or traffic control systems at the project site will, at the Contractor's request, mark and/or stake, once per location, all underground cable routes owned or maintained by the State. A project may involve multiple "locations" where separated electrical systems are involved (i.e. different controllers). The markings shall be taken to have a horizontal tolerance of at least 304.8 mm (one (1) foot) to either side.. The request for the cable locations and marking shall be made at the same time the request for the maintenance transfer and preconstruction inspection is made. The Contractor shall exercise extreme caution where existing buried cable runs are involved. The markings of existing systems are made strictly for assistance to the Contractor and this does not relieve the Contractor of responsibility for the repair or replacement of any cable run damaged in the course of his work, as specified elsewhere herein. Note that the contractor shall be entitled to

only one request for location marking of existing systems and that multiple requests may only be honored at the contractor's expense. No locates will be made after maintenance is transferred, unless it is at the contractor's expense.

Condition of Existing Systems. The Contractor shall conduct an inventory of all existing electrical system equipment within the project limits, which may be affected by the work, making note of any parts which are found broken or missing, defective or malfunctioning. Megger and load readings shall be taken for all existing circuits which will remain in place or be modified. If a circuit is to be taken out in its entirety, then readings do not have to be taken. The inventory and test data shall be reviewed with and approved by the Engineer and a record of the inventory shall be submitted to the Engineer for the record. Without such a record, all systems transferred to the Contractor for maintenance during construction shall be returned at the end of construction in complete, fully operating condition.”

**Marking Proposed Locations for Highway Lighting System.** The Contractor shall mark or stake the proposed locations of all poles, cabinets, junction boxes, pull boxes, handholes, cable routes, pavement crossings, and other items pertinent to the work. A proposed location inspection by the Engineer shall be requested prior to any excavation, construction, or installation work after all proposed installation locations are marked. Any work installed without location approval is subject to corrective action at no additional cost to the Department.

**Inspection of electrical work.** Inspection of electrical work shall be according to Article 105.12 and the following.

Before any splice, tap, or electrical connection is covered in handholes, junction boxes, light poles, or other enclosures, the Contractor shall notify and make available such wiring for the Engineer's inspection.

**Maintenance and Responsibility During Construction.**

Lighting Operation and Maintenance Responsibility. The scope of work shall include the assumption of responsibility for the continuing operation and maintenance of the existing, proposed, temporary, sign and navigation lighting, or other lighting systems and all appurtenances affected by the work as specified elsewhere herein. Maintenance of lighting systems is specified elsewhere and will be paid for separately

The proposed lighting system must be operational prior to opening the roadway to traffic unless temporary lighting exists which is designed and installed to properly illuminate the roadway.

Energy and Demand Charges. The payment of basic energy and demand charges by the electric utility for existing lighting which remains in service will continue as a responsibility of the Owner, unless otherwise indicated. Unless otherwise indicated or required by the Engineer duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously at the Owner's expense and lighting systems shall not be kept in operation during long daytime periods at the Owner's expense. Upon written authorization from the Engineer to place a proposed new lighting system in service, whether the system has passed final acceptance or not, (such as to allow temporary lighting to be removed), the Owner will accept responsibility for energy and demand charges for such lighting, effective the date of authorization. All other energy and demand payments to the utility shall be the responsibility of the Contractor until final acceptance.

**Damage to Electrical Systems.** Should damage occur to any existing electrical systems through the Contractor's operations, the Engineer will designate the repairs as emergency or non-emergency in nature.

Emergency repairs shall be made by the Contractor, or as determined by the Engineer, the Department, or its agent. Non-emergency repairs shall be performed by the Contractor within six working days following discovery or notification. All repairs shall be performed in an expeditious manner to assure all electrical systems are operational as soon as possible. The repairs shall be performed at no additional cost to the Department.

Lighting. An outage will be considered an emergency when three or more lights on a circuit or three successive lights are not operational. Knocked down materials, which result in a danger to the motoring public, will be considered an emergency repair.

Temporary aerial multi-conductor cable, with grounded messenger cable, will be permitted if it does not interfere with traffic or other operations, and if the Engineer determines it does not require unacceptable modification to existing installations.

**Testing.** Before final inspection, the electrical work shall be tested. Tests may be made progressively as parts of the work are completed, or may be made when the work is complete. Tests shall be made in the presence of the Engineer. Items which fail to test satisfactorily shall be repaired or replaced. Tests shall include checks of control operation, system voltages, cable insulation, and ground resistance and continuity.

The forms for recording test readings will be available from the Engineer in electronic format. The Contractor shall provide the Engineer with a written report of all test data including the following:

- Voltage Tests
- Amperage Tests
- Insulation Resistance Tests
- Continuity tests
- Detector Loop Tests

Lighting systems. The following tests shall be made.

- (1) Voltage Measurements. Voltages in the cabinet from phase to phase and phase to neutral, at no load and at full load, shall be measured and recorded. Voltage readings at the last termination of each circuit shall be measured and recorded.
- (2) Insulation Resistance. Insulation resistance to ground of each circuit at the cabinet, with all loads connected, shall be measured and recorded.

On tests of new cable runs, the readings shall exceed 50 megohms for phase and neutral conductors with a connected load over 20 A, and shall exceed 100 megohms for conductors with a connected load of 20 A or less.

On tests of cable runs which include cables which were existing in service prior to this contract, the resistance readings shall be the same or better than the readings recorded at the maintenance transfer at the beginning of the contract. Measurements shall be taken with a megohm meter approved by the Engineer.

- (3) Loads. The current of each circuit, phase main, and neutral shall be measured and recorded. The Engineer may direct reasonable circuit rearrangement. The current readings shall be within ten percent of the connected load based on material ratings.
- (4) Ground Continuity. Resistance of the system ground as taken from the farthest extension of each circuit run from the controller (i.e. check of equipment ground continuity for each circuit) shall be measured and recorded. Readings shall not exceed 2.0 ohms, regardless of the length of the circuit.
- (5) Resistance of Grounding Electrodes. Resistance to ground of all grounding electrodes shall be measured and recorded. Measurements shall be made with a ground tester during dry soil conditions as approved by the Engineer. Resistance to ground shall not exceed 10 ohms.

ITS. The following test shall be made in addition to the lighting system test above.

Detector Loops. Before and after permanently securing the loop in the pavement, the resistance, inductance, resistance to ground, and quality factor for each loop and lead-in circuit shall be tested. The loop and lead-in circuit shall have an inductance between 20 and 2500 microhenries. The resistance to ground shall be a minimum of 50 megohms under any conditions of weather or moisture. The quality factor (Q) shall be 5 or greater.

Fiber Optic Systems. Fiber optic testing shall be performed as required in the fiber optic cable special provision and the fiber optic splice special provision.

All test results shall be furnished to the Engineer seven working days before the date the inspection is scheduled.

**Contract Guarantee.** The Contractor shall provide a written guarantee for all electrical work provided under the contract for a period of six months after the date of acceptance with the following warranties and guarantees.

- (a) The manufacturer's standard written warranty for each piece of electrical material or apparatus furnished under the contract. The warranty for light emitting diode (LED) modules, including the maintained minimum luminance, shall cover a minimum of 60 months from the date of delivery.
- (b) The Contractor's written guarantee that, for a period of six months after the date of final acceptance of the work, all necessary repairs to or replacement of said warranted material or apparatus for reasons not proven to have been caused by negligence on the part of the user or acts of a third party shall be made by the Contractor at no additional cost to the Department.
- (c) The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of six months after final acceptance of the work.

The warranty for an uninterruptable power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years.

**Record Drawings.** Alterations and additions to the electrical installation made during the execution of the work shall be neatly and plainly marked in red by the Contractor on the full-size set of record drawings kept at the Engineer's field office for the project. These drawings shall be updated on a daily basis and shall be available for inspection by the Engineer during the course of the work. The record drawings shall include the following:

- Cover Sheet
- Summary of Quantities, electrical items only
- Legends, Schedules and Notes
- Plan Sheet
- Pertinent Details
- Single Line Diagram
- Other useful information useful to locate and maintain the systems.

Any modifications to the details shall be indicated. Final quantities used shall be indicated on the Summary of Quantities. Foundation depths used shall also be listed.

As part of the record drawings, the Contractor shall inventory all materials, new or existing, on the project and record information on inventory sheets provided by the Engineer.

The inventory shall include:

- Location of Equipment, including rack, chassis, slot as applicable.
- Designation of Equipment
- Equipment manufacturer
- Equipment model number
- Equipment Version Number
- Equipment Configuration
  - Addressing, IP or other
  - Settings, hardware or programmed
- Equipment Serial Number

The following electronic inventory forms are available from the Engineer:

- Lighting Controller Inventory
- Lighting Inventory
- Light Tower Inspection Checklist
- ITS Location Inventory

The information shall be entered in the forms; handwritten entries will not be acceptable; except for signatures. Electronic file shall also be included in the documentation.

When the work is complete, and seven days before the request for a final inspection, the set of contract drawings, stamped "**RECORD DRAWINGS**", shall be submitted to the Engineer for review and approval and shall be stamped with the date and the signature of the Contractor's



supervising Engineer or electrician. The record drawings shall be submitted in PDF format on CDROM as well as hardcopy's for review and approval.

In addition to the record drawings, PDF copies of the final catalog cuts which have been Approved and Approved as Noted with applicable follow-up shall be submitted along with the record drawings. The PDF files shall clearly indicate either by filename or PDF table of contents the respective pay item number. Specific part or model numbers of items which have been selected shall be clearly visible. Hard copies of the catalog are not required with this submittal.

The Contractor shall provide two sets of electronically produced drawings in a moisture proof pouch to be kept on the inside door of the controller cabinet or other location approved by the Engineer. These drawings shall show the final as-built circuit orientation(s) of the project in the form of a single line diagram with all luminaires numbered and clearly identified for each circuit.

Final documentation shall be submitted as a complete submittal package, i.e. record drawings, test results, inventory, etc. shall be submitted at the same time. Partial piecemeal submittals will be rejected without review. A total of five hardcopies and CDROMs of the final documentation shall be submitted.

GPS Documentation. In addition to the specified record drawings, the Contractor shall record GPS coordinates of the following electrical components being installed, modified or being affected in other ways by this contract:

- All light poles and light towers.
- Handholes and vaults.
- Junction Boxes
- Conduit roadway crossings.
- Controllers.
- Control Buildings.
- Structures with electrical connections, i.e. DMS, lighted signs.
- Electric Service locations.
- CCTV Camera installations.
- Roadway Surveillance installations.
- Fiber Optic Splice Locations.
- Fiber Optic Cables. Coordinates shall be recorded along each fiber optic cable route every 200 feet.
- All fiber optic slack locations shall be identified with quantity of slack cable included. When sequential cable markings are available, those markings shall be documented as cable marking into enclosure and marking out of enclosure.

Datum to be used shall be North American 1983.

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

1. District
2. Description of item
3. Designation

4. Use
5. Approximate station
6. Contract Number
7. Date
8. Owner
9. Latitude
10. Longitude
11. Comments

A spreadsheet template will be available from the Engineer for use by the Contractor.

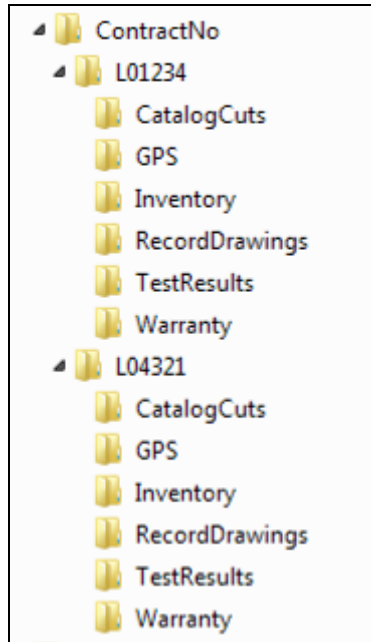
**Prior to the collection of data, the contractor shall provide a sample data collection of at least six data points of known locations to be reviewed and verified by the Engineer to be accurate within 20 feet.** Upon verification, data collection can begin. Data collection can be made as construction progresses, or can be collected after all items are installed. If the data is unacceptable the contractor shall make corrections to the data collection equipment and or process and submit the data for review and approval as specified. **Data collection prior to the submittal and review of the sample data of existing data points will be unacceptable and rejected.**

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

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

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

The documents on the CD shall be organized by the Electrical Maintenance Contract Management System (EMCMS) location designation. If multiple EMCMS locations are within the contract, separate folders shall be utilized for each location as follows:



Extraneous information not pertaining to the specific EMCMS location shall not be included in that particular folder and sub-folder.

The inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.

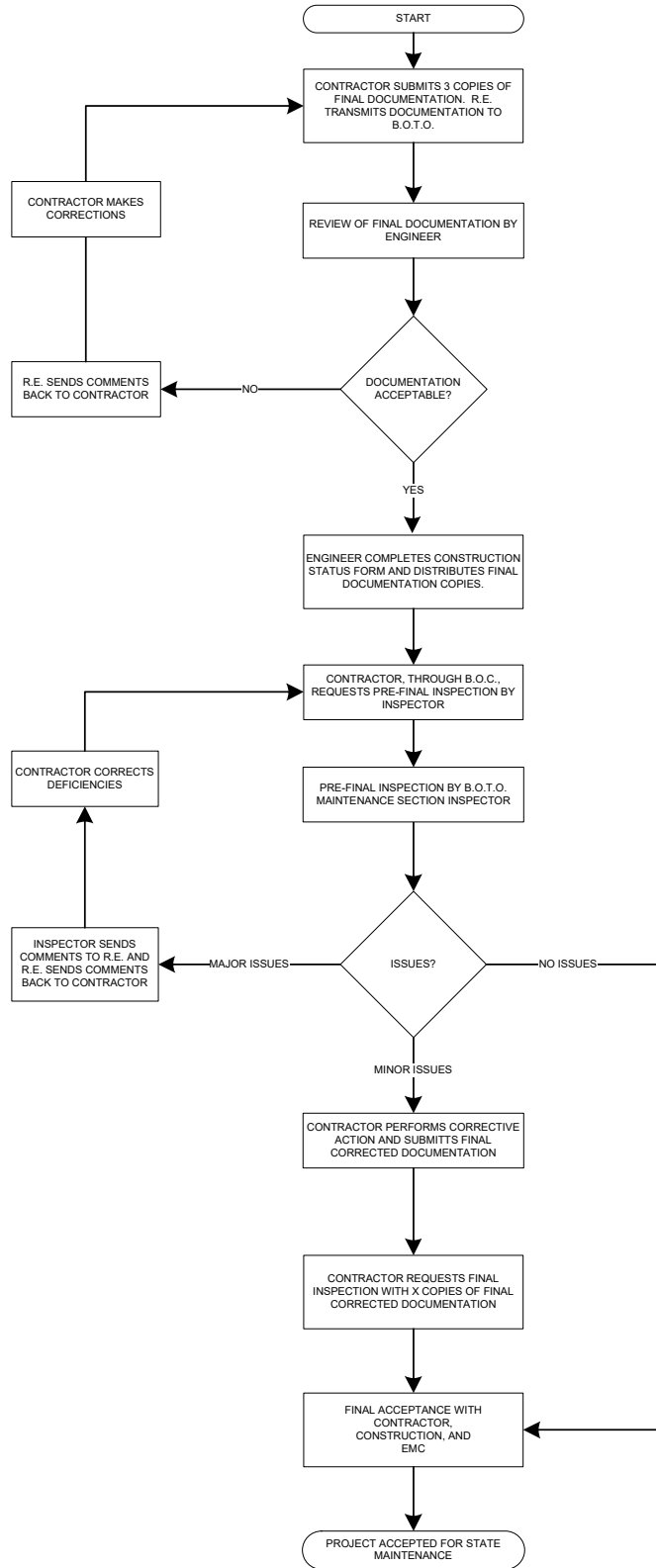
The Final Acceptance Documentation Checklist shall be completed and is contained elsewhere herein.

All CD's shall be labeled as illustrated in the CD Label Template contained herein.

**Acceptance.** Acceptance of electrical work will be given at the time when the Department assumes the responsibility to protect and maintain the work according to Article 107.30 or at the time of final inspection.

When the electrical work is complete, tested, and fully operational, the Contractor shall schedule an inspection for acceptance with the Engineer no less than seven working days prior to the desired inspection date. The Contractor shall furnish the necessary labor and equipment to make the inspection.

A written record of the test readings taken by the Contractor according to Article 801.13 shall be furnished to the Engineer seven working days before the date the inspection is scheduled. Inspection will not be made until after the delivery of acceptable record drawings, specified certifications, and the required guarantees.



### Final Acceptance Documentation Checklist

LOCATION	
Route	Common Name
Limits	Section
Contract #	County
Controller Designation(s)	EMC Database Location Number(s)

ITEM	Contractor (Verify)	Resident Engineer (Verify)
<b>Record Drawings</b> -Four hardcopies (11" x 17") -Scanned to two CD-ROMs	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<b>Field Inspection Tests</b> -Voltage -Amperage -Cable Insulation Resistance -Continuity -Controller Ground Rod Resistance (Four Hardcopies & scanned to two CD's)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>GPS Coordinates</b> -Excel file (Check Special Provisions, Excel file scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
<b>Job Warranty Letter</b> (Four Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
<b>Catalog Cut Submittals</b> -Approved & Approved as Noted (Scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
<b>Lighting Inventory Form</b> (Four Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
<b>Lighting Controller Inventory Form</b> (Four Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>
<b>Light Tower Inspection Form</b> (If applicable, Four Hardcopies & scanned to two CD's)	<input type="checkbox"/>	<input type="checkbox"/>

Four Hardcopies & scanned to two CD's shall be submitted for all items above. The CD ROM shall be labeled as shown in the example contained herein.

**General Notes:**

Record Drawings – The record drawings should contain contract cover sheet, summary of quantities showing all lighting pay item sheets, proposed lighting plans and lighting detail sheets. Submit hardcopies 11 x 17 size. Include the original “red-ink” copy. The red-ink markup should be neatly drawn. Record drawings copies should be legible. Blurred copies will not be acceptable. Temporary lighting plans and removal lighting plans should not be part of the set.

Field Inspection Tests – Testing should be done for proposed cables. Testing shall be per standard specifications. Forms shall be neatly filled out.

GPS Coordinates – Check special provisions “General Electrical Requirements”. Submit electronic “EXCEL” file.

Job Warranty Letter – See standard specifications.

Cutsheet Submittal – See special provisions “General Electrical Requirements”. Scan Approved and Approved as Noted cutsheets.

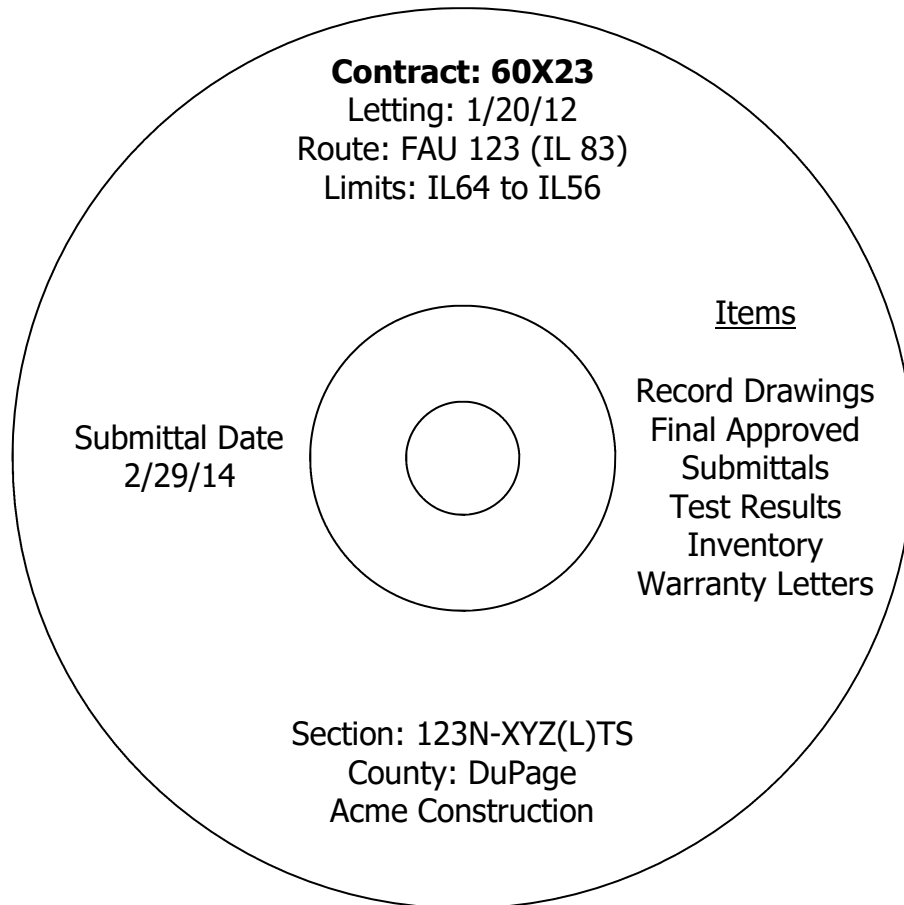
Lighting Inventory Form – Inventory form should include only proposed light poles, proposed light towers, proposed combination (traffic/light pole) lighting and proposed underpass luminaires.

Lighting Controller Inventory Form – Form should be filled out for only proposed lighting controllers.

Light Tower Safety Inspection Form – Form should be filled out for each proposed light tower.

CD LABEL FORMAT TEMPLATE.

**Label must be printed; hand written labels are unacceptable and will be rejected.**



**ELECTRIC SERVICE INSTALLATION**

Effective: January 1, 2012

**Description.** This item shall consist of all material and labor required to extend, connect or modify the electric services, as indicated or specified, which is over and above the work performed by the utility. Unless otherwise indicated, the cost for the utility work, if any, will be reimbursed to the Contractor separately under ELECTRIC UTILITY SERVICE CONNECTION. This item may apply to the work at more than one service location and each will be paid separately.

**Materials.** Materials shall be in accordance with the Standard Specifications.

## CONSTRUCTION REQUIREMENTS

**General.** The Contractor shall ascertain the work being provided by the electric utility and shall provide all additional material and work not included by other contract pay items required to complete the electric service work in complete compliance with the requirements of the utility.

No additional compensation will be allowed for work required for the electric service, even though not explicitly shown on the Drawings or specified herein

**Method Of Measurement.** Electric Service Installation shall be counted, each.

**Basis Of Payment.** This work will be paid for at the contract unit price each for **ELECTRIC SERVICE INSTALLATION** which shall be payment in full for the work specified herein.

### **ELECTRIC UTILITY SERVICE CONNECTION (COMED)**

Effective: January 1, 2012

**Description.** This item shall consist of payment for work performed by ComEd in providing or modifying electric service as indicated. THIS MAY INVOLVE WORK AT MORE THAN ONE ELECTRIC SERVICE. For summary of the Electrical Service Drop Locations see the schedule contained elsewhere herein.

## CONSTRUCTION REQUIREMENTS

**General.** It shall be the Contractor's responsibility to contact ComEd. The Contractor shall coordinate his work fully with the ComEd both as to the work required and the timing of the installation. No additional compensation will be granted under this or any other item for extra work caused by failure to meet this requirement. **Please contact ComEd, New Business Center Call Center, at 866 NEW ELECTRIC (1-866-639-3532) to begin the service connection process. The Call Center Representatives will create a work order for the service connection. The representative will ask the requestor for information specific to the request. The representative will assign the request based upon the location of project.**

The Contractor should make particular note of the need for the earliest attention to arrangements with ComEd for service. In the event of delay by ComEd, no extension of time will be considered applicable for the delay unless the Contractor can produce written evidence of a request for electric service within 30 days of execution.

**Method Of Payment.** The Contractor will be reimbursed to the exact amount of money as billed by ComEd for its services. Work provided by the Contractor for electric service will be paid separately as described under ELECTRIC SERVICE INSTALLATION. No extra compensation shall be paid to the Contractor for any incidental materials and labor required to fulfill the requirements as shown on the plans and specified herein.

For bidding purposes, this item shall be estimated as \$1,500.

**Basis Of Payment.** This work will be paid for at the contract lump sum price for **ELECTRIC UTILITY SERVICE CONNECTION** which shall be reimbursement in full for electric utility service charges.



Designers Note: The estimate of cost of service connections for bidding purposes shall be provided by the Designer or Design Consultant.

### **MAINTENANCE OF LIGHTING SYSTEMS**

Effective: March 1, 2017

Replace Article 801.11 and 801.12 of the Standard Specifications with the following:

Effective the date the Contractor's activities (electrical or otherwise) at the job site begin, the Contractor shall be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by the work until final acceptance or as otherwise determined by the Engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, the Contractor shall initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the Engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. During the maintenance preconstruction inspection, the party responsible for existing maintenance shall perform testing of the existing system in accordance with Article 801.13a. The Contractor shall request a date for the preconstruction inspection no less than fourteen (14) days prior to the desired date of the inspection.

The Engineer will document all test results and note deficiencies. All substandard equipment will be repaired or replaced by the existing maintenance contractor, or the Engineer can direct the Contractor to make the necessary repairs under Section 109.04.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. It remains the Contractor's responsibility to visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained. Contract documents shall indicate the circuit limits.

### **Maintenance of Existing Lighting Systems**

**Existing lighting systems.** Existing lighting systems shall be defined as any lighting system or part of a lighting system in service at the time of contract Letting. The contract drawings indicate the general extent of any existing lighting, but whether indicated or not, it remains the Contractor's responsibility to ascertain the extent of effort required for compliance with these specifications and failure to do so will not be justification for extra payment or reduced responsibilities.

#### **Extent of Maintenance.**

**Partial Maintenance.** Unless otherwise indicated, if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work, the Contractor needs only to maintain the affected circuits within the project limits. The project limits are defined as those limits indicated in the contract plans. Equipment outside of the project limits, on the affected circuits shall be maintained and paid for under Article 109.04. The affected circuits shall be

isolated by means of in-line waterproof fuse holders as specified elsewhere and as approved by the Engineer. The unaffected circuits and the controller will remain under the maintenance of the State.

**Full Maintenance.** If the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work, the Contractor shall maintain the entire controller and all associated circuits within the project limits. Equipment outside of the project limits shall be maintained and paid for under Article 109.04.

If the existing equipment is damaged by normal vehicular traffic, not contractor operations, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind with payment made for such equipment under Article 109.04. If the equipment damaged by any construction operations, not normal vehicular traffic, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind and the cost of the equipment shall be included in the cost of this pay item and shall not be paid for separately.

### **Maintenance of Proposed Lighting Systems**

**Proposed Lighting Systems.** Proposed lighting systems shall be defined as any lighting system or part of a lighting system, temporary or permanent, which is to be constructed under this contract regardless of the project limits indicated in the plans.

The Contractor shall be fully responsible for maintenance of all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, Contractor operations, vandalism, or other means. The potential cost of replacing or repairing any malfunctioning, damaged, or vandalized equipment shall be included in the bid price of this item and will not be paid for separately.

### **Lighting System Maintenance Operations**

The Contractor's responsibility shall include all applicable responsibilities of the Electrical Maintenance Contract, State of Illinois, Department of Transportation, Division of Highways, District One. These responsibilities shall include the maintenance of lighting units (including sign lighting), cable runs and lighting controls. In the case of a pole knockdown or sign light damage, the Contractor shall promptly clear the lighting unit and circuit discontinuity and restore the system to service. The equipment shall then be re-set by the contractor within the time limits specified herein.

If the existing equipment is damaged by normal vehicular traffic, not contractor operations, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind with payment made for such equipment under Article 109.04. If the equipment damaged by any construction operations, not normal vehicular traffic, is beyond repair and cannot be re-set, the contractor shall replace the equipment in kind and the cost of the equipment shall be included in the cost of this pay item and shall not be paid for separately.

Responsibilities shall also include weekly night-time patrol of the lighting system, with patrol reports filed immediately with the Engineer and with deficiencies corrected within 24 hours of the patrol. Patrol reports shall be presented on standard forms as designated by the Engineer.

Uncorrected deficiencies may be designated by the Engineer as necessitating emergency repairs as described elsewhere herein.

The following chart lists the maximum response, service restoration, and permanent repair time the Contractor will be allowed to perform corrective action on specific lighting system equipment.

INCIDENT OR PROBLEM	SERVICE RESPONSE TIME	SERVICE RESTORATION TIME	PERMANENT REPAIR TIME
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Radio problem	1 hour	4 hours	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey or reported to EMC	na	na	7 Calendar days
Navigation light outage	na	na	24 hours

- **Service Response Time** -- amount of time from the initial notification to the Contractor until a patrolman physically arrives at the location.
- **Service Restoration Time** – amount of time from the initial notification to the Contractor until the time the system is fully operational again (In cases of motorist caused damage the undamaged portions of the system are operational.)
- **Permanent Repair Time** – amount of time from initial notification to the Contractor until the time permanent repairs are made if the Contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the Department reserves the right to assign any work not completed within this timeframe to the Electrical Maintenance Contractor. All costs associated to repair this uncompleted work shall be the responsibility of the Contractor. Failure to pay these costs to the Electrical Maintenance Contractor within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from any monies owed to the Contractor. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Maintenance Contractor being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

Damage caused by the Contractor's operations shall be repaired at no additional cost to the Contract.

### **Operation of Lighting**

The lighting shall be operational every night, dusk to dawn. Duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Lighting systems shall not be kept in operation during long daytime periods.

### **Method of Measurement**

The contractor shall demonstrate to the satisfaction of the Engineer that the lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request. Months in which the lighting systems are not maintained and not operational will not be paid. Payment shall not be made retroactively for months in which lighting systems were not operational.

**Basis of Payment.** Maintenance of lighting systems shall be paid for at the contract unit price per calendar month for **MAINTENANCE OF LIGHTING SYSTEM.**

### **UNIT DUCT**

Effective: January 1, 2012

Revise the first paragraph of Article 810.04 to read:

“The unit duct shall be installed at a minimum depth of 30-inches (760 mm) unless otherwise directed by the Engineer.”

Revise Article 1088.01(c) to read:

“(c) Coilable Nonmetallic Conduit.

General:

The duct shall be a plastic duct which is intended for underground use and which can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance. The duct shall be a plastic duct which is intended for underground use and can be manufactured and coiled or reeled in continuous transportable lengths and uncoiled for further processing and/or installation without adversely affecting its properties of performance.

The duct shall be made of high density polyethylene which shall meet the requirements of ASTM D 2447, for schedule 40. The duct shall be composed of black high density polyethylene meeting the requirements of ASTM D 3350, Class C, Grade P33. The wall thickness shall be in accordance with Table 2 for ASTM D 2447.

The duct shall be UL Listed per 651-B for continuous length HDPE coiled conduit. The duct shall also comply with NEC Article 354.100 and 354.120.

Submittal information shall demonstrate compliance with the details of these requirements.

Dimensions:

Duct dimensions shall conform to the standards listed in ASTM D2447. Submittal information shall demonstrate compliance with these requirements.

Nominal Size		Nominal I.D.		Nominal O.D.		Minimum Wall	
mm	in	mm	in	mm	in	mm	in
31.75	1.25	35.05	1.380	42.16	1.660	3.556 +0.51	0.140 +0.020
38.1	1.50	40.89	1.610	48.26	1.900	3.683 +0.51	0.145 +0.020

Nominal Size		Pulled Tensile	
mm	in	N	lbs
31.75	1.25	3322	747
38.1	1.50	3972	893

Marking:

As specified in NEMA Standard Publication No. TC-7, the duct shall be clearly and durably marked at least every 3.05 meters (10 feet) with the material designation (HDPE for high density polyethylene), nominal size of the duct and the name and/or trademark of the manufacturer.

Performance Tests:

Polyethylene Duct testing procedures and test results shall meet the requirements of UL 651. Certified copies of the test report shall be submitted to the Engineer prior to the installation of the duct. Duct crush test results shall meet or exceed the following requirements:

Duct Diameter		Min. force required to deform sample 50%	
mm	in	N	lbs
35	1.25	4937	1110
41	1.5	4559	1025

**AVAILABLE REPORTS**

- No project specific reports were prepared.

When applicable, the following checked reports and record information is available for Bidders' reference upon request:

- Record Structural plans
- Preliminary Site Investigation (PSI)
- Preliminary Environmental Site Assessment (PESA)
- Soils/Geotechnical Report
- Boring Logs
- Pavement Cores

- Location Drainage Study (LDS)
- Hydraulic Report
- Noise Analysis
- Other: \_\_\_\_\_

Those seeking these reports should request access from:

David Landeweer (Project Manager)  
TERRA Engineering  
225 West Ohio Street, 4<sup>th</sup> Floor  
Chicago, IL 60654  
312-467-0123  
8:00 AM to 4:30 PM

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.

# DUPAGE COUNTY STORMWATER MANAGEMENT CERTIFICATE

PERMIT NO: 19110004

PROJECT: DOWNTOWN REVITALIZATION PROJECT

PROPERTY ADDRESS: 1 N PROSPECT AVE

PROPERTY OWNER: VILLAGE OF CLARENDON HILLS

CONTRACTOR: TERRA ENGINEER



DAN UNGERLEIDER, AICP  
COMMUNITY DEVELOPMENT DIRECTOR  
VILLAGE OF CLARENDON HILLS, ILLINOIS



# DUPAGE COUNTY STORMWATER MANAGEMENT CERTIFICATION APPLICATION (1/2)

<b>1. Community and Status</b> Clarendon Hills <input type="checkbox"/> Non <input checked="" type="checkbox"/> Partial <input type="checkbox"/> Complete	<b>2. Date of Application</b> 4/4/2019	<b>3. Stormwater Application No.</b> (to be assigned by community) 1 9 1 1 0 0 0 4	<b>4. DuPage County Tracking No.</b>												
<b>5. Applicant:</b> Name: Alex Heidtke Company Name: TERRA Engineering, Ltd. Address: 225 W Ohio Street, 4th Floor City, ST, Zip: Chicago, IL 60657 Phone: 312-467-0123 Email: aheadtke@terraengineering.com		<b>6. Owner:</b> Name: Dan Ungerleider Company Name: Village of Clarendon Hills Address: 1 N Prospect Avenue City, ST, Zip: Clarendon Hills, IL 60514 Phone: 630-286-5400 Email: dungerleider@clarendonhills.us													
<b>7. Description of Proposed Development:</b> Streetscape and train station improvements on Prospect, Ann, Golf, and Burlington Avenues including train station, shelter and canopy construction, road resurfacing, parking lot resurfacing, sidewalks, and associated utilities and stormwater management facilities															
<b>8. Location of Development:</b> Address: 1 S Prospect Avenue  Municipality: Clarendon Hills Watershed Planning Area & Trlb: Flagg Creek		<b>9. Legal Description</b>  <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">11</td> <td style="text-align: center;">38N</td> <td style="text-align: center;">11E</td> </tr> <tr> <td style="text-align: center;">¼ Section</td> <td style="text-align: center;">Township</td> <td style="text-align: center;">Range</td> </tr> <tr> <td style="text-align: center;">PIN 09</td> <td style="text-align: center;">- 11 - 502</td> <td style="text-align: center;">- 006</td> </tr> <tr> <td style="text-align: center;">PIN</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> </table>		11	38N	11E	¼ Section	Township	Range	PIN 09	- 11 - 502	- 006	PIN	-	-
11	38N	11E													
¼ Section	Township	Range													
PIN 09	- 11 - 502	- 006													
PIN	-	-													
<b>10. Check all of the conditions which apply:</b> <input type="checkbox"/> Flood Plain <input type="checkbox"/> Stormwater Detention <input checked="" type="checkbox"/> Best Management Practices <input checked="" type="checkbox"/> Soil Erosion & Sediment Control <input type="checkbox"/> Wetland <input type="checkbox"/> Wetland Buffer <input type="checkbox"/> Riparian Buffer															
<b>11. Acknowledgement of On-Site Infiltration PCBMPs</b> I acknowledge that I have used my best effort to identify zones for which on-site infiltration are prohibited for Post Construction Best Management Practices (PCBMPs) in accordance with the Ordinance (15-63.B) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border-bottom: 1px solid black;">                      Signature of Applicant                 </td> <td style="width: 35%; border-bottom: 1px solid black;">                     Alex Heidtke                      Print Name                 </td> <td style="width: 30%; border-bottom: 1px solid black;">                     4/4/19                      Date                 </td> </tr> </table>				Signature of Applicant	Alex Heidtke Print Name	4/4/19 Date									
Signature of Applicant	Alex Heidtke Print Name	4/4/19 Date													
<b>12. Freedom of Information Act (FOIA)</b> I acknowledge that all architects' drawings, engineers' technical submissions and other construction-related technical documents containing stormwater management information submitted with this application may be made available for inspection or copying by the County, notwithstanding 5 ILCS 140/7(1)(k), upon the written request for such materials. Such productions will be restricted to the following parties: i) the Applicant ii) any subsequent owner of the subject property; or iii) any governmental unit having planning or drainage jurisdiction within 1 and ½ mile of the subject property. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border-bottom: 1px solid black;">                      Signature of Applicant                 </td> <td style="width: 35%; border-bottom: 1px solid black;">                     Alex Heidtke                      Print Name                 </td> <td style="width: 30%; border-bottom: 1px solid black;">                     4/4/19                      Date                 </td> </tr> <tr> <td style="width: 35%; border-bottom: 1px solid black;">                      Signature of Owner                 </td> <td style="width: 35%; border-bottom: 1px solid black;">                     Dan Ungerleider                      Print Name                 </td> <td style="width: 30%; border-bottom: 1px solid black;">                     4-4-2019                      Date                 </td> </tr> </table>				Signature of Applicant	Alex Heidtke Print Name	4/4/19 Date	Signature of Owner	Dan Ungerleider Print Name	4-4-2019 Date						
Signature of Applicant	Alex Heidtke Print Name	4/4/19 Date													
Signature of Owner	Dan Ungerleider Print Name	4-4-2019 Date													
<b>13. Statement of Opinion for Minimum Criteria for Stormwater Management</b> I am a Professional Engineer under the employment of the Applicant. It is my professional opinion that the development meets the minimum criteria for stormwater management in accordance with the Ordinance (15-36) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border-bottom: 1px solid black;">                      Signature of Professional Engineer                 </td> <td style="width: 35%; border-bottom: 1px solid black;">                     Alex Heidtke                      Print Name                 </td> <td style="width: 30%; border-bottom: 1px solid black;">                     4/4/19                      Date                 </td> </tr> </table>				Signature of Professional Engineer	Alex Heidtke Print Name	4/4/19 Date									
Signature of Professional Engineer	Alex Heidtke Print Name	4/4/19 Date													

# DUPAGE COUNTY STORMWATER MANAGEMENT CERTIFICATION APPLICATION (2/2)

<b>Community Tracking No:</b> <u>19110004</u>	<b>DuPage County Tracking No:</b> _____
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**14. Statement of Opinion for Presence of Flood Plain, Wetlands, and Buffers (15-47-A.5)**

<input type="checkbox"/> I acknowledge the presence of flood plain. <input checked="" type="checkbox"/> I deny the presence of flood plain.	<input type="checkbox"/> I acknowledge the presence of wetlands. <input checked="" type="checkbox"/> I deny the presence of wetlands.	<input type="checkbox"/> I acknowledge the presence of buffers. <input checked="" type="checkbox"/> I deny the presence of buffers.
<u>Alex Heidtke</u> <u>4/4/19</u> Signature of Qualified Professional      Date Alex Heidtke Printed Name	<u>Alex Heidtke</u> <u>4/4/19</u> Signature of Qualified Professional      Date Alex Heidtke Printed Name	<u>Alex Heidtke</u> <u>4/4/19</u> Signature of Qualified Professional      Date Alex Heidtke Printed Name

**15. Soil Erosion & Sediment Control Submittal Requirements (15-50.B)**  
 (For developments with less than 1 acre of land disturbance that are not part of a larger common plan)

I certify that the development meets the soil erosion and sediment control design criteria found in Article VII have been met.

\_\_\_\_\_  
 Signature of Qualified Designer      Print Name      Date

**16. Soil Erosion & Sediment Control Requirements (15-59.W)** (For developments with land disturbing activities greater than 1 acre)

I acknowledge that the site complies with the IEPA NPDES ILR10 Permit.

Alex Heidtke      Alex Heidtke      4/4/19  
 Signature of Applicant      Print Name      Date

**17. Acknowledgement of Required As-Built Plans (15-47.B)**

I acknowledge that a record drawing signed by either a Professional Engineer or a Professional Land Surveyor depicting the as-constructed size, rim, and invert elevations of pipes, stormwater structures and culverts, and contours and flood storage volumes of all required basins of the major stormwater systems and minor stormwater systems shall be submitted for review and approval upon completion of the stormwater facilities.

Alex Heidtke      Alex Heidtke      4/4/19  
 Signature of Owner      Print Name      Date

**18. Intentional Misrepresentation Under Penalty of Perjury**

I declare that I have examined and/or made this application and rider, and it is true and correct to the best of my knowledge and belief. I realize that the information that I have affirmed hereon forms a basis for the issuance of the stormwater management certification(s) herein applied for and approval of plans in connection therewith shall not be construed to permit any construction upon said premises or use thereof in violation of any provision of any applicable ordinance or to excuse the owner or his successors in title from complying therewith. The Owner and Applicant each understand and agree to construct said improvement in compliance with all provisions of the applicable ordinances.

Alex Heidtke      Alex Heidtke      4/4/19  
 Signature of Applicant      Print Name      Date

Dan Ungerleider      Dan Ungerleider      4-4-2019  
 Signature of Owner      Print Name      Date

**DO NOT WRITE BELOW THIS LINE**

<b>19. Security (15-54)</b> Stormwater Facilities \$ _____ Wetlands/Natural Area \$ _____ SE/SC \$ _____ Total \$ _____	<b>20. Stormwater Fees</b> Community Review \$ _____ DCSM Review \$ _____ Fee-in-Lieu \$ _____ Wetland      \$ _____ BMP	<b>Seal/Stamp</b> Certifications expire December 31 <sup>st</sup> of the third year of Certification or Authorization, whichever is earlier.
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**21. Final Approvals** (See Certification letter for special conditions and general conditions.)

Community Certification      4/11/19      Dan Ungerleider  
 Date      Approved by/Title

County Authorization      \_\_\_\_\_  
 Date      Approved by/Title



Storm Water Pollution Prevention Plan

Route MUN 1003
Section 16-00045-00-MS
County DuPage

Marked Rte. Prospect Avenue
Project No. PKDA(808)
Contract No. 61F85

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

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

Dan Ungerleider
Print Name
Director Community Development
Title
Village of Clarendon Hills
Agency

Signature
6/24/19
Date

Note: Guidance on preparing each section of BDE 2342 can be found in Chapter 41 of the IDOT Bureau of Design and Environment Manual. Chapter 41 and this form also reference the IDOT Drainage Manual which should be readily available.

I. Site Description:

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

The project is located in the downtown area of the Village of Clarendon Hills, DuPage County, Illinois. The project location consists of streetscape improvements to Prospect Avenue between Railroad Avenue and Burlington Avenue, Burlington Avenue between Prospect Avenue and Golf Avenue, and Golf Avenue north from Burlington Avenue. Latitude = 41.797373, Longitude = -87.954721. Section 11, Township 38 North, Range 11 East.

B. Provide a description of the construction activity which is the subject of this plan. Include the number of construction stages, drainage improvements, in-stream work, installation, maintenance, removal of erosion measures, and permanent stabilization:

The project consists of roadway resurfacing, pavement removal, sidewalk removal and replacement, landscaping, removal of an existing shelter and replacement with a new warming shelter for train passengers, installation of bioretention basins, and temporary erosion control measures. New drainage structures will be installed along the new curb and gutter line as well as at the bioretention basins along with new lateral storm sewers to connect the new structures to the mainline storm sewer. Temporary erosion control features to be utilized include inlet filters, perimeter erosion barrier and temporary erosion control seeding. Permanent stabilization in unpaved areas will consist of sod and decorative plantings.

C. Provide the estimated duration of this project:

Three months.

D. The total area of the construction site is estimated to be 2.0 acres.

The total area of the site estimated to be disturbed by excavation, grading or other activities is 2.0 acres.

E. The following are weighted averages of the runoff coefficient for this project before and after construction activities are completed (See Section 4-102 of the IDOT Drainage Manual):

Existing runoff coefficient = 0.8. Proposed runoff coefficient = 0.8

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

The soils within the project limits consist of Map Unit Symbol 805B, Orthents, clayey, undulating. Slopes range from between 1 and 6 percent.

- G. If wetlands were delineated for this project, provide an extent of wetland acreage at the site (See Phase I report):

No wetlands are present without the project limits.

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

The project consists primarily of impervious pavement and sidewalk with limited erosive areas.

- 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 slopes, etc.):

Stage 1 of the project consists of the resurfacing, pavement widening and pavement removal of the south leg of Golf Avenue. Sidewalk will be removed and replaced within this area. During Stage 2, the existing wouthwest leg of Golf Avenue pavement will be removed and replaced with earth. Regrading of the front lawn of Village Hall will also be constructed in this stage. Additional drainage structures, new sidewalk, and bioretention basins will be installed in this area north of Burlington Avenue. After placement of earth and topsoil, the area will be seeded with temporary erosion control seeding. Stage 3 of the project consists of the completion of the pavement on the south side of Burlington Avenue along with the installation of bioretention basins, new drainage structures, and the removal and replacement of sidewalk within this area. After grading and the placement of topsoil, the area will be seeded with temporary erosion control seeding.

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

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

The Village of Clarendon Hills.

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

The Village of Clarendon Hills.

- M. The following is a list of receiving water(s) and the ultimate receiving water(s) for this site. In addition, include receiving waters that are listed as Biologically Significant Streams by the IDNR. The location of the receiving waters can be found on the erosion and sediment control plans:

Flag Creek. It is not a biologically significant stream.

- N. Describe areas of the site that are to be protected or remain undisturbed. These areas may include steep slopes (i.e., 1:3 or steeper), highly erodible soils, streams, stream buffers, specimen trees, natural vegetation, nature preserves, etc. Include any commitments or requirements to protect adjacent wetlands.

For any storm water discharges from construction activities within 50-feet of Waters of the US (except for activities for water-dependent structures authorized by a Section 404 permit, describe: a) How a 50-foot undisturbed natural buffer will be provided between the construction activity and the Waters of the United States, or b) How additional erosion and sediment controls will be provided within that area.

There are no Waters of the US nearby. There are no steep slopes, highly erodible soils, streams or stream buffers, specimen trees, natural vegetation, natures preserves or other similar areas within or near the project limits.

- O. Per the Phase I document, the following sensitive environmental resources are associated with this project and may have the potential to be impacted by the proposed development. Further guidance on these resources is available in Section 41-4 of the BDE Manual.

303(d) Listed receiving waters for suspended solids, turbidity, or siltation

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

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:

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

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

- Applicable Federal, Tribal, State or Local Programs
- Floodplain
- Historic Preservation
- Receiving waters with Total Maximum Daily Load (TMDL) for sediment, total suspended solids, turbidity or siltation

TMDL (fill out this section if checked above)

The name(s) of the listed water body:

Provide a description of the erosion and sediment control strategy that will be incorporated into the site design that is consistent with the assumptions and requirements of the TMDL:

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

- Threatened and Endangered Species/Illinois Natural Areas (INAI)/Nature Preserves
- Other
- Wetland

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

- |  |  |
|--|--|
| <input type="checkbox"/> Antifreeze / Coolants   | <input checked="" type="checkbox"/> Solid Waste Debris                               |
| <input checked="" type="checkbox"/> Concrete   | <input type="checkbox"/> Solvents  |
| <input checked="" type="checkbox"/> Concrete Curing Compounds                                      | <input checked="" type="checkbox"/> Waste water from cleaning construction equipment |
| <input checked="" type="checkbox"/> Concrete Truck Waste   | <input type="checkbox"/> Other (specify)   |
| <input checked="" type="checkbox"/> Fertilizers / Pesticides                                       | <input type="checkbox"/> Other (specify)   |
| <input checked="" type="checkbox"/> Paints   | <input type="checkbox"/> Other (specify)   |
| <input checked="" type="checkbox"/> Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids) | <input type="checkbox"/> Other (specify)   |
| <input checked="" type="checkbox"/> Soil Sediment  | <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 checked="" type="checkbox"/> Erosion Control Blanket / Mulching | <input type="checkbox"/> Temporary Turf (Seeding, Class 7) |
| <input type="checkbox"/> Geotextiles                                   | <input type="checkbox"/> Temporary Mulching                |
| <input checked="" type="checkbox"/> Permanent Seeding                  | <input type="checkbox"/> Vegetated Buffer Strips           |
| <input type="checkbox"/> Preservation of Mature Vegetation             | <input type="checkbox"/> Other (specify)                   |
| <input checked="" type="checkbox"/> Protection of Trees                | <input type="checkbox"/> Other (specify)                   |
| <input checked="" type="checkbox"/> Sodding                            | <input type="checkbox"/> Other (specify)                   |
| <input checked="" type="checkbox"/> Temporary Erosion Control Seeding  | <input type="checkbox"/> Other (specify)                   |

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

Where possible, stabilization of the initial Stage should be completed before work is moved to subsequent stages. Those trees which can be preserved are identified on the Removal Plan. Temporary Erosion Control Seeding is specified for temporary erosion and sediment control for all disturbed ground surfaces that are not receiving paved surface. Erosion Control Blanket is specified where relatively flat or mild ditch slopes are present. Sodding and permanent seeding will be placed as soon as possible after placement of the final topsoil.

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

Sodding is specified for all lawn areas. Seeding and plantings will be placed in the bioretention areas. Tree plantings will take place where shown on the Landscaping drawings.

C. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following structural practices will be used for this project:

- |   |  |
|---|--|
| <input type="checkbox"/> Aggregate Ditch                      | <input type="checkbox"/> Stabilized Construction Exits |
| <input type="checkbox"/> Concrete Revetment Mats              | <input type="checkbox"/> Stabilized Trench Flow        |
| <input type="checkbox"/> Dust Suppression                     | <input type="checkbox"/> Slope Mattress                |
| <input type="checkbox"/> Dewatering Filtering                 | <input type="checkbox"/> Slope Walls                   |
| <input type="checkbox"/> Gabions                              | <input type="checkbox"/> Temporary Ditch Check         |
| <input type="checkbox"/> In-Stream or Wetland Work            | <input type="checkbox"/> Temporary Pipe Slope Drain    |
| <input type="checkbox"/> Level Spreaders                      | <input type="checkbox"/> Temporary Sediment Basin      |
| <input type="checkbox"/> Paved Ditch                          | <input type="checkbox"/> Temporary Stream Crossing     |
| <input type="checkbox"/> Permanent Check Dams                 | <input type="checkbox"/> Turf Reinforcement Mats       |
| <input checked="" type="checkbox"/> Perimeter Erosion Barrier | <input type="checkbox"/> Other (specify)               |
| <input type="checkbox"/> Permanent Sediment Basin             | <input type="checkbox"/> Other (specify)               |
| <input type="checkbox"/> Retaining Walls                      | <input type="checkbox"/> Other (specify)               |
| <input type="checkbox"/> Riprap                               | <input type="checkbox"/> Other (specify)               |
| <input type="checkbox"/> Rock Outlet Protection               | <input type="checkbox"/> Other (specify)               |

- |                                     |                              |                          |                 |
|-------------------------------------|------------------------------|--------------------------|-----------------|
| <input type="checkbox"/>            | Sediment Trap                | <input type="checkbox"/> | Other (specify) |
| <input checked="" type="checkbox"/> | Storm Drain Inlet Protection | <input type="checkbox"/> | Other (specify) |

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

Perimeter Erosion Barrier will be placed at all downslope earth areas to prevent unfiltered stormwater from flowing onto pavement. Inlet filters will be placed at all open lid drainage structures within the project limits.

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

The temporary erosion control devices will be removed once sod has placed and a permanent ground cover established.

**D. Treatment Chemicals**

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

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

**E. Permanent (i.e., Post-Construction) 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 based on the technical guidance in Chapter 41 (Construction Site Storm Water Pollution Control) of the IDOT Bureau of Design and Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

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

Description of permanent storm water management controls:

Sodding will be placed in all lawn areas. Seeding and planting of bioretention areas will be placed upon grading of those locations to help filter stormwater runoff and promote infiltration.

**F. Approved State or Local Laws:** The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under the Permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

The project has been designed in accordance with the Village of Clarendon Hills and DuPage County Stormwater Ordinance.

- G. **Contractor Required Submittals:** Prior to conducting any professional services at the site covered by this plan, the Contractor and each subcontractor responsible for compliance with the permit shall submit to the Resident Engineer a Contractor Certification Statement, BDE 2342a.
1. The Contractor shall provide a construction schedule containing an adequate level of detail to show major activities with implementation of pollution prevention BMPs, including the following items:
    - Approximate duration of the project, including each stage of the project
    - Rainy season, dry season, and winter shutdown dates
    - Temporary stabilization measures to be employed by contract phases
    - Mobilization timeframe
    - Mass clearing and grubbing/roadside clearing dates
    - Deployment of Erosion Control Practices
    - Deployment of Sediment Control Practices (including stabilized construction entrances/exits)
    - Deployment of Construction Site Management Practices (including concrete washout facilities, chemical storage, refueling locations, etc.)
    - Paving, saw-cutting, and any other pavement related operations
    - Major planned stockpiling operations
    - Timeframe for other significant long-term operations or activities that may plan non-storm water discharges such as dewatering, grinding, etc.
    - Permanent stabilization activities for each area of the project
  2. During the pre-construction meeting, 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:
    - Temporary Ditch Checks - Identify what type and the source of Temporary Ditch Checks that will be installed as part of the project. The installation details will then be included with the SWPPP.
    - Vehicle Entrances and Exits – Identify type and location of stabilized construction entrances and exits to be used and how they will be maintained.
    - Material Delivery, Storage and Use – Discuss where and how materials including chemicals, concrete curing compounds, petroleum products, etc. will be stored for this project.
    - Stockpile Management – Identify the location of both on-site and off-site stockpiles. Discuss what BMPs will be used to prevent pollution of storm water from stockpiles.
    - Waste Disposal – Discuss methods of waste disposal that will be used for this project.
    - Spill Prevention and Control – Discuss steps that will be taken in the event of a material spill (chemicals, concrete curing compounds, petroleum, etc.)
    - Concrete Residuals and Washout Wastes – Discuss the location and type of concrete washout facilities to be used on this project and how they will be signed and maintained.
    - Litter Management – Discuss how litter will be maintained for this project (education of employees, number of dumpsters, frequency of dumpster pick-up, etc.).
    - Vehicle and Equipment Fueling – Identify equipment fueling locations for this project and what BMPs will be used to ensure containment and spill prevention.
    - Vehicle and Equipment Cleaning and Maintenance – Identify where equipment cleaning and maintenance locations for this project and what BMPs will be used to ensure containment and spill prevention.
    - Dewatering Activities – Identify the controls which will be used during dewatering operations to ensure sediments will not leave the construction site.
    - Polymer Flocculants and Treatment Chemicals – Identify the use and dosage of treatment chemicals and provide the Resident Engineer with Material Safety Data Sheets. Describe procedures on how the chemicals will be used and identify who will be responsible for the use and application of these chemicals. The selected individual must be trained on the established procedures.
    - Additional measures indicated in the plan.

### III. Maintenance:

When requested by the Contractor, the Resident Engineer will provide general maintenance guides (e.g., IDOT Erosion and Sediment Control Field Guide) to the Contractor for the practices associated with this project. Describe how all items will be checked for structural integrity, sediment accumulation and functionality. Any damage or undermining shall be repaired immediately. Provide specifics on how repairs will be made. The following additional procedures will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures



and other protective measures identified in this plan. It will be the Contractor's responsibility to attain maintenance guidelines for any manufactured BMPs which are to be installed and maintained per manufacture's specifications.

The Resident Engineer will perform timely inspections of the Contractor's erosion control facilities on a regular basis to ensure conformance with the DuPage County, Village, and IDOT requirements.

#### **IV. Inspections:**

Qualified personnel shall inspect disturbed areas of the construction site including Borrow, Waste, and Use Areas, which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site using IDOT Storm Water Pollution Prevention Plan Erosion Control Inspection Report (BC 2259). Such inspections shall be conducted at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm or by the end of the following business or work day that is 0.5 inch or greater or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer shall notify the appropriate IEPA Field Operations Section office by email at: [epa.swnoncomp@illinois.gov](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

#### **V. Failure to Comply:**

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of a National Pollutant Discharge Elimination System/Erosion and Sediment Control Deficiency Deduction against the Contractor and/or penalties under the Permit ILR10 which could be passed on to the Contractor.



Contractor Certification Statement

Prior to conducting any professional services at the site covered by this contract, the Contractor and every subcontractor must complete and return to the Resident Engineer the following certification. A separate certification must be submitted by each firm. Attach to this certification all items required by Section II.G of the Storm Water Pollution Prevention Plan (SWPPP) which will be handled by the Contractor/subcontractor completing this form.

Route MUN 1003 Marked Rte. Prospect Avenue
Section 16-00045-00-MS Project No. PKDA(808)
County DuPage Contract No. 61F85

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

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

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

- Contractor
Sub-Contractor

Print Name Signature
Title Date
Name of Firm Telephone
Street Address City/State/ZIP

Items which this 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: Proposed Prospect Ave. and Metra Improvements Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Northeast Corner of Prospect Avenue and Ann Street

City: Clarendon Hills State: IL Zip Code: 60514

County: DuPage Township: \_\_\_\_\_

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

Latitude: 41.797102 Longitude: -87.953943  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

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

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Village of Clarendon Hills

Name: \_\_\_\_\_

Street Address: 1 North Prospect Avenue

Street Address: \_\_\_\_\_

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Clarendon Hills State: IL

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip Code: 60514 Phone: \_\_\_\_\_

Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

Contact: Dan Ungerlaider

Contact: \_\_\_\_\_

Email, if available: dungerleider@clarendonhills.us

Email, if available: \_\_\_\_\_

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 Management Center.

Project Name: Proposed Prospect Ave. and Metra Improvements

Latitude: 41.797102 Longitude: -87.953943

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):

This form pertains to samples S-1 and S-2, which were collected at the location corresponding to the Latitude and Longitude above.

- 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]:

The representative samples were analyzed for polynuclear aromatic hydrocarbons (PNAs), All Metals, Volatile Organic Compounds (VOCs), and pH. The laboratory report and chain of custody documentation are available as described in the Available Reports special provision.

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

I, Adam M. Moghamis (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: Applied GeoScience, Inc.

Street Address: 2385 Hammond Drive, Suite 6

City: Schaumburg State: IL Zip Code: 60173

Phone: 847-303-0300

Adam M. Moghamis  
Printed Name:

*Adam M. Moghamis*  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

11-19-18  
 Date:



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

## COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017

Revised: April 1, 2019

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 according to Article 109.04.

When an extended traffic control 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."

80384



## 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.

80261

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

Effective: September 1, 2000

Revised: March 2, 2019

**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 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 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, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform 16.00 % 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 enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents 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 a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. 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. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, 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.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the 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. This means 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 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 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 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 the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines 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 will also include a statement of reasons for the adverse 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 to cure the deficiency.

- (c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "[DOT.DBE.UP@illinois.gov](mailto:DOT.DBE.UP@illinois.gov)" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. 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 reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person 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 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 it 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 or supplies obtained from a DBE manufacturer.
  - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a 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 emailed to the Department at [DOT.DBE.UP@illinois.gov](mailto:DOT.DBE.UP@illinois.gov).
- (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, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure 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 copies of DBE subcontracts to the Department 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) 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) The DBE is aware 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) 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 Contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the 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) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor 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 Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the 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 will 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 30 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 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.

80029

## **DISPOSAL FEES (BDE)**

Effective: November 1, 2018

Replace Articles 109.04(b)(5) – 109.04(b)(8) of the Standard Specifications with the following:

- “(5) Disposal Fees. When the extra work performed includes paying for disposal fees at a clean construction and demolition debris facility, an uncontaminated soil fill operation or a landfill, the Contractor shall receive, as administrative costs, an amount equal to five percent of the first \$10,000 and one percent of any amount over \$10,000 of the total approved costs of such fees.
- (6) Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- (7) Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with itemized statements of the cost of such force account work. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor’s stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Itemized statements at the cost of force account work shall be detailed as follows.

- a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman. Payrolls shall be submitted to substantiate actual wages paid if so requested by the Engineer.
  - b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
  - c. Quantities of materials, prices and extensions.
  - d. Transportation of materials.
  - e. Cost of property damage, liability and workmen’s compensation insurance premiums, unemployment insurance contributions, and social security tax.
- (8) Work Performed by an Approved Subcontractor. When extra work is performed by an approved subcontractor, the Contractor shall receive, as administrative costs, an amount equal to five percent of the total approved costs of such work with the minimum payment being \$100.

- (9) All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after receipt of the Central Bureau of Construction form "Extra Work Daily Report". If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Department is released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery."

80402

## EMULSIFIED ASPHALTS (BDE)

Effective: August 1, 2019

Revise Article 1032.06 of the Standard Specifications to read:

**“1032.06 Emulsified Asphalts.** Emulsified asphalts will be accepted according to the current Bureau of Materials Policy Memorandum, “Emulsified Asphalt Acceptance Procedure”. These materials shall be homogeneous and shall show no separation of asphalt after thorough mixing, within 30 days after delivery, provided separation has not been caused by freezing. They shall coat the aggregate being used in the work to the satisfaction of the Engineer and shall be according to the following requirements.

- (a) Anionic Emulsified Asphalt. Anionic emulsified asphalts RS-1, RS-2, HFRS-2, SS-1h, and SS-1 shall be according to AASHTO M 140, except as follows.
  - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
  - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (b) Cationic Emulsified Asphalt. Cationic emulsified asphalts CRS-1, CRS-2, CSS-1h, and CSS-1 shall be according to AASHTO M 208, except as follows.
  - (1) The cement mixing test will be waived when the emulsion is being used as a tack coat.
  - (2) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.
- (c) High Float Emulsion. High float emulsions HFE-90, HFE-150, and HFE-300 are medium setting and shall be according to the following table.

Test	HFE-90	HFE-150	HFE-300
Viscosity, Saybolt Furol, at 122 °F (50 °C), (AASHTO T 59), SFS <sup>1/</sup>	50 min.	50 min.	50 min.
Sieve Test, No. 20 (850 µm), retained on sieve, (AASHTO T 59), %	0.10 max.	0.10 max.	0.10 max.
Storage Stability Test, 1 day, (AASHTO T 59), %	1 max.	1 max.	1 max.
Coating Test (All Grades), (AASHTO T 59), 3 minutes	stone coated thoroughly		
Distillation Test, (AASHTO T 59): Residue from distillation test to 500 °F (260 °C), % Oil distillate by volume, %	65 min. 7 max.	65 min. 7 max.	65 min. 7 max.



Characteristics of residue from distillation test to 500 °F (260 °C): Penetration at 77 °F (25 °C), (AASHTO T 49), 100 g, 5 sec, dmm	90-150	150-300	300 min.
Float Test at 140 °F (60 °C), (AASHTO T 50), sec.	1200 min.	1200 min.	1200 min.

1/ The emulsion shall be pumpable.

- (d) Penetrating Emulsified Prime. Penetrating Emulsified Prime (PEP) shall be according to AASHTO T 59, except as follows.

Test	Result
Viscosity, Saybolt Furol, at 77 °F (25 °C), SFS	75 max.
Sieve test, retained on No. 20 (850 µm) sieve, %	0.10 max.
Distillation to 500 °F (260 °C) residue, %	38 min.
Oil distillate by volume, %	4 max.

The PEP shall be tested according to the current Bureau of Materials Illinois Laboratory Test Procedure (ILTP), "Sand Penetration Test of Penetrating Emulsified Prime (PEP)". The time of penetration shall be equal to or less than that of MC-30. The depth of penetration shall be equal to or greater than that of MC-30.

- (e) Delete this subparagraph.
- (f) Polymer Modified Emulsified Asphalt. Polymer modified emulsified asphalts, e.g. SS-1hP, CSS-1hP, CRS-2P (formerly CRSP), CQS-1hP (formerly CSS-1h Latex Modified) and HFRS-2P (formerly HFP) shall be according to AASHTO M 316, except as follows.
- (1) The cement mixing test will be waived when the polymer modified emulsion is being used as a tack coat.
  - (2) CQS-1hP (formerly CSS-1h Latex Modified) emulsion for micro-surfacing treatments shall use latex as the modifier.
  - (3) Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show minimal to no white, milky colored substance and shall be a homogenous brown color throughout.
  - (4) The distillation for all polymer modified emulsions shall be performed according to AASHTO T 59, except the temperature shall be  $374 \pm 9$  °F ( $190 \pm 5$  °C) to be held for a period of 15 minutes and measured using an ASTM 16F (16C) thermometer.
  - (5) The specified temperature for the Elastic Recovery test for all polymer modified emulsions shall be  $50.0 \pm 1.0$  °F ( $10.0 \pm 0.5$  °C).

(6) The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent.

(g) Non-Tracking Emulsified Asphalt. Non-tracking emulsified asphalt NTEA (formerly SS-1vh) shall be according to the following.

Test	Requirement
Saybolt Viscosity at 77 °F (25 °C), (AASHTO T 59), SFS	20-100
Storage Stability Test, 24 hr, (AASHTO T 59), %	1 max.
Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	50 min.
Sieve Test, No. 20 (850 µm), (AASHTO T 59), %	0.3 max.
Tests on Residue from Evaporation	
Penetration at 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 49), dmm	40 max.
Softening Point, (AASHTO T 53), °F (°C)	135 (57) min.
Ash Content, (AASHTO T 111), % <sup>1/</sup>	1 max.

1/ The Solubility in Trichloroethylene test according to AASHTO T 44 may be run in lieu of Ash Content and shall meet a minimum of 97.5 percent

The different grades are, in general, used for the following.

Grade	Use
SS-1, SS-1h, RS-1, RS-2, CSS-1, CRS-1, CRS-2, CSS-1h, HFE-90, SS-1hP, CSS-1hP, NTEA (formerly SS-1vh)	Tack Coat
PEP	Prime Coat
RS-2, HFE-90, HFE-150, HFE-300, CRS-2P (formerly CRSP), HFRS-2P (formerly HFP), CRS-2, HFRS-2	Bituminous Surface Treatment
CQS-1hP (formerly CSS-1h Latex Modified)	Micro-Surfacing Slurry Sealing Cape Seal™

80415

## **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 - DENSITY TESTING OF LONGITUDINAL JOINTS (BDE)

Effective: January 1, 2010

Revised: August 1, 2018

Description. This work shall consist of testing the density of longitudinal joints as part of the quality control/quality assurance (QC/QA) of hot-mix asphalt (HMA). Work shall be according to Section 1030 of the Standard Specifications except as follows.

Quality Control/Quality Assurance (QC/QA). Delete the second and third sentence of the third paragraph of Article 1030.05(d)(3) of the Standard Specifications.

Add the following paragraphs to the end of Article 1030.05(d)(3) of the Standard Specifications:

“Longitudinal joint density testing shall be performed at each random density test location. Longitudinal joint testing shall be located at a distance equal to the lift thickness or a minimum of 4 in. (100 mm), from each pavement edge. (i.e. for a 5 in. (125 mm) lift the near edge of the density gauge or core barrel shall be within 5 in. (125 mm) from the edge of pavement.) Longitudinal joint density testing shall be performed using either a correlated nuclear gauge or cores.

- a. Confined Edge. Each confined edge density shall be represented by a one-minute nuclear density reading or a core density and shall be included in the average of density readings or core densities taken across the mat which represents the Individual Test.
- b. Unconfined Edge. Each unconfined edge joint density shall be represented by an average of three one-minute density readings or a single core density at the given density test location and shall meet the density requirements specified herein. The three one-minute readings shall be spaced 10 ft (3 m) apart longitudinally along the unconfined pavement edge and centered at the random density test location.

When a longitudinal joint sealant (LJS) is applied, longitudinal joint density testing will not be required on the joint(s) sealed.”

Revise the Density Control Limits table in Article 1030.05(d)(4) of the Standard Specifications to read:

“Mixture Composition	Parameter	Individual Test (includes confined edges)	Unconfined Edge Joint Density Minimum
IL-4.75	Ndesign = 50	93.0 – 97.4% <sup>1/</sup>	91.0%
IL-9.5	Ndesign = 90	92.0 – 96.0%	90.0%
IL-9.5,IL-9.5L	Ndesign < 90	92.5 – 97.4%	90.0%
IL-19.0	Ndesign = 90	93.0 – 96.0%	90.0%
IL-19.0, IL-19.0L	Ndesign < 90	93.0 <sup>2/</sup> – 97.4%	90.0%

SMA	Ndesign = 50 & 80	93.5 – 97.4%	91.0%”
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80246

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

Effective: August 1, 2018  
 Revised: November 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 42 in. (1070 mm)48 in. (1200 mm);
- (2) The minimum length of the drum(s) shall be 57 in. (1480 mm)66 in. (1650 mm);
- (3) The minimum unit static force on the drum(s) shall be 125 lb/in. (22 N/m); and
- (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

## 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 1, 2019

Description. In addition to those manufactured according to the current standards included in this contract, manholes, valve vaults, and flat slab tops manufactured prior to March 1, 2019, according to the previous Highway Standards listed below will be accepted on this contract:

Product	Previous Standards		
Precast Manhole Type A, 4' (1.22 m) Diameter	602401-05	602401-04	602401-03
Precast Manhole Type A, 5' (1.52 m) Diameter	602402-01	602402	602401-03
Precast Manhole Type A, 6' (1.83 m) Diameter	602406-09	602406-08	602406-07
Precast Manhole Type A, 7' (2.13 m) Diameter	602411-07	602411-06	602411-05
Precast Manhole Type A, 8' (2.44 m) Diameter	602416-07	602416-06	602416-05
Precast Manhole Type A, 9' (2.74 m) Diameter	602421-07	602421-06	602421-05
Precast Manhole Type A, 10' (3.05 m) Diameter	602426-01	602426	
Precast Valve Vault Type A, 4' (1.22 m) Diameter	602501-04	602501-03	602501-02
Precast Valve Vault Type A, 5' (1.52 m) Diameter	602506-01	602506	602501-02
Precast Reinforced Concrete Flat Slab Top	602601-05	602601-04	

The following revisions to the Standard Specifications shall apply to manholes, valve vaults, and flat slab tops manufactured according to the current standards included in this contract:

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).”

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 manufactured according to AASHTO M 199 (M 199M), except the minimum wall thickness shall be as shown on the plans. 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

## PAVEMENT MARKING BLACKOUT TAPE (BDE)

Effective: November 1, 2014

Revised: April 1, 2016

Revise the fourth paragraph of Article 701.04 of the Standard Specifications to read:

“The traffic control shall remain in place only as long as needed and shall be removed when directed by the Engineer. Signs that do not apply to current conditions shall be removed, covered, or turned from the view of motorists. All existing pavement markings which conflict with the revised traffic pattern shall be removed according to Section 783 or when specified, temporarily covered with pavement marking blackout tape. The width of blackout tape shall be at least 1 in. (25 mm) wider than the width of the pavement marking being covered. The removing or covering of existing markings shall be scheduled immediately to facilitate the revised traffic pattern. If darkness or inclement weather prohibits the removal or covering operations, such operations shall be resumed the next morning or when weather permits.”

Revise Article 701.19(f) of the Standard Specifications to read:

“(f) Removal of existing pavement markings and raised reflective pavement markers will be measured for payment according to Article 783.05. Temporary covering of existing pavement markings with blackout tape will be measured for payment in feet (meters) in place. Removal of blackout tape will be measured for payment in square feet (square meters).”

Revise Article 701.20(j) of the Standard Specifications to read:

“(j) Removal of existing pavement markings and raised reflective pavement markers will be paid for according to Article 783.06. Temporary covering of existing pavement markings with blackout tape will be paid for at the contract unit price per foot for PAVEMENT MARKING BLACKOUT TAPE, of the line width specified.” Removal of blackout tape will be paid for as short term pavement marking removal according to Article 703.07.”

Revise the first two paragraphs of Article 1095.06 of the Standard Specifications to read:

“**1095.06 Pavement Marking Tape.** White or yellow marking tape shall consist of glass spheres of high optical quality embedded into a binder on a suitable backing that is precoated with a pressure sensitive adhesive. The spheres shall be of uniform gradation and distributed evenly over the surface of the tape. Blackout marking tape shall be a Type III tape consisting of a matte black, non-reflective, patterned surface that is precoated with a pressure sensitive adhesive. The surface of the blackout pavement marking tape shall provide a minimum skid resistance value of 45 BPN when tested according to ASTM E 303-74.

The material shall be white, yellow, or matte black as specified. White and yellow colors shall conform closely to Federal color tolerances for pavement marking paint.”

Revise the second table of Article 1095.06 to read:

"Test	Type I		Type III		
	White	Yellow	White	Yellow	Blackout
Initial Thickness, mils (mm)	20 (0.51)	20 (0.51)	20 (0.51)	20 (0.51)	65 (1.65) <sup>1/</sup> 10 (0.25) <sup>2/</sup>
Durability (cycles)	5,000	5,000	1,500	1,500	1,500

Notes:

1/ Measured at the thickest point of the patterned surface.

2/ Measured at the thinnest point of the patterned surface."

80349

**PAVEMENT MARKING REMOVAL (BDE)**

Effective: July 1, 2016

Revise Article 783.02 of the Standard Specifications to read:

**“783.02 Equipment.** Equipment shall be according to the following.

Item	Article/Section
(a) Grinders (Note 1)	
(b) Water Blaster with Vacuum Recovery .....	1101.12

Note 1. Grinding equipment shall be approved by the Engineer.”

Revise the first paragraph of Article 783.03 of the Standard Specifications to read:

**“783.03 Removal of Conflicting Markings.** Existing pavement markings that conflict with revised traffic patterns shall be removed. If darkness or inclement weather prohibits the removal operations, such operations shall be resumed the next morning or when weather permits. In the event of removal equipment failure, such equipment shall be repaired, replaced, or leased so removal operations can be resumed within 24 hours.”

Revise the first and second sentences of the first paragraph of Article 783.03(a) of the Standard Specifications to read:

“The existing pavement markings shall be removed by the method specified and in a manner that does not materially damage the surface or texture of the pavement or surfacing. Small particles of tightly adhering existing markings may remain in place, if in the opinion of the Engineer, complete removal of the small particles will result in pavement surface damage.”

Revise the first paragraph of Article 783.04 of the Standard Specifications to read:

**“783.04 Cleaning.** The roadway surface shall be cleaned of debris or any other deleterious material by the use of compressed air or water blast.”

Revise the first paragraph of Article 783.06 of the Standard Specifications to read:

**“783.06 Basis of Payment.** This work will be paid for at the contract unit price per each for RAISED REFLECTIVE PAVEMENT MARKER REMOVAL, or at the contract unit price per square foot (square meter) for PAVEMENT MARKING REMOVAL – GRINDING and/or PAVEMENT MARKING REMOVAL – WATER BLASTING.”

Delete Article 1101.13 from the Standard Specifications.

80371

## **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



## **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

## RAILROAD PROTECTIVE LIABILITY INSURANCE (5 AND 10) (BDE)

Effective: January 1, 2006

Description. Railroad Protective Liability and Property Damage Liability Insurance shall be carried according to Article 107.11 of the Standard Specifications, except the limits shall be a minimum of \$5,000,000 combined single limit per occurrence for bodily injury liability and property damage liability with an aggregate limit of \$10,000,000 over the life of the policy. A separate policy is required for each railroad unless otherwise noted.

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NAMED INSURED & ADDRESS	NUMBER & SPEED OF PASSENGER TRAINS	NUMBER & SPEED OF FREIGHT TRAINS
BNSF Railway Company c/o CertFocus P.O. Box 140528 Kansas City, MO 64114	103 at 79 mph	30 at 60 mph
DOT/AAR No.: 079 529S RR Division: Chicago	RR Mile Post: 18.32 RR Sub-Division: Chicago	
For Freight/Passenger Information Contact:	Calvin Nutt	Phone: 763-782-3495
For Insurance Information Contact:	Rosa Martinez	Phone: 214-303-8519

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DOT/AAR No.:  
RR Division:

RR Mile Post:  
RR Sub-Division:

For Freight/Passenger Information Contact:  
For Insurance Information Contact:

Phone:  
Phone:

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Approval of Insurance. The original and one certified copy of each required policy shall be submitted to the following address for approval:

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

The Contractor will be advised when the Department has received approval of the insurance from the railroad(s). Before any work begins on railroad right-of-way, the Contractor shall submit to the Engineer evidence that the required insurance has been approved by the railroad(s). The Contractor shall also provide the Engineer with the expiration date of each required policy.

Basis of Payment. Providing Railroad Protective Liability and Property Damage Liability Insurance will be paid for at the contract unit price per Lump Sum for RAILROAD PROTECTIVE LIABILITY INSURANCE.

80157

## REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)

Effective: January 1, 2019

Revise Section 669 of the Standard Specifications to read:

### “SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

**669.01 Description.** This work shall consist of the transportation and proper disposal of contaminated soil and groundwater. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.

**669.02 Equipment.** The Contractor shall notify the Engineer of the delivery of all excavation, storage, and transportation equipment to a work area location. The equipment shall comply with OSHA and American Petroleum Institute (API) guidelines and shall be furnished in a clean condition. Clean condition means the equipment does not contain any residual material classified as a non-special waste, non-hazardous special waste, or hazardous waste. Residual materials include, but are not limited to, petroleum products, chemical products, sludges, or any other material present in or on equipment.

Before beginning any associated soil or groundwater management activity, the Contractor shall provide the Engineer with the opportunity to visually inspect and approve the equipment. If the equipment contains any contaminated residual material, decontamination shall be performed on the equipment as appropriate to the regulated substance and degree of contamination present according to OSHA and API guidelines. All cleaning fluids used shall be treated as the contaminant unless laboratory testing proves otherwise.

**669.03 Pre-construction Submittals.** Prior to beginning this work, or working in areas with regulated substances, the Contractor shall submit a Regulated Substance Pre-Construction Plan (RSPCP) to the Engineer for review and approval using form BDE 2730. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

As part of the RSPCP, the qualifications of Contractor(s) or firm(s) performing the following work shall be listed.

- (a) On-Site Monitoring. Qualification for on-site monitoring of regulated substance work and on-site monitoring of UST removal requires either pre-qualification in Hazardous Waste by the Department or demonstration of acceptable project experience in remediation and special waste operations for contaminated sites in accordance with applicable Federal, State, or local regulatory requirements.

Qualification for each individual performing on-site monitoring requires a minimum of one-year of experience in similar activities as those required for the project.

(b) Underground Storage Tank. Qualification for underground storage tank (UST) work requires licensing and certification with the Office of the State Fire Marshall (OSFM) and possession of all permits required to perform the work. A copy of the permit shall be provided to the Engineer prior to tank removal.

The qualified Contractor(s) or firm(s) shall also document it does not have any current or former ties with any of the properties contained within, adjoining, or potentially affecting the work.

The Engineer will require up to 30 calendar days for review of the RSPCP. The review may involve rejection or revision and resubmittal; in which case, an additional 30 days will be required for each subsequent review. Work shall not commence until the RSPCP has been approved by the Engineer. After approval, the RSPCP shall be revised as necessary to reflect changed conditions in the field.

## CONSTRUCTION REQUIREMENTS

**669.04 Contaminated Soil and/or Groundwater Monitoring.** Prior to beginning excavation, the Contractor shall mark the limits of removal for approval by the Engineer. Once excavation begins, the work and work area involving regulated substances shall be monitored by qualified personnel. The qualified personnel shall be on-site continuously during excavation and loading of material containing regulated substances. The qualified personnel shall be equipped with either a photoionization detector (PID) (minimum 10.6eV lamp), or a flame ionization detector (FID), and other equipment, as appropriate, to monitor for potential contaminants associated with volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs). The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily, and as field and weather conditions change. Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. PID or FID readings may be used as the basis of increasing the limits of removal with the approval of the Engineer but shall in no case be used to decrease the limits.

The qualified personnel shall document field activities using form BDE 2732 (Regulated Substances Monitoring Daily Record) including the name(s) of personnel conducting the monitoring, weather conditions, PID or FID calibration records, a list of equipment used on-site, a narrative of activities completed, photo log sheets, manifests and landfill tickets, monitoring results, how regulated substances were managed and other pertinent information.

Samples will be collected in accordance with the RSPCP. Samples shall be analyzed for the contaminants of concern (COCs), including pH, based on the property's land use history, the encountered abnormality and/or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Ill. Adm. Code 1100.605. The analytical results shall serve to document the level of contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, collection location and depth, and any other relevant observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846; "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039; and "Methods for the Determination of Organic Compounds in Drinking Water, Supplement III", EPA 600/R-95/131, August 1995. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective.

**669.05 Contaminated Soil and/or Groundwater Management and Disposal.** The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:
  - (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
  - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation (USFO) within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
  - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an USFO within an MSA County excluding Chicago or within

the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.

- (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as “uncontaminated soil” at a CCDD facility or an USFO within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
  - (5) When the Engineer determines soil cannot be managed according to Articles 669.05(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the construction limits or managed and disposed off-site as “uncontaminated soil” according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO for any of the following reasons.
- (1) The pH of the soil is less than 6.25 or greater than 9.0.
  - (2) The soil exhibited PID or FID readings in excess of background levels.
- (c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed Tiered Approach to Corrective Action Objectives (TACO) Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 IAC 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way or managed and disposed off-site as “uncontaminated soil” according to Article 202.03. However, the excavated soil cannot be taken to a CCDD facility or an USFO.
- (d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste. The groundwater shall be containerized and trucked to an off-site treatment facility or may be discharged to a sanitary sewer or combined sewer when permitted by the local sewer authority. Groundwater discharged to a sewer shall be pre-treated to remove particulates and measured with a calibrated flow meter to comply with applicable discharge limits. A copy of the permit shall be provided to the Engineer prior to discharging groundwater to the sewer.

All groundwater encountered within trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is

prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than  $10^{-7}$  cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer.

The Contractor shall use due care when transferring contaminated material from the area of origin to the transporter. Should releases of contaminated material to the environment occur (i.e., spillage onto the ground, etc.), the Contractor shall clean-up spilled material and place in the appropriate storage containers as previously specified. Clean-up shall include, but not be limited to, sampling beneath the material staging area to determine complete removal of the spilled material.

The Contractor shall be responsible for transporting and disposing all material classified as a non-special waste, special waste, or hazardous waste from the job site to an appropriately permitted landfill facility. The transporter and the vehicles used for transportation shall comply with all federal, state, and local rules and regulations governing the transportation of non-special waste, special waste, or hazardous waste.

All equipment used by the Contractor to haul contaminated material to the landfill facility shall be lined with a 6 mil (150 micron) polyethylene liner and securely covered during transportation. The Contractor shall obtain all documentation including any permits and/or licenses required to transport the contaminated material to the disposal facility.

The Contractor shall provide engineered barriers, when required, and shall include materials sufficient to completely line excavation surfaces, including sloped surfaces, bottoms, and sidewall faces, within the areas designated for protection.

The Engineer shall coordinate with the Contractor on the completion of all documentation. The Contractor shall make all arrangements for collection and analysis of landfill acceptance testing. The Contractor shall coordinate for waste disposal approval with the disposal facility. After the Contractor completes these activities and upon receipt of authorization from the Engineer, the Contractor shall initiate the disposal process.

The Contractor shall provide the Engineer with all transport-related documentation within two days of transport or receipt of said document(s). The Engineer shall maintain the file for all such documentation. For management of special or hazardous waste, the Contractor shall provide the Engineer with documentation the Contractor (or subcontractor, if a subcontractor is used for transportation) is operating with a valid Illinois special waste transporter permit at least two weeks before transporting the first load of contaminated material.



The Contractor shall schedule and arrange the transport and disposal of each load of contaminated material produced. The Contractor shall make all transport and disposal arrangements so no contaminated material remains within the project area at the close of business each day. Exceptions to this specification require prior approval from the Engineer within 24 hours of close of business. The Contractor shall be responsible for all other pre-disposal/transport preparations necessary daily to accomplish management activities.

Any waste generated as a special or hazardous waste from a non-fixed facility shall be manifested off-site using the Department's county generator number. An authorized representative of the Department shall sign all manifests for the disposal of the contaminated material and confirm the Contractor's transported volume. Any waste generated as a non-special waste may be managed off-site without a manifest, a special waste transporter, or a generator number.

The Contractor shall select a landfill mandated by definition of the contaminant within the State of Illinois. The Department will review and approve or reject the facility proposed by the Contractor to use as a landfill. The Contractor shall verify whether the selected disposal facility is compliant with those applicable standards as mandated by definition of the contaminant and whether the disposal facility is presently, has previously been, or has never been, on the United States Environmental Protection Agency (U.S. EPA) National Priorities List or the Resource Conservation and Recovery Act (RCRA) List of Violating Facilities. The Contractor shall be responsible for coordinating permits with the IEPA. The use of a Contractor selected landfill shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.

**669.06 Non-Special Waste Certification.** An authorized representative of the Department shall sign and date all non-special waste certifications. The Contractor shall be responsible for providing the Engineer with the required information that will allow the Engineer to certify the waste is not a special waste.

(a) Definition. A waste is considered a non-special waste as long as it is not:

- (1) a potentially infectious medical waste;
- (2) a hazardous waste as defined in 35 IAC 721;
- (3) an industrial process waste or pollution control waste that contains liquids, as determined using the paint filter test set forth in subdivision (3)(A) of subsection (m) of 35 IAC 811.107;
- (4) a regulated asbestos-containing waste material, as defined under the National Emission Standards for Hazardous Air Pollutants in 40 CFR 61.141;
- (5) a material containing polychlorinated biphenyls (PCB's) regulated pursuant to 40 CFR Part 761;

- (6) a material subject to the waste analysis and recordkeeping requirements of 35 IAC 728.107 under land disposal restrictions of 35 IAC 728;
  - (7) a waste material generated by processing recyclable metals by shredding and required to be managed as a special waste under Section 22.29 of the Environmental Protection Act; or
  - (8) an empty portable device or container in which a special or hazardous waste has been stored, transported, treated, disposed of, or otherwise handled.
- (b) Certification Information. All information used to determine the waste is not a special waste shall be attached to the certification. The information shall include but not be limited to:
- (1) the means by which the generator has determined the waste is not a hazardous waste;
  - (2) the means by which the generator has determined the waste is not a liquid;
  - (3) if the waste undergoes testing, the analytic results obtained from testing, signed and dated by the person responsible for completing the analysis;
  - (4) if the waste does not undergo testing, an explanation as to why no testing is needed;
  - (5) a description of the process generating the waste; and
  - (6) relevant material safety data sheets.

**669.07 Temporary Staging.** The Contractor shall excavate and dispose of all waste material as mandated by the contaminants without temporary staging. If circumstances require temporary staging, he/she shall request in writing, approval from the Engineer.

When approved, the Contractor shall prepare a secure location within the project area capable of housing containerized waste materials. The Contractor shall contain all waste material in leak-proof storage containers such as lined roll-off boxes or 55 gal (208 L) drums, or stored in bulk fashion on storage pads. The design and construction of such storage pad(s) for bulk materials shall be subject to approval by the Engineer. The Contractor shall place the staged storage containers on an all-weather gravel-packed, asphalt, or concrete surface. The Contractor shall maintain a clearance both above and beside the storage units to provide maneuverability during loading and unloading. The Contractor shall provide any assistance or equipment requested by the Engineer for authorized personnel to inspect and/or sample contents of each storage container. All containers and their contents shall remain intact and undisturbed by unauthorized persons until the manner of disposal is determined. The Contractor shall keep the storage containers covered, except when access is requested by authorized personnel of the Department. The Engineer shall authorize any additional material added to the contents of any storage container before being filled.

The Contractor shall ensure the staging area is enclosed (by a fence or other structure) to ensure direct access to the area is restricted, and he/she shall procure and place all required regulatory identification signs applicable to an area containing the waste material. The Contractor shall be responsible for all activities associated with the storage containers including, but not limited to, the procurement, transport, and labeling of the containers. The Contractor shall clearly mark all containers in permanent marker or paint with the date of waste generation, location and/or area of waste generation, and type of waste (e.g., decontamination water, contaminated clothing, etc.). The Contractor shall place these identifying markings on an exterior side surface of the container. The Contractor shall separately containerize each contaminated medium, i.e. contaminated clothing is placed in a separate container from decontamination water. Containers used to store liquids shall not be filled in excess of 80 percent of the rated capacity. The Contractor shall not use a storage container if visual inspection of the container reveals the presence of free liquids or other substances that could classify the material as a hazardous waste in the container.

The Department will not be responsible for any additional costs incurred, if mismanagement of the staging area, storage containers, or their contents by the Contractor results in excess cost expenditure for disposal or other material management requirements.

**669.08 Underground Storage Tank Removal.** For the purposes of this section, an underground storage tank (UST) includes the underground storage tank, piping, electrical controls, pump island, vent pipes and appurtenances.

Prior to removing an UST, the Engineer shall determine whether the Department is considered an "owner" or "operator" of the UST as defined by the UST regulations (41 Ill. Adm. Code Part 176). Ownership of the UST refers to the Department's owning title to the UST during storage, use or dispensing of regulated substances. The Department may be considered an "operator" of the UST if it has control of, or has responsibility for, the daily operation of the UST. The Department may however voluntarily undertake actions to remove an UST from the ground without being deemed an "operator" of the UST.

In the event the Department is deemed not to be the "owner" or "operator" of the UST, the OSFM removal permit shall reflect who was the past "owner" or "operator" of the UST. If the "owner" or "operator" cannot be determined from past UST registration documents from OSFM, then the OSFM removal permit will state the "owner" or "operator" of the UST is the Department. The Department's Office of Chief Counsel (OCC) will review all UST removal permits prior to submitting any removal permit to the OSFM. If the Department is not the "owner" or "operator" of the UST then it will not register the UST or pay any registration fee.

The Contractor shall be responsible for obtaining all permits required for removing the UST, notification to the OSFM, using an OSFM certified tank contractor, removal and disposal of the UST and its contents, and preparation and submittal of the OSFM Site Assessment Report in accordance with 41 Ill. Adm. Code Part 176.330.

The Contractor shall contact the Engineer and the OSFM's office at least 72 hours prior to removal to confirm the OSFM inspector's presence during the UST removal. Removal, transport,

and disposal of the UST shall be according to the applicable portions of the latest revision of the "American Petroleum Institute (API) Recommended Practice 1604".

The Contractor shall collect and analyze tank content (sludge) for disposal purposes. The Contractor shall remove as much of the regulated substance from the UST system as necessary to prevent further release into the environment. All contents within the tank shall be removed, transported and disposed of, or recycled. The tank shall be removed and rendered empty according to IEPA definition.

The Contractor shall collect soil samples from the bottom and sidewalls of the excavated area in accordance with 35 Ill. Adm. Code Part 734.210(h) after the required backfill has been removed during the initial response action, to determine the level of contamination remaining in the ground, regardless if a release is confirmed or not by the OSFM on-site inspector.

In the event the UST is designated a leaking underground storage tank (LUST) by the OSFM's inspector, or confirmation by analytical results, the Contractor shall notify the Engineer and the DESU. Upon confirmation of a release of contaminants from the UST and notifications to the Engineer and DESU, the Contractor shall report the release to the Illinois Emergency Management Agency (IEMA) (e.g., by telephone or electronic mail) and provide them with whatever information is available ("owner" or "operator" shall be stated as the past registered "owner" or "operator", or the IDOT District in which the UST is located and the DESU Manager);

The Contractor shall perform the following initial response actions if a release is indicated by the OSFM inspector:

- (a) Take immediate action to prevent any further release of the regulated substance to the environment, which may include removing, at the Engineer's discretion, and disposing of up to 4 ft (1.2 m) of the contaminated material, as measured from the outside dimension of the tank
- (b) Identify and mitigate fire, explosion and vapor hazards;
- (c) Visually inspect any above ground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater; and
- (d) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors and free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements).

The UST excavation shall be backfilled according to applicable portions of Sections 205, 208, and 550 with a material that will compact and develop stability. The material shall be approved prior to placement. All uncontaminated concrete and soil removed during tank extraction may be used to backfill the excavation, at the discretion of the Engineer.

After backfilling the excavation, the site shall be graded and cleaned.

**669.09 Regulated Substance Final Construction Report.** Not later than 90 days after completing this work, the Contractor shall submit a Regulated Substance Final Construction Report (RSFCR) to the Engineer using form BDE 2733 and required attachments. The form shall be signed by an Illinois licensed Professional Engineer or Professional Geologist.

**669.10 Method of Measurement.** Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench.

Groundwater containerized and transported off-site for management, storage, and disposal will be measured for payment in gallons (liters).

Backfill plugs will be measured in cubic yards (cubic meters) in place, except the quantity for which payment will be made shall not exceed the volume of the trench, as computed by using the maximum width of trench permitted by the Specifications and the actual depth of the trench, with a deduction for the volume of the pipe.

Engineered Barriers will be measured for payment in square yards (square meters).

**669.11 Basis of Payment.** The work of preparing, submitting and administering a Regulated Substances Pre-Construction Plan will be paid for at the contract lump sum price for REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN.

On-site monitoring of regulated substances, including completion of form BDE 2732 for each day of work, will be paid for at the contract unit price per calendar day, or fraction thereof, for ON-SITE MONITORING OF REGULATED SUBSTANCES.

The installation of engineered barriers will be paid for at the contract unit price per square yard (square meter) for ENGINEERED BARRIER.

The work of removing a UST, soil excavation, soil and content sampling, and the excavated soil, UST content, and UST disposal will be paid for at the contract unit price per each for UNDERGROUND STORAGE TANK REMOVAL.

The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.

The transportation and disposal of groundwater from an excavation determined to be contaminated will be paid for at the contract unit price per gallon (liter) for SPECIAL WASTE GROUNDWATER DISPOSAL or HAZARDOUS WASTE GROUNDWATER DISPOSAL. When groundwater is discharged to a sanitary or combined sewer by permit, the cost will be paid for according to Article 109.05.

Backfill plugs will be paid for at the contract unit price per cubic yard (cubic meter) for BACKFILL PLUGS.

Payment for temporary staging, if required, will be paid for according to Article 109.04.

Payment for accumulated stormwater removal and disposal will be according to Article 109.04. Payment will only be allowed if appropriate stormwater and erosion control methods were used.

Payment for decontamination, labor, material, and equipment for monitoring areas beyond the specified areas, with the Engineer's prior written approval, will be according to Article 109.04.

The sampling and testing associated with this work will be paid for as follows.

- (a) BETX Soil/Groundwater Analysis. When the contaminants of concern are gasoline only, soil or groundwater samples shall be analyzed for benzene, ethylbenzene, toluene, and xylenes (BETX). The analysis will be paid for at the contract unit price per each for BETX SOIL ANALYSIS and/or BETX GROUNDWATER ANALYSIS using EPA Method 8021B.
- (b) BETX-PNAS Soil/Groundwater Analysis. When the contaminants of concern are middle distillate and heavy ends, soil or groundwater samples shall be analyzed for BETX and polynuclear aromatics (PNAS). The analysis will be paid for at the contract unit price per each for BETX-PNAS SOIL ANALYSIS and/or BETX-PNAS GROUNDWATER ANALYSIS using EPA Method 8021B for BETX and EPA Method 8310 for PNAS.
- (c) Priority Pollutants Soil Analysis. When the contaminants of concern are used oils, soil samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, and priority pollutants metals. The analysis will be paid for at the contract unit price per each for PRIORITY POLLUTANTS SOIL ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs, and using an ICP instrument and EPA Methods 6010B and 7471A for metals.
- (d) Priority Pollutant Groundwater Analysis. When the contaminants of concern are used oils, non-petroleum material, or unknowns, groundwater samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, and priority pollutants metals. The analysis will be paid for at the contract unit price per each for PRIORITY POLLUTANTS GROUNDWATER ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs, and EPA Methods 6010B and 7470A for metals.
- (e) Target Compound List (TCL) Soil Analysis. When the contaminants of concern are unknowns or non-petroleum material, soil samples shall be analyzed for priority pollutant VOCs, priority pollutants SVOCs, priority pollutants metals, pesticides, and Resource Conservation and Recovery Act (RCRA) metals by the toxicity characteristic leaching procedure (TCLP). The analysis will be paid for at the contract unit price per each for TCL SOIL ANALYSIS using EPA Method 8260B for VOCs, EPA Method 8270C for SVOCs,

EPA Method 8081 for pesticides, and ICP instrument and EPA Methods 6010B, 7471A, 1311 (extraction), 6010B, and 7470A for metals.

- (f) Soil Disposal Analysis. When the waste material for disposal requires sampling for disposal acceptance, the samples shall be analyzed for TCLP VOCs, SVOCs, RCRA metals, pH, ignitability, and paint filter test. The analysis will be paid for at the contract unit price per each for SOIL DISPOSAL ANALYSIS using EPA Methods 1311 (extraction), 8260B for VOCs, 8270C for SVOCs, 6010B and 7470A for RCRA metals, 9045C for pH, 1030 for ignitability, and 9095A for paint filter.

The work of preparing, submitting and administering a Regulated Substances Final Construction Report will be paid for at the contract lump sum price REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT.”

80407

## **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 MOBILIZATION PAYMENTS (BDE)**

Effective: November 2, 2017

Revised: April 1, 2019

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

“This mobilization payment shall be made at least seven 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

**TEMPORARY PAVEMENT MARKING (BDE)**

Effective: April 1, 2012

Revised: April 1, 2017

Revise Article 703.02 of the Standard Specifications to read:

**“703.02 Materials.** Materials shall be according to the following.

- (a) Pavement Marking Tape, Type I and Type III ..... 1095.06
- (b) Paint Pavement Markings ..... 1095.02
- (c) Pavement Marking Tape, Type IV ..... 1095.11”

Revise the second paragraph of Article 703.05 of the Standard Specifications to read:

“Type I marking tape or paint shall be used at the option of the Contractor, except paint shall not be applied to the final wearing surface unless authorized by the Engineer for late season applications where tape adhesion would be a problem. Type III or Type IV marking tape shall be used on the final wearing surface when the temporary pavement marking will conflict with the permanent pavement marking such as on tapers, crossovers and lane shifts.”

Revise Article 703.07 of the Standard Specifications to read:

**“703.07 Basis of Payment.** This work will be paid for as follows.

- a) Short Term Pavement Marking. Short term pavement marking will be paid for at the contract unit price per foot (meter) for SHORT TERM PAVEMENT MARKING. Removal of short term pavement markings will be paid for at the contract unit price per square foot (square meter) for SHORT TERM PAVEMENT MARKING REMOVAL.
- b) Temporary Pavement Marking. Where the Contractor has the option of material type, temporary pavement marking will be paid for at the contract unit price per foot (meter) for TEMPORARY PAVEMENT MARKING of the line width specified, and at the contract unit price per square foot (square meter) for TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS.

Where the Department specifies the use of pavement marking tape, the Type III or Type IV temporary pavement marking will be paid for at the contract unit price per foot (meter) for PAVEMENT MARKING TAPE, TYPE III or PAVEMENT MARKING TAPE, TYPE IV of the line width specified and at the contract unit price per square feet (square meter) for PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS or PAVEMENT MARKING TAPE, TYPE IV – LETTERS AND SYMBOLS.

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

When temporary pavement marking is shown on the Standard, the cost of the temporary pavement marking and its removal will be included in the cost of the Standard.”

Add the following to Section 1095 of the Standard Specifications:

**“1095.11 Pavement Marking Tape, Type IV.** The temporary, preformed, patterned markings shall consist of a white or yellow tape with wet retroreflective media incorporated to provide immediate and continuing retroreflection during both wet and dry conditions. The tape shall be manufactured without the use of heavy metals including lead chromate pigments or other similar, lead-containing chemicals.

The white and yellow Type IV marking tape shall meet the Type III requirements of Article 1095.06 and the following.

- (a) Composition. The retroreflective pliant polymer pavement markings shall consist of a mixture of high-quality polymeric materials, pigments and glass beads distributed throughout its base cross-sectional area, with a layer of wet retroreflective media bonded to a durable polyurethane topcoat surface. The patterned surface shall have approximately 40% ± 10% of the surface area raised and presenting a near vertical face to traffic from any direction. The channels between the raised areas shall be substantially free of exposed beads or particles.
- (b) Retroreflectance. The white and yellow markings shall meet the following for initial dry and wet retroreflectance.
  - (1) Dry Retroreflectance. Dry retroreflectance shall be measured under dry conditions according to ASTM D 4061 and meet the values described in Article 1095.06 for Type III tape.
  - (2) Wet Retroreflectance. Wet retroreflectance shall be measured under wet conditions according to ASTM E 2177 and meet the values shown in the following table.

**Wet Retroreflectance, Initial R<sub>L</sub>**

<b>Color</b>	<b>R<sub>L</sub> 1.05/88.76</b>
White	300
Yellow	200

- (c) Color. The material shall meet the following requirements for daylight reflectance and color, when tested, using a color spectrophotometer with 45 degrees circumferential/zero degree geometry, illuminant D65, and a two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

<b>Color</b>	<b>Daylight Reflectance %Y</b>
White	65 minimum
*Yellow	36-59

\*Shall match Federal 595 Color No. 33538 and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

- (d) Skid Resistance. The surface of the markings shall provide an average minimum skid resistance of 50 BPN when tested according to ASTM E 303.
- (e) Sampling, Testing, Acceptance, and Certification. Prior to approval and use of the wet reflective, temporary, removable pavement marking tape, the manufacturer shall submit a notarized certification from an independent laboratory, together with the results of all tests, stating that the material meets the requirements as set forth herein. The certification test report shall state the lot tested, manufacturer's name, and date of manufacture.

After approval by the Department, samples and certification by the manufacturer shall be submitted for each batch used. The manufacturer shall submit a certification stating that the material meets the requirements as set forth herein and is essentially identical to the material sent for qualification. The certification shall state the lot tested, manufacturer's name, and date of manufacture.

All costs of testing (other than tests conducted by the Department) shall be borne by the manufacturer."

80298

## **TRAFFIC CONTROL DEVICES - CONES (BDE)**

Effective: January 1, 2019

Revise Article 701.15(a) of the Standard Specifications to read:

“(a) Cones. Cones are used to channelize traffic. Cones used to channelize traffic at night shall be reflectorized; however, cones shall not be used in nighttime lane closure tapers or nighttime lane shifts.”

Revise Article 1106.02(b) of the Standard Specifications to read:

“(b) Cones. Cones shall be predominantly orange. Cones used at night that are 28 to 36 in. (700 to 900 mm) in height shall have two white circumferential stripes. If non-reflective spaces are left between the stripes, the spaces shall be no more than 2 in. (50mm) in width. Cones used at night that are taller than 36 in. (900 mm) shall have a minimum of two white and two fluorescent orange alternating, circumferential stripes with the top stripe being fluorescent orange. If non-reflective spaces are left between the stripes, the spaces shall be no more than 3 in. (75 mm) in width.

The minimum weights for the various cone heights shall be 4 lb for 18 in. (2 kg for 450 mm), 7 lb for 28 in. (3 kg for 700 mm), and 10 lb for 36 in. (5 kg for 900 mm) with a minimum of 60 percent of the total weight in the base. Cones taller than 36 in. shall be weighted per the manufacturer’s specifications such that they are not moved by wind or passing traffic.”

80409

## **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 40 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 journeyman 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 contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

\* \* \* \* \*

## **2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

## **2. Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of

Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

\* \* \* \* \*

#### **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.

**MINIMUM WAGES FOR FEDERAL AND FEDERALLY  
ASSISTED CONSTRUCTION CONTRACTS**

This project is funded, in part, with Federal-aid funds and, as such, is subject to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Sta. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in a 29 CFR Part 1, Appendix A, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act and pursuant to the provisions of 29 CFR Part 1. The prevailing rates and fringe benefits shown in the General Wage Determination Decisions issued by the U.S. Department of Labor shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

General Wage Determination Decisions, modifications and supersedes decisions thereto are to be used in accordance with the provisions of 29 CFR Parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable DBRA Federal prevailing wage law and 29 CFR Part 5. The wage rates and fringe benefits contained in the General Wage Determination Decision shall be the minimum paid by contractors and subcontractors to laborers and mechanics.