

# 62

**Letting January 16, 2026**

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



**Contract No. 68F92  
TAZEWELL County  
Section 17(RS-6,TS-2);18(RS,TS)-2  
Route FAP 317  
Project NHPP-MDDS(771)  
District 4 Construction Funds**

Prepared by

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Checked by

(Printed by authority of the State of Illinois)



**Illinois Department  
of Transportation**

**NOTICE TO BIDDERS**

1. **TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. January 16, 2026 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. 68F92  
TAZEWELL County  
Section 17(RS-6,TS-2);18(RS,TS)-2  
Project NHPP-MDDS(771)  
Route FAP 317  
District 4 Construction Funds**

**3.22 miles patching, resurfacing and traffic signals; from west of Grosenbach Road to east of Cummings Lane in Peoria County.**

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 re-advertise the proposed improvement, and to waive technicalities.

By Order of the  
Illinois Department of Transportation

Gia Biagi,  
Secretary

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2026

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

ERRATA    Standard Specifications for Road and Bridge Construction  
(Adopted 1-1-22) (Revised 1-1-26)

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## **STATE OF ILLINOIS**

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### **SPECIAL PROVISIONS**

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction," adopted January 1, 2022 (revised January 1, 2026), the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," and the "Manual of Test Procedures for Materials" in effect on the date of invitation for bids, and the Supplemental Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of FAP Route 317 (US 24), Project NHPP-MDDS(771), Section 17(RS-6,TS-2)18(RS,TS)-2, Tazewell County, Contract No. 68F92 and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

### **LOCATION OF PROJECT**

This project on US Route 24 (FAP 317) is from just west of Grosenbach Road in East Peoria to just east of Cummings Lane in Washington in Tazewell County.

### **DESCRIPTION OF PROJECT**

The work on this project consists of rehabilitating approximately 3.20 miles of US Route 24 (FAP 317) with pavement patching, hot-mix asphalt surface removal, hot-mix asphalt resurfacing, hot-mix asphalt shoulders, aggregate wedge shoulders, steel plate beam guardrail, traffic signal modifications, pavement marking, and all other miscellaneous work necessary to complete this section.



## **LOCATION OF UNDERGROUND STATE MAINTAINED FACILITIES**

Effective: August 3, 2007      Revised: July 31, 2009

The Contractor shall be responsible for locating existing and proposed IDOT electrical facilities (traffic signal, overhead lighting, Intelligent Transportation System, etc.) prior to performing any work at his/her own expense if required. The Contractor shall also be liable for any damage to IDOT facilities resulting from inaccurate locating.

The Contractor may obtain, on request, plans for existing electrical facilities from the Department.

The Contractor shall also be responsible for locating and providing protection for IDOT facilities during all phases of construction. If at any time the facilities are damaged, the Contractor shall immediately notify the Department and make all necessary arrangements for repair to the satisfaction of the Engineer. This work will not be paid for separately, but shall be included in the contract bid price.

## **SEEDING, MINOR AREAS**

Effective July 1, 1990      Revised April 1, 2019

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

All areas disturbed by the work performed shall be seeded, fertilized, and mulched in accordance with Article 251.03(a). The materials may be purchased locally and placed as directed by the engineer.

The estimated area is approximately 0.1 acre. The seed mixture shall be applied at 100 pounds/acre (110 kg/ha). The mixture shall be one that contains Turf Type Tall Fescue, Creeping Red Fescue, and Kentucky Blue Grass. The Kentucky Blue Grass shall not exceed 50% of the mixture. All seeds shall meet the purity and noxious weed requirements of Article 1081.04 of the Standard Specifications and be approved by the Engineer.

The fertilizer nutrients shall be applied at a rate of 270 lbs. (300 kg) of actual nutrients per acre (hectare). The fertilizer furnished shall be ready mixed material having a ratio of (1-1-1).

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

The seed, fertilizer, and mulch will not be measured for payment but will be considered included in the cost of Traffic Signal pay items.

## **MOWING**

Effective: December 11, 2001

Revised: August 2, 2013

This work shall consist of mowing the entire median up to 60' (20m) in width and the roadway foreslopes of the outside lanes to the ditchline or for a width of 15' (4.572 meters) from the edge of pavement or paved shoulder, whichever is less. At intersecting roadways, the mowing shall extend to the proposed right of way for a distance of 150' (45 m) on either side of the intersection. The height of the mowing shall not be more than 6" (150 mm). Equipment used shall be capable of completely severing all growth at the cutting height and distributing it evenly over the mowed area. The Contractor will not be required to mow continuously wet ditches and drainage ways, slopes greater than 1:3 (V:H), or areas which may be designated by the Engineer as not mowable. Mowing shall be done within the project limits during the construction of the project as directed by the Engineer and prior to the final inspection of the project. Any subsequent mowing required to disperse mowed material shall be considered as included in the cost of the mowing. Debris encountered during mowing, which interferes with the mowing operation or is visible from the roadway shall be removed and disposed of according to Article 202.03.

Method of Measurement: Mowing will be measured for payment in Acres of surface area mowed.

Basis of Payment: This work will be paid for at the contract unit price per Acre for MOWING.

## **CLEAN EXISTING PAVEMENT EDGE JOINT**

Effective January 3, 2000

Revised April 24, 2020

Description: This work shall consist of removing loose material and vegetation present in the existing edge of pavement joint between the pavement and hot-mix asphalt shoulders. Any existing vegetation and other loose material shall be removed from the edge joint and deposited on the roadside in a method acceptable to the Engineer. The existing edge joint shall then be cleaned of any loose material using compressed air. After cleaning, any depressions in the edge joint greater than 1" (25 mm) in depth shall be filled with leveling binder placed and compacted by hand methods.

Basis of Payment: This work shall be paid for in accordance with Article 109.04 of the Standard Specifications.

## **PARTIAL DEPTH PATCHING**

Effective: April 26, 2013

Revised: November 6, 2020

This work shall consist of partial depth patching of the existing pavement structure and replacement with Hot-Mix Asphalt (HMA) material at the locations shown in the plans or as directed by the Engineer. This work will be performed before completion of the cold milling operation and prior to the placement of the HMA overlay, if applicable.

This work shall include all labor, equipment, and materials necessary to remove the existing HMA overlay to a depth of 5". The removal shall be performed with a cold milling machine of sufficient

size and weight to remove the existing HMA. The milling machine must be operated longitudinally with the flow of traffic and will not be permitted to cut transversely across the lane. Disposal of waste materials for the work described herein shall be in accordance with Article 202.03 of the Standard Specifications. After cold milling the patch, all loose material shall be removed and the area air-blast cleaned to the satisfaction of the Engineer. Replacement HMA material shall be as shown in the Mixture Requirements Table in the plans.

Prior to placement of the HMA material, the bottom and sides of the patch shall be primed in accordance with Article 406.05 of the Standard Specifications using an SS-1hP bituminous material. The prime shall be applied at a residual rate of 0.08 lbs./Sq. Ft. by means of a mechanical distributor and shall be placed on all surfaces of the milled trench.

The HMA material shall be placed in 3" max lifts and shall match the elevation of the surrounding pavement after final compaction. Bumps greater than  $\frac{1}{4}$ ", measured with a 16' straight edge, left after compaction shall be removed with pavement surface grinding equipment in accordance with Article 1101.04 of the Standard Specifications.

The HMA mixture and density control limits shall conform to Article 1030 of the Standard Specifications. Compaction shall be accomplished using a vibrating roller that conforms to the applicable sections of Article 1101.01 of the Standard Specifications.

The Contractor shall fill all patches with the HMA material in the same day they are milled. No open patches will be allowed to remain overnight.

Removal of the existing HMA will be measured for payment in place, and the area computed in Square Yards. The limits will be the area of the patch that measures at least 5" in depth and shall not include the rounded transition at the beginning and end of the patch.

If after milling, it's determined by the Resident Engineer that damage to the existing pavement structure still exists and must be addressed by means of a full-depth patch, the additional labor and materials required shall be paid in accordance to Article 109.04 of the Standard Specifications for "Road and Bridge Construction."

Replacement with HMA will be measured in Tons placed to fill the full depth milled area (PARTIAL DEPTH PATCHING).

Basis of Payment: Partial depth removal and cleaning of the pavement will be paid for at the contract unit price per Square Yard for PARTIAL DEPTH PATCHING (SPECIAL). The HMA placement and the priming of the partial depth patches will be paid for at the contract unit price per Ton for PARTIAL DEPTH PATCHING.

## **HOT-MIX ASPHALT JOINT TRIMMING**

Effective: August 5, 2022

When specified in the plans, unconfined hot mix asphalt (HMA) edges will be placed and trimmed per the following guidelines:

1. Place the HMA tack coat and HMA pavement/shoulder 6" wider than the designated lane line (centerline or edge of pavement).

2. When the joint is trimmed as an independent operation, mill the excess 6" of the unconfined HMA to the lane line. The milling equipment must be capable of producing a straight line. The depth of the milling must be controlled so as not to gouge the underlying lift. The intent is to create a vertical face at the lane line and provide a lateral confinement for the adjacent mat. Skid-steer mounted mills will not be allowed. Milling and cleaning must be done prior to tacking of the adjacent HMA paving. Milling the same day as HMA placement will not be allowed. If the Engineer determines excessive raveling of the milled face is occurring, the contractor shall make adjustments to the operation such as slowing the mill speed, replacing mill teeth, or adjustment of mill box side plates.
3. When the joint is trimmed as part of the adjacent mat milling, milling the same day as HMA placement will not be allowed. If the Engineer determines excessive raveling of the milled face is occurring, the contractor shall make adjustments to the operation such as slowing the mill speed, replacing mill teeth, or adjustment of mill box side plates.
4. Clean and prepare the surface of the adjacent mat as per Article 406.05 of the Standard Specification prior to the placement of the HMA. The HMA Tack Coat shall be sprayed the full width of the lane/shoulder and also lapped onto the adjacent mat a distance not to exceed 4". In addition, the vertical face of the adjacent mat shall be thoroughly tacked by means of a dedicated spray nozzle, mounted at a 45 degree angle, aimed toward the face.
5. Placement of this HMA mat shall require the use of a joint-matching device in lieu of a longitudinal averaging ski. The compacted height of this mat shall be exactly flush, or not more than 1/32" higher, to the adjacent mat to ensure the joint has sufficient material for adequate compaction. During placement, the side plate of the screed shall not exceed 1/2" overlap onto the adjacent mat.

When milled independently, the 6" extra width at the lane line will be paid for at the contract unit price per Square Yard for HOT-MIX ASPHALT SURFACE REMOVAL – SPECIAL. When milled with the adjacent mat, the 6" extra width at the lane line will be paid for at the contract unit price for HOT-MIX ASPHALT SURFACE REMOVAL of the depth specified. The extra HMA tack coat will be paid for at the contract unit price per Pound for the tack coat specified in the plans. The extra trimmed HMA will be paid for at the contract unit price per Ton or Square Yard, as specified in the plans. All other extra work will not be paid for separately but shall be included in the unit bid price of the various pay items and no other compensation will be allowed.

#### **HOT-MIX ASPHALT SHOULDER RESURFACING REQUIRED TO BE CONSTRUCTED SIMULTANEOUSLY WITH MAINLINE PAVING**

Effective April 23, 2010  
Revised August 4, 2017

When the top lift of the shoulders are specified to be placed simultaneously with the mainline surface course and a Material Transfer Device is required for the mainline surface course, the shoulder will be placed with the Material Transfer Device and both the mainline and shoulder tonnage will be paid for at the contract unit price for Material Transfer Device.

A roller meeting the requirements of Article 1101.01 shall be required. This roller will be in addition to any rollers required for compaction of the mainline roadway resurfacing. This additional roller will not be paid for separately but shall be included in the contract unit price bid for the Hot-Mix Asphalt surface course material being placed.

The various HMA mixtures placed with the material transfer device will be paid for as specified in their respective specifications.

### **HOT-MIX ASPHALT SHOULDER RESURFACING CONSTRUCTED SIMULTANEOUSLY WITH MAINLINE PAVING**

Effective: January 22, 2001 Revised: January 1, 2007

If the Department allows resurfacing hot-mix asphalt shoulders simultaneously with the mainline pavement resurfacing, a roller meeting the requirements of Article 1101.01 shall be required. This roller will be in addition to any rollers required for compaction of the mainline roadway resurfacing. This additional roller will not be paid for separately but shall be included in the contract unit price bid for the mainline bituminous material being placed.

### **GUARDRAIL AGGREGATE EROSION CONTROL**

Effective: February 1, 1993 Revised: January 1, 2007

This work shall consist of furnishing, placing, and shaping crushed aggregate placed around and behind guardrail posts in accordance with plan details.

Method of Measurement: The aggregate for constructing the Guardrail Aggregate Erosion Control will be measured in Tons (Metric Tons).

The Geotextile Fabric will not be measured for payment.

Basis of Payment: Guardrail Aggregate Erosion Control will be paid for at the contract unit price per Ton (Metric Ton) for GUARDRAIL AGGREGATE EROSION CONTROL measured as specified herein. The Geotextile Fabric will not be measured for payment, but shall be included in the cost per Ton (Metric Ton) for GUARDRAIL AGGREGATE EROSION CONTROL.

### **TRAFFIC BARRIER TERMINALS**

Effective: February 1, 1996 Revised: November 5, 2004

Widening of existing shoulders/slopes for the construction of Traffic Barrier Terminals shall be completed as directed by the Engineer and paid for as specified in Article 109.04 of the Standard Specifications.

## **RECOVERABLE DELINEATORS**

Effective: April 26, 2015

Revised: November 1, 2018

This work shall consist of furnishing and installing Recoverable Delineators in accordance to the following:

1. Driveables
  - a. Ground Anchor shall be a 2" x 12 ga. x 24" piece of perforated square tubing.
  - b. Shall include a flexible square to round self-righting joint.
  - c. Post shall be composed of a minimum of 70% by volume post-consumer recycled materials.
  - d. Post shall be permanently flattened and sealed at the top and be a minimum of 3"-wide and be capable of displaying a 3"-wide piece of reflective sheeting.
2. Surface Mount Delineator shall be omni-directional which is self-righting and can take multiple vehicle hits and return to vertical.
3. The mounting will be bolted and pinned to the ground anchor allowing the post to be replaced in less than a minute requiring no specialized tools.
4. Reflective sheeting on each highway delineator shall be 3" x 9" in dimension and white in color. Reflective sheeting shall comply with Article 1091.03 of the Standard Specifications for Road and Bridge Construction. On interchange ramps, each delineator shall also have red reflective sheeting on the reverse side of the delineator to indicate wrong-way direction.

The highway delineators shall be installed at proposed delineator locations in accordance to the construction plans.

All equipment necessary for the installation shall be per manufacturer's recommendation.

All materials, equipment, and labor shall be included in the agreed unit bid price per Each for RECOVERABLE DELINEATORS.

## **TRAFFIC CONTROL PLAN**

Effective: 10/15/2025

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

Special attention is called to Section 701 and Articles 107.09 and 107.14 of the "Standard Specifications for Road and Bridge Construction" and the following Highway Standards relating to traffic control:

701001	701006	701011	701101	701106	701201
701301	701306	701311	701411	701421	701422
701426	701451	701456	701701	701801	701901

BLR 21

701001	This standard will be used on 2-lane/2-way traffic for all work activities greater than 15 ft. from the edge of pavement on US 24 side roads.
701006	This standard will be used on 2-lane/2-way traffic for all work activities within 24 inches to 15 ft. from the edge of pavement on US 24 side roads.
701011	This standard will be used on 2-lane/2-way traffic for all work activities involving off road moving operations within 15 ft. from the edge of pavement on US 24 side roads.
701101	This standard will be used on multi-lane highways for all work activities within 24 inches and 15 ft. from the edge of pavement on US 24 side roads.
701106	This standard will be used on multi-lane highways for all work activities greater than 15 ft. from the edge of pavement on US 24.
701201	This standard will be used on 2-lane/2-way traffic for construction activities such as patching, corner island removal and replacements, sidewalk removal and replacements, etc. on US 24 side roads.
701301	This standard will be used on 2-lane/2-way traffic for construction activities such as string line operations, work zone pavement marking removal, and cleaning debris on the pavement on US 24 side roads.
701306	This standard will be used on 2-lane/2-way traffic for construction activities such as HMA surface removal operations and paving on US 24 side roads.
701311	This standard will be used on 2-lane/2-way traffic for construction activities that require continuous moving operations such as pavement marking and raised reflective pavement markers on US 24 side roads.
701411	This standard will be used for all work activities involving freeway and expressway lane closures in close proximity to entrance and exit ramps, such as the BL-24 ramps on US 24. Each ramp regardless of the number of setups required, shall be considered as one each.

- 701421 This standard will be used any time a day-time lane closure is required on the US 24 expressway due to work encroaching on a travel lane adjacent to the shoulder or on the shoulder within 24" of the edge of pavement. This standard is applicable for construction activities such as US 24 resurfacing operations and shall be used.
- 701422 This standard will be used any time a night-time lane closure is required on the US 24 expressway due to work encroaching on a travel lane adjacent to the shoulder or on the shoulder within 24" of the edge of pavement. This standard is applicable for construction activities such as US 24 resurfacing operations and shall be used.
- 701426 This standard will be used any time a lane closure is required on a freeway or expressway when any vehicle, equipment, workers, or their activities require stationary operations less than one (1) hour or moving operations where the average speed is greater than 1 MPH. This standard is applicable for construction activities such as US 24 pavement marking operations and possibly rumble strip installation.
- 701451 This standard will be used for closing an interchange ramp to traffic. Ramp closures will be allowed for both pavement and shoulder HMA surface removal operations and HMA resurfacing operations on the BL-24 entrance and exit ramps on US 24.
- 701456 This standard will be used for partial lane ramp closures when construction operations do not require a full ramp closure. This standard is intended for ramp pavement patching, guardrail installation and aggregate shoulder placement on the BL-24 entrance and exit ramps on US 24.
- 701701 This standard will be used any time for construction activities that require portions of the pavement to be closed off to traffic at the side road intersections on US 24.
- 701801 This standard will be used any time for construction activities that require sidewalk closures at the side road intersection on US 24 at Cummings Lane.
- 701901 This standard describes all permissible traffic control devices that can be utilized with the above-mentioned traffic control standards.
- BLR 21 This standard shall be used during construction activities which involve a temporary road closure allowed on the US 24 side roads for HMA surface removal and HMA paving operations. This work shall be done in accordance with Section 701 of the Standard Specifications and as per Highway Standard BLR 21. This work will be measured and paid for at the contract unit price per lump sum for TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21.

All traffic control devices shall be furnished, erected, maintained, and removed by the Contractor in accordance with the Standard Specifications. Where possible, all post-mounted signs shall be placed a minimum of two feet (2') (0.6 m) beyond the curb or edge of shoulder. Proposed sign spacing may be modified as approved by the Engineer in order to meet existing field conditions or to prevent obstruction of the motorist's view of permanent signing and lane restrictions at all times.



### LIMITATIONS OF CONSTRUCTION

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

1. The Contractor shall contact the District Four Bureau of Operations (309) 671-4488 at least 72 hours in advance of beginning work, and three (3) weeks prior to implementing any traffic control.
2. The Contractor shall erect changeable message signs 14 days in advance of implementing traffic control and protection, Standard 701421. The exact location of changeable message signs shall be confirmed by the Engineer.
3. All traffic control signs shall be new and meet current reflectivity standards. Remaining traffic control devices shall be new or like new equipped with new reflective sheeting at the time of use. The Engineer will be the sole judge of the condition of the devices.
4. During the construction of this section, at least one lane shall remain open to traffic at all times, with the exception of the allowed road closure at side roads and the BL-24 entrance and exit ramps on US 24. No lane closures will be allowed without spotter protection.
5. The contractor shall be required to maintain two (2) open lanes of traffic in both the eastbound and westbound directions on US 24 during non-working hours.
6. At least two WB lanes shall be open to traffic on Mondays through Fridays between the hours of 6:00 A.M. and 8:30 A.M.; and at-least two EB lanes shall be open to traffic on Mondays through Fridays between the hours of 3:30 P.M. and 7:00 P.M.
7. In advance of each lane closure, the Contractor shall provide four (4) "BE PREPARED TO STOP" (W3-4(O)48) signs. These signs shall be tripod mounted and placed at locations as designated by the Engineer, to provide adequate warning in advance of traffic back-ups. The signs will not be paid for separately but shall be included as part of the contract unit bid prices for the traffic control and protection pay items.
8. Where construction operations result in a temporary drop-off between two traffic lanes and is open to traffic, "UNEVEN LANES" (W8-11(O)48) signs shall be used. The Contractor shall place the signs at the beginning of the drop-off area, just beyond freeway interchanges or major intersections on non-freeways and at such other locations within the drop-off area as directed by the Engineer to ensure a nominal spacing of one (1) mile. The signs shall remain in place until the drop-off is eliminated. The signs will not be paid for separately but shall be included as part of the contract unit bid prices for the traffic control and protection pay items.
9. Where construction operations require the construction of a temporary ramp, a "BUMP" sign(s) (W8-1(O)48) shall be used. The Contractor shall place the signs adjacent to the temporary ramp or as directed by the Engineer. The signs shall remain in place until the temporary ramp is eliminated. The signs will not be paid for separately but shall be included as part of the contract unit bid prices for the traffic control and protection pay items.

10. Where construction operations create a drop off equal to or greater than two (2") inches at the edge of pavement, "LOW SHOULDER" sign(s) (W8-9(O)48) shall be used. The Contractor shall place the signs at the beginning of the drop-off area, just beyond freeway interchanges or major intersections on non-freeways and at other locations within the drop-off areas as directed by the Engineer to ensure a nominal spacing of one (1) mile. The signs shall remain in place until the drop-off is eliminated. The signs will not be paid for separately but shall be included as part of the contract unit bid prices for the traffic control and protection pay items.

#### KEEPING ROADS OPEN TO TRAFFIC

US Route 24 will be required to be open to all four lanes at times as stated above and lane closures shall be kept to a minimum on US 24 and also on all side roads, turn lanes and median crossovers. Lane closures on US 24 mainline utilizing TC&P Standards 701421 and/or 701422 will only be allowed during pavement and shoulder patching, HMA Surface Removal, HMA Paving, placement of aggregate shoulders, pavement marking, raised pavement markers, shoulder rumble strips, and during other miscellaneous operations (such as portions of the traffic signal installations) as agreed to by the Engineer.

Full road closures on side roads, turn lanes, and on entrance and exit ramps along US 24 utilizing TC&P Standard BLR 21 and/or Standard 701456 will only be allowed during HMA Surface Removal, and HMA Paving on the side roads and on entrance and exit ramps. Full road closures on each side road should be less than a day for HMA Surface Removal, less than a day for HMA binder course placements, and less than a day for HMA surface course placements. Full road closures on side roads, and on entrance and exit ramps shall also be alternated, so two adjacent side road locations are not closed at the same time. All other operations should be completed with flaggers and proper TC&P Standards. Median turn lanes at Spring Creek Road and Cummings Lane will be allowed to be closed for short terms during other miscellaneous operations (such as pavement marking, raised pavement markers, portions of the traffic signal installations) as agreed to by the Engineer.

#### SEQUENCE OF CONSTRUCTION

The traffic signal upgrades at US 24 and Grange Road intersection and US 24 and Cummings Lane intersection are considered as major controlling items of work for this project in combination with the US 24 mainline, and other side road roadway work. The US 24 mainline, and other side road roadway work must be complete before finishing the work for the traffic signal upgrades at the two intersections.

#### Suggested Patching and Paving Sequence for US 24 Mainline and At-grade Intersections:

1. Set-up TC&P Standards 701421/701422 to close the outside lane of Eastbound and Westbound lanes of US 24 with TC&P Standard 701411 at the BL-24 ramp terminals and utilize TC&P Standard 701701 at side road intersections as necessary with temporary stop signs located as directed by the Engineer.
2. Patch outside lanes of Eastbound and Westbound US 24 along with any outside shoulder patching that may be necessary.

3. Patch entrance and exit ramp terminals at BL-24 and complete adjacent shoulder patching that may be necessary while utilizing TC&P Standard 701411. Ramp patching shall be done ½ of the pavement width at a time utilizing TC&P Standard 701456.
4. Patch pavement on the north and south legs of all side roads within the limits of improvement and complete adjacent shoulder patching that may be necessary while utilizing TC&P Standard 701701 or TC&P Standard BLR 22 on the side roads as directed by the Engineer.
5. Complete HMA Surface Removal 2.0" only on the outside lane for the full length of the project extra wide (8" to 12") to allow for later adjacent milling/joint trimming on the adjacent lanes and shoulders to make sure the edges of the new binder mat after later adjacent milling extends to the centerline and to the edges of pavement.
6. Directly after the HMA Surface Removal 2.0"/3.75" on the outside lanes, the HMA binder lift (2.0") shall be placed on the outside lanes between the previously milled confined edges past the centerline and edges of pavement (4" to 6" on each side).
7. Guardrail removal and replacement; paved shoulder removal; construction of new curb and gutter; corner island removal and replacements; sidewalk work; and a portion of the traffic signal work near the outside shoulders shall be completed before/during these paving activities. Edge of pavement hazards in these areas shall be protected with drums or other TC&P items as approved by the Engineer.
8. Complete HMA Surface Removal 2.0"/3.75" on the outside shoulders for the full length of the project making sure milling/joint trimming is completed on the new adjacent HMA binder mat to the pavement edges. The right-turn lanes and side roads should be milled at this same time.
9. Directly after the HMA Surface Removal 2.0"/3.75" on the outside shoulders, right-turn lanes, and side roads, the HMA binder lift (1.75")/bottom HMA shoulder lift (1.75") shall be placed on all these areas with hot joints constructed along the right turn lanes and in the side road areas as necessary. If a hot joint cannot be completed on the right-turn lanes, then the joint shall be trimmed on the right-turn lanes prior to the placement of the HMA binder lift and will not be measured for payment separately.

*Note: The above activities #1 through #9 shall be completed in short sections as necessary to make sure two traffic lanes are open in the Eastbound and Westbound directions as required above with short-term pavement marking in place.*

10. After the first lift of HMA binder/shoulder material is placed on the outside lanes, right-turn lanes, side road intersection legs, and outside shoulders, the outside lanes shall be open to traffic with short-term pavement marking in place and then the median lanes shall be closed utilizing TC&P Standards 701421/701422 on the Eastbound and Westbound lanes of US 24 with TC&P Standard 701411 at the BL-24 ramp terminals and utilizing TC&P (Special)/TC&P Standard 701701 at the median crossovers at the sideroad intersections.
11. Patching shall then be completed on the median lanes of Eastbound and Westbound US 24 along with any median shoulder patching, left turn lane patching, and median pavement patching that may be necessary.

12. Guardrail removal and replacement; sidewalk work; and a portion of the traffic signal work on/near the median shoulders shall be completed before/during these paving activities. Edge of pavement hazards in these areas shall be protected with drums or other TC&P items as approved by the Engineer.
13. Complete HMA Surface Removal 2.0"/3.75" on the median lane, median shoulder, and median intersection pavements for the full length of the project. This work shall include milling/joint trimming that extends into the HMA binder mat that was previously placed on the outside lanes, so a clean joint will be allowed on centerline.
14. Directly after the HMA Surface Removal 2.0" on the median lanes, median shoulders, left-turn lanes, and median intersection pavements, the HMA binder lift (1.75")/bottom HMA shoulder lift (1.75") shall be placed on all these areas with hot joints constructed along the left-turn lanes and in the side road areas as necessary. If a hot joint cannot be completed on the left-turn lanes, then the joint shall be trimmed prior to the placement of the HMA binder lift on the right-turn lanes. The bottom lift of the median HMA shoulders (which are less than 6.0' wide) shall be paved monolithically/simultaneously with the adjacent lane to avoid joint trimming. If not, joint trimming shall be completed by the Contractor and will not be measured for payment separately.
15. While the median lanes are closed, the top HMA surface lift (2.0")/top HMA shoulder lift (2.0") shall be placed on all these same areas with hot joints constructed along the left-turn lanes and in the side road areas as necessary. The HMA surface lift shall be placed 6" wider into the outside lanes to allow future joint trimming prior to paving HMA surface on the outside lanes. If a hot joint cannot be completed on the left-turn lane, then the joint shall be trimmed prior to the placement of the HMA surface lift. The top lift of the median HMA shoulders (which are less than 6.0' wide) shall be paved monolithically/simultaneously with the adjacent lane to avoid a joint.

*Note: The above activities #10 through #15 shall be completed in short sections as necessary to make sure two traffic lanes are open in the Eastbound and Westbound directions as required above with short-term pavement marking in place.*

16. After the top lift of HMA surface/shoulder material is placed on the median lanes, left-turn lanes, median intersection pavements, and median shoulders, the median lanes shall be open to traffic with short-term pavement marking in place and then the outside lanes shall be closed utilizing TC&P Standards 701421/701422 on the Eastbound and Westbound lanes of US 24 with TC&P Standard 701411 at the BL-24 ramp terminals and utilizing TC&P Standard 701701 at the median crossovers at the sideroad intersections.
17. The centerline joints shall first be trimmed to remove the 6" wide area on the unconfined surface lift at the edge of the median lanes, then the top HMA surface lift (2.0") shall be placed on the outside lanes. The HMA surface lift shall be placed 6" wider into the outside shoulder/right-turn lanes to allow future joint trimming prior to paving the top lift of HMA surface/shoulder on the outside right-turn lanes/shoulders.
18. The outside edge of pavement joints shall first be trimmed to remove the 6" wide area on the unconfined surface lift at the edge of the outside lanes on the right-turn lanes/outside shoulders, then the top HMA surface/top HMA shoulder lift (2.0") shall be placed on the right-turn lanes, side road intersection legs, and outside shoulders.

Note: The above activities #16 through #18 shall be completed in short sections as necessary to make sure two traffic lanes are open in the Eastbound and Westbound directions as required above with short-term pavement marking in place.

19. All remaining work (aggregate wedge shoulders, guardrail, shoulder rumble strips, pavement marking, traffic signal work, clean-up work, etc.) shall then be completed immediately following utilizing proper TC&P Standards and making sure two traffic lanes are open in the Eastbound and Westbound directions as required above with short-term pavement marking in place.

The Contractor shall submit a plan to the engineer detailing milling and paving operations for mainline, turn-lanes, side roads, entrance and exit ramps, and shoulders. The plan shall include sequence of the construction operations/activities, anticipated traffic control and side road closure sequencing. All other work as part of the project is considered non-controlling and shall be completed during controlling construction activities. This submitted plan may differ from the sequence of activities listed above but must first be agreed upon by the Engineer before starting work.

Traffic Control Required for Allowed Road Closure of the Exit Ramps and Entrance Ramps at BL-24:

Full road closures on entrance and exit ramps at BL-24 on US 24 will only be allowed during HMA Surface Removal, and HMA Paving utilizing TC&P Standards BLR 21 and 701451. These road closures on each side road/ramp should be less than a day for HMA Surface Removal, less than a day for HMA binder course placements, and less than a day for HMA surface course placements. All other operations should be completed with flaggers and proper TC&P Standards.

The road closure involving NB BL-24 for operations on Ramp B and Ramp A shall be completed at the same time with the same one day road closure restriction to complete work on both ramps in the same time period which should be less than a day for HMA Surface Removal, less than a day for HMA binder course placements, and less than a day for HMA surface course placements. All other operations on these ramps shall be completed with flaggers and proper TC&P Standards.

During the road closure involving Northbound BL-24 for operations on Ramp B (entrance ramp from Northbound BL-24 to Westbound US 24) and Ramp A (entrance ramp from Northbound BL-24 to Eastbound US 24):

- TC&P Std BLR 21 shall be installed on Northbound BL-24 (McClugage Road) just north of the Spring Creek Road intersection with advance signing, directional barricades, and drums placed as directed by the Engineer following applicable portions of TC&P Standards 701421/701422 used to direct all Northbound traffic to Northbound Spring Creek Road.
- An additional changeable message sign (or the message sign already used on Northbound BL-24) shall be placed on Northbound BL-24 (McClugage Road) warning traffic one week in advance of each of these closures and during these closures. This changeable message sign shall be used to provide information for the traffic headed on Northbound BL-24 to use Spring Creek Road to access US 24. Messages to be directed by the Engineer.

During the road closure for operations involving Exit Ramp C (Eastbound US 24 to Southbound BL-24):

- TC&P Standard 701451 shall be installed on Eastbound US 24 for Exit Ramp C.
- An additional changeable message signs shall be placed on Eastbound US 24 warning traffic one week in advance of this ramp closure and during this closure. This Changeable Message Sign shall be used to provide information for the traffic headed on Eastbound US 24 to use Spring Creek Road to access Southbound BL-24 (McClugage Road). Messages to be directed by the Engineer.

During the road closure for operations involving Exit Ramp D (Westbound US 24 to Southbound BL-24):

- TC&P Standard 701451 shall be installed on Westbound US 24 for Exit Ramp D.
- An additional changeable message signs shall be placed on Eastbound US 24, East of Spring Creek Road, warning traffic one week in advance of this ramp closure and during this closure. This Changeable Message Sign shall be used to provide information for the traffic headed on Westbound US 24 to use Spring Creek Road to access Southbound BL-24 (McClugage Road). Messages to be directed by the Engineer.

#### Traffic Control Required for Allowed Road Closure of Other Side Road Intersections on US 24:

During the side road closures along US 24:

- TC&P Standard 701451 shall be installed on Eastbound and Westbound US 24 to close off the Left/Right-turn lanes when the side road is closed. TC&P Standard BLR 21 shall be used at the North and/or South ends of the sideroad closure with an advance warning signs located per the TC&P Standard and another additional warning sign placed at the closest North/South intersection of the actual road closure.
- An additional changeable message signs shall be placed on Eastbound and Westbound US 24 at location directed by the engineer during these road closure. This Changeable Message Sign shall be used to provide information for the traffic headed on Eastbound/Westbound US 24 to alternate routes to get around the actual road closures. Messages to be directed by the Engineer.

#### CHANGEABLE MESSAGE SIGNS

All changeable message signs required in the contract and as directed by the engineer shall meet the requirements of Section 701 of the Standard Specifications. These Changeable Message Signs will be paid for in accordance with Section 701 of the Standard Specifications.

Changeable message signs for mainline Traffic Control and Protection shall be in place a minimum of the 14 days directly prior to the commencement of work that requires a lane closure and/or as directed by the Engineer. These Changeable Message Signs are anticipated to be placed in advance to the East and West limits of the project on Eastbound and Westbound US 24; and on Northbound BL-24 in advance of US 24. Additional message boards shall be used as directed by the Engineer during side road closures and entrance and exit ramp closures at BL-24.

### **TRAFFIC CONTROL SURVEILLANCE**

Traffic control and surveillance will be required in accordance with application portions of Section 701.10 of the IDOT Standard Specifications and will be measured and paid for in accordance with Section 701.19 and 701.20 of the IDOT Standard Specifications.

### **TRAFFIC CONTROL AND PROTECTION, (SPECIAL)**

This work shall consist of furnishing, installing, maintaining, and removal of the required work zone traffic control and protection on all US 24 side roads and intersections in accordance with applicable portion of Section 701 of the Standard Specifications, in accordance with highway standards listed in the plans, and as directed by the Engineer, except all this work will be paid for at the contract Lump Sum price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

The traffic control and protection for US 24 mainline construction activities, including work activities on entrance and exit ramps at BL-24, will be paid for at the contract Lump Sum price for all other pay items included in the contract. The traffic control and protection required to fully close each side road during milling and paving operations will also be paid for separately at the contract Lump Sum price for TRAFFIC CONTROL AND PROTECTION STANDARD BLR 21. All other Traffic Control and Protection on all US 24 side roads and intersections will be paid for as stated directly above (Note: Traffic Control and Protection Standards 701201, 701306, and 701701 will not be paid for separately, but shall be included in the Lump Sum bid price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL).

### **TRAFFIC SIGNAL CONSTRUCTION STAGING**

- The Contractor will be allowed to place the intersection into all-red flash mode to facilitate the installation of the proposed traffic signal controller cabinets and other components.
- The Contractor shall furnish and install a minimum of two stop signs per approach when the intersection is operating in all-red flash mode. The traffic signals may be placed into all-red flash mode between the hours of 8:30 A.M. and 3:00 P.M. only.
- The Contractor shall restore the traffic signal to normal operation at all other times, unless specifically directed otherwise by the Engineer.

All costs (labor, materials, and equipment) associated with these requirements shall be included in the contract unit bid price for TRAFFIC CONTROL AND PROTECTION, (SPECIAL). There will be no additional compensation for items requirement to implement staging, included but not limited to, temporary cable splices and premium time hours.

## **FLAGGERS**

Effective: August 1, 2018

For operations when workers are on the pavement, one flagger shall be present for each separate operation that is greater than 500' from the initial flagger. The intent is a flagger is never more than 500' from a work activity with workers on the pavement regardless if there is encroachment of the work activity to the open lane. No additional compensation shall be allowed for flaggers and shall be included in the cost of Highway Standard 701401.

## **WIDTH RESTRICTION SIGNING**

Effective: November 1, 2007    Revised: January 1, 2019

Description. This work shall consist of providing, placing, maintaining, and removing width restriction signing as shown on the plans and special provisions. Width restriction signing shall be required when the roadway width will be less than 17'-6" as measured from face to face of temporary concrete barrier and a concrete parapet, guardrail or other fixed, immovable barrier. Width restriction signing may be required when the roadway width will be less than 17'-6" as measured from movable traffic control devices and a fixed object (concrete parapet, guardrail or other immovable roadside barrier). The contractor shall provide signing if the traffic control devices cannot be shifted (in areas of a fixed object and patching/paving/centerline work etc.) to accommodate a traveled way opening of 17'-6". The Contractor shall furnish all materials, equipment, labor, and other essentials necessary to accomplish this work and all other work described herein and as directed by the Engineer.

Materials. All sign post materials shall be in accordance with Articles/Sections: 1093.01(a), 10007.05. Galvanizing will not be required. The nominal size of wood posts shall be 4 in. x 4 in. (100 mm x 100 mm).

Equipment. All equipment shall be in accordance with Article/Section 1106.01.

Notification. The Contractor shall notify the Traffic Control Supervisor, in writing, when the Contractor receives an award letter for the contract. The letter shall state the anticipated start date of lane width restrictions. The twenty-one (21) day notice will start from the Award date. No width restrictions will be allowed until twenty-one (21) days after receiving notice from the Contractor. The Contractor may elect to provide the anticipated start date of lane width restrictions at the Preconstruction meeting so long as there is a minimum of twenty-one (21) days advanced notice.

Traffic Control Supervisor

Don Hoffman

(309) 671-4488

Failure to provide required advanced notice may delay project at the expense of the Contractor.

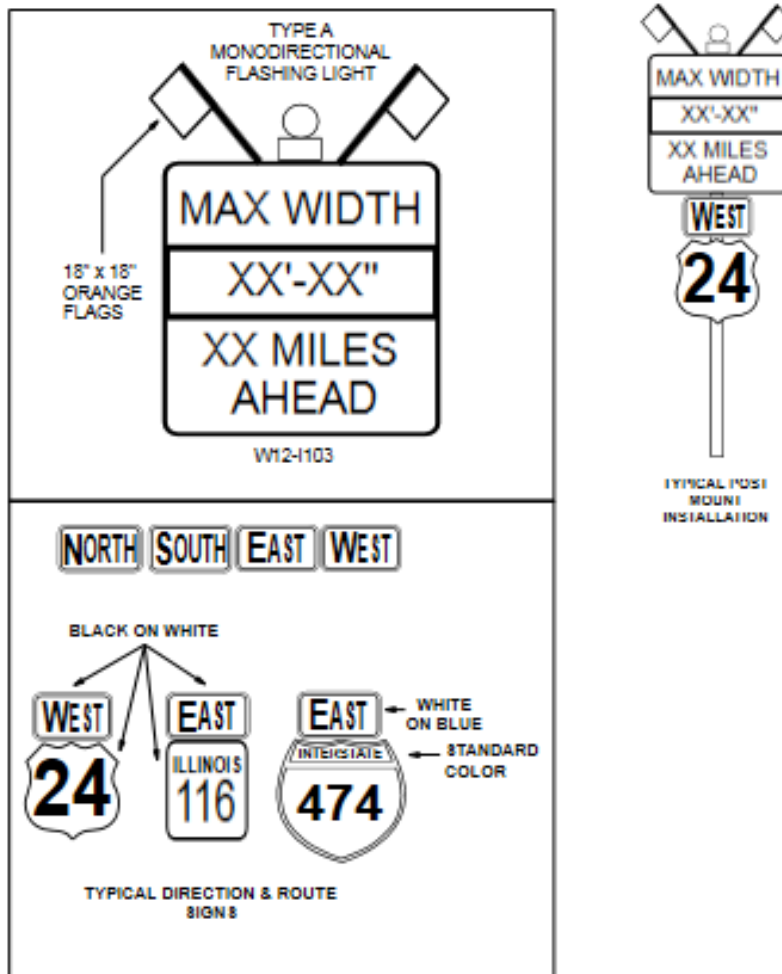


**General.** The Contractor shall provide the route and directional (North, South, East and West) signage. The route and directional signage shall be placed, maintained, and removed by the Contractor. The route sign shall visually be the same as the existing route signs as posted by IDOT. The directional signage shall be black lettering on a white background. Interstate signs shall have the cardinal direction signs with white on a blue background. The route and directional signage shall be placed below Sign W12-I103.

Locations, distances and quantity of signs and shall be as shown on the plan sheets or in the Traffic Control Plan. All final field locations will be marked by the Bureau of Operations, Traffic Control Supervisor.

It shall be the Contractor's responsibility to make arrangements for the J.U.L.I.E. locates.

**Basis of Payment:** This work will not be paid for separately but will be included in the cost of Traffic Control and Protection pay items. This work shall consist of providing, placing, maintaining, and removing width restriction signing as shown on the plans and special provisions and no additional compensation will be allowed.



## **TRAFFIC CONTROL AND PROTECTION BLR 21**

Effective: April 25, 2008 Revised: April 24, 2020

This work shall be in accordance with Section 701 of the Standard Specifications and shall include all material, equipment, and labor necessary to install the traffic control items as shown on the Highway Standard BLR 21 or as shown and described in the plans and specifications.

Add the following to the first paragraph of Article 701.20(b):

"Traffic Control and Protection Standard BLR 21".

## **LINEAR DELINEATOR PANELS, 4 INCH**

Effective: October 1, 2022

Description. This work shall consist of furnishing and installing linear delineators on steel plate beam guardrail at locations shown on plan details.

### **CONSTRUCTION REQUIREMENTS**

General. Linear delineator panels shall be attached to steel plate beam guardrail as shown on plan details and as directed by the Engineer. These panels shall be either white or yellow, matching the color of the adjacent pavement marking edge line. They should be spaced at a minimum of 80-foot centers horizontally, with a minimum of two linear delineator per guardrail run. Linear delineators shall not be placed on guardrail terminal sections. Linear delineator spacing through horizontal curves where the normal speed limit is reduced, the spacing of the linear delineators shall be reduced to 40-foot centers. Existing steel plate beam guardrail that contain existing linear delineator panels shall have any damaged or missing panels removed and replaced as directed by the Engineer.

When securing the linear delineator panels to steel plate beam guardrail, the Contractor may use a linear delineation system panel and bracket mounting method approved by the Engineer.

Linear delineation system panel and bracket including installation methods shall be according to the manufacture's recommendations.

The Contractor shall be responsible for testing the durability and strength of the method used to ensure permanent adhesion of the linear delineator panel to the bridge rail. Drilling into metal bridge rail or other metal surfaces to secure the linear delineator panels will not be permitted.

When removing and replacing missing or damaged linear delineator panels, the existing linear delineator panels and any adhesive or bracket when used to secure the existing linear delineator panels shall be removed to the satisfaction of the Engineer. All cost and labor associated with the removal and cleanup of the existing linear delineator panels shall not be paid for separately but shall be included in the cost of this work.

Each panel shall not be less than 34 inches in length and 4.00 inches in width. The panels shall be constructed of cube-corner retroreflective material in standard highway colors permanently bonded to an aluminum substrate. The lateral edges of each panel shall be hemmed. The panel assembly shall have a repeating raised lateral ridge every 2.25 inches. Each ridge shall be 0.34 inches high with a 45° profile and a 0.28-inch radius top.

Daytime color requirements shall be determined from measurement of the retroreflective sheeting applied to aluminum test panels. Daytime color shall be measured instrumentally using a spectrophotometer employing annular 45/0 (or equivalent 0/45) illuminating and viewing geometry. Measurements shall be made in accordance with ASTM E1164 for ordinary colors or ASTM E2153 for fluorescent colors. Chromaticity coordinates shall be calculated for CIE Illuminant D65 and the CIE 1931 (2o) Standard Colorimetric Observer in accordance with ASTM E308 for ordinary colors or ASTM E2152 for fluorescent colors.

#### Chromaticity Limits for White

	x	y	x	y	x	y	x	y	Limit Y (%)	
									Min	Max
White	0.303	0.287	0.368	0.353	0.340	0.380	0.274	0.316	40	-

#### Chromaticity Limits for Fluorescent Yellow

	x	Y	x	Y	x	y	x	y	Total Luminance Factor YT (%)
									Min
Fluor. Yellow	0.521	0.424	0.557	0.442	0.479	0.520	0.454	0.491	40

#### Inspection of Linear Delineator Panels

The linear delineator panels installed under this contract will be inspected following installation, in addition, they will be inspected following a winter performance period that extends 180 days from December 30th.

Within 15 calendar days after the end of the winter performance period, a final performance inspection will be made. If this inspection discloses any work which is not visibly intact and serviceable, the Contractor shall, within 30 calendar days, completely repair or replace such work to the satisfaction of the Engineer.

Measured in its entirety, the work shall be 97 percent intact.

Upon completion of the final performance inspection, or after satisfactory completion of any necessary corrections, the Engineer shall notify the Contractor in writing of the date of such final performance inspection and release him/her from further performance responsibility.

This delay in performance inspection and performance acceptance of the linear delineator panels shall not delay acceptance of the entire project and final payment due if the contractor requires and receives from the subcontractor a third party "performance" bond naming the Department as obligee in the full amount of all linear delineator panels listed in the contract, multiplied by the contract unit price. The bond shall be executed prior to acceptance and final payment of the non-linear delineator panel items and shall be in full force and effect until final performance inspection and performance acceptance of the linear delineator panels. Execution of the third-party bond shall be the option of the Contractor.

Basis of Payment: This work, including all materials, equipment, and labor necessary to complete the work as described will be paid for at the contract unit price per Each for LINEAR DELINEATOR PANELS, 4 INCH.

### **DETECTOR LOOPS, TYPE 1**

Effective March 1, 1996

Revised November 6, 2020

This work shall be in accordance with Sections 886 and 1079 of the Standard Specifications except as modified herein.

All detector loops shall utilize a separate pair of lead-ins and a Type II splice shall be used for all detector lead-ins.

All proposed detector loops shall be cut in the proposed binder course or milled surface prior to the final overlay.

All detector loops shall be re-installed in the original locations. The Engineer of Traffic shall be notified prior to detector loop installation. Please contact Ben Tellefson, Operations, at (309) 671-4477 forty-eight (48) hours prior to milling.

The above work will be paid for at the contract unit price per Foot (Meter) for DETECTOR LOOP, TYPE I.

### **AGGREGATE QUALITY**

Effective: July 1, 1990

Revised: April 26, 2013

Coarse aggregate for Granular Embankment Special, Sub-base Granular Material, Aggregate Shoulders, Aggregate Surface and Base Courses, and Erosion Control Aggregate shall conform to Article 1004.04 of the Standard Specifications for Road and Bridge Construction except that all of the following revisions to Article 1004.04(b) shall apply unless the Contractor chooses to use RAP for aggregate shoulders:

1. Revise the maximum allowable percentage of weighted average loss when the material is subjected to five (5) cycles of sodium sulfate soundness test from 25%, as shown under the Class D of the Quality Chart in Article 1004.01(b) of the Standard Specifications, to 40%; and

2. Revise the maximum allowable percentage of wear as determined by the Los Angeles Abrasion Method from 45%, as shown under Class D of the Quality Chart in Article 1004.01(b) of the Standard Specifications, to 65%; and
3. The sum of the percentages of weighted average loss when the material is subjected to 5 cycles of the sodium sulfate soundness test and the percentage of wear as determined by the Los Angeles Abrasion Method shall not exceed 95%.

### **PCC QMP ELECTRONIC REPORT SUBMITTALS**

Effective: January 13, 2022

The Contractor's QC personnel shall be responsible for electronically submitting the following reports to the Department: PRO and IND data for BMPR MI654 "Air, Slump, & Quantity"; PRO data for BMPR MI655 "PCC Strength"; and PRO data for BMPR MI504 "Field/Lab Gradation". The format for the electronic submittals will be the "QMP" reporting program which will be provided by the Department. Microsoft Office 2007 or newer is required for this program which must be provided by the Contractor.

### **PCC AUTOMATIC BATCHING EQUIPMENT**

Effective: April 23, 2010      Revised: August 1, 2023

Portland cement concrete provided shall be produced from batch plants that conform to the requirements of Article 1103.03 (a) and (b) of the Standard Specifications for Road and Bridge Construction. Semi-automatic batching will not be allowed.

Plants shall have computerized batching interfaced with a printer. IDOT Producer Number, IDOT Concrete Material Code, batch weights, aggregate mixtures, water added, amount of each admixture or additive, and percent variance from design shall be printed for each batch. The ticket shall state the actual water-cement ratio as batched, and the amount of water that can be added to the batch without exceeding the maximum water-cement ratio. Truck delivery tickets will still be required as per Article 1020.11 (a)(7) of the Standard Specifications.

### **POTHOLING FOR LOCATION OF EXISTING UNDERGROUND UTILITIES**

Potholing to locate existing underground utilities shall be included in the contract bid price for the conduit pay items.

Removal and replacement of existing sidewalk, pavement, and islands only for utility locating purposes will not be paid for separately but shall also be included in the contract bid price for the conduit pay items.

## **GUARDRAIL REMOVAL**

This work shall be in accordance with applicable sections of Section 632 of the Standard Specifications with the specification that the removal of the existing bituminous curb and erosion control board shall be considered in the contract unit bid price per Foot for GUARDRAIL REMOVAL. No additional compensation will be allowed for the required removals.

## **ISLAND PAVEMENT REMOVAL AND REPLACEMENT**

This work shall be in accordance with the applicable Articles of Sections 420, 440, and 1020 of the Standard Specifications with the following modifications:

The Contractor shall remove the existing island surface to facilitate the installation of the proposed conduit.

The island surface shall be sawcut at the removal limits and the Contractor shall remove all debris and dispose of it off the right-of-way in accordance with Article 202.07 of the Standard Specifications.

The Contractor shall restore the island surface by matching the existing pavement depth.

All work shall be done to the satisfaction of the Engineer.

Basis of Payment: This work will be paid for at the contract unit price per Square Foot for ISLAND PAVEMENT REMOVAL AND REPLACEMENT which price shall be payment in full for all labor, materials, and equipment required to remove the existing island surface, dispose of the debris, and restore the island surface as described above.

## **CLASS B PATCHES, TYPE II, 16 INCH (SPECIAL)**

This work shall be completed in accordance with applicable portions of Section 442.05(b) of the IDOT Standard Specifications and IDOT Highway Standard 442101, except instead of using dowel bars #6 rebars, 24" long at the same spacing as dowel bars, shall be used after drilling with grouting preformed meeting the requirements of Section 420.05 with a minimum pull-out strength of 11,000 lbs. and as directed by the Engineer.

Basis of Payment: This work will be measured and paid for in accordance with applicable portions of Section 442.10 and 442.11 per Square Yard for CLASS B PATCHES (SPECIAL) of the type and thickness specified. All mandatory saw cuts for removal operations (same as for Class B patches) will be paid for at the contract unit bid price per Foot for SAW CUTS. Drilled and grouted rebars will be paid at the contract unit price per Each for DRILL AND GROUT #6 TIE BARS.

### **HOT-MIX ASPHALT SHOULDER REMOVAL AND REPLACEMENT (SPECIAL)**

Description. This pay item is intended for the removal and replacement of the existing hot-mix asphalt (HMA) shoulders in areas that have deteriorated primarily due to traffic moving onto the shoulder from the adjacent lane closure operations. It will also be used on deteriorated shoulders in areas that are anticipated to have traffic temporarily moved onto the shoulder in advance of pavement patching, milling, and paving operations, and in areas as needed for culvert extensions.

Construction Requirements. This work shall consist of removal and disposal of existing HMA shoulders at locations directed by the Engineer. Removal and disposal shall be in accordance with the applicable portions of Section 440 of the Standard Specifications.

This work shall also consist of the replacement of the HMA shoulders to a thickness of eight (8) inches (200 mm). The replacement of the HMA shoulders shall be in accordance with the applicable portions of Section 482 of the Standard Specifications.

Method of Measurement. This work will be measured for payment in place and the area computed in Square Yards (Square Meters).

Basis of Payment. This work will be paid for at the contract unit price per Square Yard (Square Meter) for HOT-MIX ASPHALT SHOULDER REMOVAL AND REPLACEMENT (SPECIAL).

### **CLEANING UNDERDRAIN OUTLETS**

Description. This work shall consist of cleaning the existing underdrain outlets and replacing missing rodent shields.

All existing underdrain outlets shall be cleaned unless otherwise directed by the Engineer. This cleaning shall include removing vegetation, sediment, or other debris from the existing headwall and outlet pipe. The cleaning shall also include reestablishing positive drainage from the outlet to the ditch where needed. The outlet pipe shall be flushed with water using a hose or other suitable equipment. The pipe shall be flushed a minimum distance of 10 feet beyond the pipe opening. The pressure of water introduced into the pipe shall not exceed 50 psi. All equipment used is subject to the approval of the Engineer. Headwalls and pipes damaged during cleaning shall be replaced as directed by the Engineer.

Existing outlets with an invert elevation below the existing ditch elevation do not require cleaning unless directed by the Engineer. If the contract includes separate work for ditch cleaning or regrading at the location of the outlet, the outlet should be cleaned after ditch work is complete.

Where rodent shields are not functioning or absent, they should be replaced according to Article 601.05 of the Standard Specifications. The Contractor shall submit a rodent shield design for approval of the Engineer prior to use.

Basis of Payment. This work will be paid for at the contract unit price per Each for CLEANING UNDERDRAIN OUTLETS.

### **INLET BOXES TO BE ADJUSTED (SPECIAL)**

This work shall consist of all material and labor required to clean and adjust inlets to match proposed Concrete/HMA surfaces. The removal and replacement of concrete pavement and curb necessary to adjust the inlets to the proposed finish grade shall be included in this item.

This work shall be performed in accordance with Article 602 of the Standard Specifications. Standard 610001 shall apply to the inlet adjustments located in paved shoulder area. All existing frames and grates shall be salvaged and reused.

This work will be measured and paid for at the contract unit price per Each for INLET BOXES TO BE ADJUSTED (SPECIAL) at the locations specified in the schedule of quantities, and no additional compensation will be allowed.

### **OUTLET MARKER**

Description. This work shall consist of marking the location of all existing pipe underdrain outlets within the limits of the project.

Materials. Materials shall meet the requirements of the following Articles of Section 1000 of the Standard Specifications:

Item	Article/Section
(a) Modified Urethane Pavement Marking .....	1095.02

### **CONSTRUCTION REQUIREMENTS**

Outlet markers, as detailed in the plans, shall be installed on the completed bituminous with painted pavement markings. Outlet markers shall be placed directly over all existing pipe underdrain outlet pipes. Outlet marker color shall be white. Installation shall be according to Article 780.06 of the Standard Specifications.

### **TRAFFIC SIGNAL BACKPLATE**

This work shall be in accordance with Sections 882 and 1078 of the Standard Specifications except as modified herein.

The traffic signal backplates shall be of the same material as the traffic signal heads as specified on the plans.

A three (3) inch wide strip of reflective sheeting shall be applied to the outside perimeter of the face of the backplates. The reflective tape shall be fluorescent yellow in color and shall consist of type AZ or type ZZ sheeting.

Backplates that are installed on existing signals shall be split backplates that are designed for installation on existing traffic signal heads. The individual halves on the backplate shall be secured with stainless steel washers, bolts, and locknuts to prevent the sections from separating. The use of metal clips is not allowed.



Basis of Payment: This work will be paid for at the contract unit price Each for TRAFFIC SIGNAL BACKPLATE and shall be payment in full for all labor, materials, and equipment required to furnish and install a traffic signal backplate with reflective tape as described above, complete.

## **INDUCTION LOOP DETECTOR AMPLIFIERS**

This work shall be in accordance with Sections 885 and 1079 of the Standard Specifications except as modified herein.

The detector amplifier shall be equipped with an LCD display that can display the loop frequency and inductance and shall conform to the following specifications:

- Custom LCD displays complete status and function settings of the detector.
- All functions are programmable from the front panel LCD "Menu" - no removing of detector to change function settings.
- LCD displays loop frequency, loop inductance, & -L/L% values.
- LCD displays the accumulated number of loop failure incidents since the detector was last reset - helps diagnose intermittent systems.
- LCD bar graph displays loop inductance change to verify ideal sensitivity level setting.
- Selectable "Continuous-CALL" and "Channel-Off" to aid system troubleshooting.
- 8 loop frequencies and 9 levels of sensitivity.
- 2 Selectable modes of operation: Presence or Pulse.
- 255 second CALL Delay and 25.5 second Extension timers.
- 999 second Max. Presence Timer. NEMA TS 2 Status Output.
- EOG (end of green) reset synchronization for Max. Presence timer.
- Super bright LEDS indicate vehicle detection or loop failure.
- Environmentally sealed push button switches to insure trouble-free service.
- Phase Green (Delay Override) input.

The detector amplifier shall be equipped with relay or solid-state outputs to ensure that the detectors fail in a constant call mode.

The RENO A&E Model C-1200 Series and EDI Oracle Series are currently approved for use within the District.

Basis of Payment: This work shall be paid for at the contract unit price Each for INDUCTION LOOP DETECTOR AMPLIFIER which price shall be payment in full for all labor, equipment, and materials required to supply and install the inductive loop detector described above, complete.

## REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

This work shall be in accordance with Section 895 of the Standard Specifications except as modified herein.

The Contractor shall remove and dispose of the following items off of the right-of-way:

Removal Items	US 24 & Grange
SIGNAL HEAD, BRACKET MOUNTED (SIGNAL HEADS 5, 11)	2.0
SIGNAL HEAD, MAST ARM MOUNTED (SIGNAL HEADS 1, 2, 3, 4, 7, 8, 9, 10)	8.0
TRAFFIC SIGNAL POST (TS-1, TS-3)	2.0
MAST ARM ASSEMBLY AND POLE (MA-1, MA-2, MA-3, MA-4)	4.0
ELECTRIC SERVICE	1.0
LIGHTING CONTROLLER	1.0
BATTERY BACKUP SYSTEM	1.0
TRAFFIC SIGNAL CONTROLLER CABINET	1.0
ELECTRICAL CABLE NOT USED IN PROPOSED PLANS	ALL

Removal Items	US 24 & Cummings
SIGNAL HEAD, BRACKET MOUNTED (SIGNAL HEADS 3, 4, 7, 8, 9, 12, 13, 16, 17, 18)	10.0
SIGNAL HEAD, MAST ARM MOUNTED (SIGNAL HEADS 1, 2, 5, 6, 10, 11, 14, 15)	8.0
TRAFFIC SIGNAL POST (TS-1, TS-2, TS-3, TS-4, TS-5)	5.0
MAST ARM ASSEMBLY AND POLE (MA-1, MA-2, MA-3, MA-4)	4.0
WOOD POLE	1.0
HPS LUMINAIRES	2.0
ELECTRIC SERVICE	1.0
TRAFFIC SIGNAL CONTROLLER CABINET	1.0
BATTERY BACKUP SYSTEM	1.0
ELECTRICAL CABLE NOT USED IN PROPOSED PLANS	ALL

The Contractor shall remove the following item and deliver it to the IDOT Traffic Building at 1025 West Detweiller Drive, Peoria:

Removal Items	US 24 & Grange
LED LUMINAIRES	4.0
DILEMMA ZONE DETECTION SYSTEM	2.0

Removal Items	US 24 & Cummings
LED LUMINAIRES	2.0
DILEMMA ZONE DETECTION SYSTEM	2.0

The above list should represent an accurate listing of removal items; however, it is the Contractor's responsibility to verify all quantities prior to bidding. There will be no additional compensation.

The Contractor shall dispose of all items off the Right-of-Way and reflect the salvage value of the material in the contract bid price.

The Contractor shall remove all LED modules prior to disposal. All HPS luminaire lamps shall be properly disposed of at a certified recycling center or alternate facility that is authorized to accept them.

Basis of Payment: The above work will be paid for at the contract unit price Each for REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT and shall be payment in full for removing and disposing of the equipment described above, complete. No additional compensation will be allowed.

### **ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C**

This work shall be in accordance with the applicable Articles of Sections 801, 806, 873, 1076, and 1088 of the Standard Specifications with the following modifications:

This work shall consist of furnishing and installing a grounding wire to bond all traffic signal handholes (lids and rings), mast arm assemblies, posts, light poles, cabinets and exposed metallic conduits.

The Contractor shall attach the proposed ground wire to the proposed traffic structures to ground and safety bond them in accordance with NEC requirements. All labor, materials, and equipment required to bond the proposed structures (wire, clamps, hardware, etc.) shall be included in the bid price for this pay item.

The Contractor shall also be responsible for locating all handholes and uncovering them as required to facilitate the work.

The proposed ground wire shall be an insulated #6 XLP copper conductor with green insulation.

Basis of Payment: This work will be paid for at the contract unit price per Foot for ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C which price shall be payment in full for all labor, materials, and equipment required to provide the grounding cable described above.

## **CLOSED-CIRCUIT TELEVISION DOME CAMERA, HD**

Description. This work shall consist of furnishing and installing an integrated Closed-Circuit Television (CCTV) Dome Camera Assembly, camera bracket, and all other items required for installation and operation. This assembly shall contain all components identified in the Materials Section and shall be configured as indicated on the plan sheets.

### Materials.

The CCTV camera shall be an Axis Model Q6075-E Dome Camera Assembly for integration into the existing District 4 ITS System.

The Contractor shall provide all materials required to install the proposed camera on the proposed mast arm strain pole as shown on the plan sheets.

The Contractor shall submit catalog cut sheets to the Department for all items (mounting brackets, hardware, etc.) that will be utilized for review prior to commencing work.

The Department will program the cameras prior to installation.

The camera shall meet or exceed the following specifications:

### CAMERA

VIDEO:	60 Hz (NTSC), 50 Hz (PAL)
IMAGE SENSOR:	1/2.8" progressive scan CMOS
LENS:	4.44–142.6 mm, F1.6–4.41 Horizontal angle of view: 62.8°–2.23° Vertical angle of view: 36.8°–1.3° Autofocus, auto-iris
DAY AND NIGHT:	Automatically removable infrared-cut filter
MINIMUM ILLUMINATION:	Color: 0.3 lux at 30 IRE F1.6 B/W: 0.03 lux at 30 IRE F1.6 Color: 0.5 lux at 50 IRE F1.6 B/W: 0.04 lux at 50 IRE F1.6
SHUTTER TIME: NTSC:	1/33000 s to 1/3 s with 50 Hz 1/33000 s to 1/4 s with 60 Hz

PAN/TILT/ZOOM: Pan: 360° endless, 0.05° - 450°/s  
Tilt: 220°, 0.05°-450°/s

32x optical zoom and 12x digital zoom, total 384x zoom  
E-flip, 256 preset positions, Tour recording, Guard tour, Control  
queue, On-screen directional indicator, Set new pan 0°,  
Adjustable zoom speed

## VIDEO

VIDEO COMPRESSION: H.264 (MPEG-4 Part 10/AVC), Motion JPEG  
RESOLUTIONS: HDTV 1080p 1920x1080 to 320x180  
HDTV 720p 1280x720 to 320x180

FRAME RATE (H.264): Up to 60/50 fps (60/50 Hz) in HDTV 720p  
Up to 30/25 fps (60/50 Hz) in HDTV 1080p

VIDEO STREAMING: Multiple, individually configurable streams in H.264 and Motion  
JPEG, Axis' Zipstream technology, Controllable frame rate and  
bandwidth, VBR/MBR H.264

IMAGE SETTING: Manual shutter time, compression, color, brightness, sharpness,  
white balance, exposure control, exposure zones, fine tuning of  
behavior at low light, rotation: 0°, 180°, text and image overlay,  
32 individual 3D privacy masks, image freeze on PTZ, automatic  
defog, backlight compensation

Wide Dynamic Range (WDR): Up to 120 dB depending on scene,  
highlight compensation

## NETWORK

SECURITY: Password protection, IP address filtering, HTTPSa encryption,  
IEEE 802.1Xa network access control, Digest authentication, User  
access log, Centralized Certificate Management

PROTOCOLS: IPv4/v6, HTTP, HTTPSa, SSL/TLSa, QoS Layer 3 DiffServ, FTP,  
CIFS/SMB, SMTP, Bonjour, UPnP, SNMP v1/v2c/v3 (MIB-II),  
DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP,  
RTCP, ICMP, DHCP, ARP, SOCKS, SSH, NTCIP

## SYSTEM INTEGRATION

APPLICATION PROG  
INTERFACE: Open API for software integration, including VAPIX®  
and AXIS Camera Application Platform; specifications at  
[www.axis.com](http://www.axis.com), AXIS Video Hosting System (AVHS) with  
One-Click Connection, ONVIF Profile S, specification at  
[www.onvif.org](http://www.onvif.org)

ANALYTICS:	Video motion detection, Autotracking, Active Gatekeeper Basic Analytics (not to be compared with third-party analytics): Object removed, Enter/Exit detector, Fence detector, Object Counter, Highlight compensation, Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://www.axis.com/acap">www.axis.com/acap</a>
EVENT TRIGGERS:	Detectors: Live stream accessed, Video motion detection, Shock Detection, Object removed, Enter/Exit detector, Fence detector, Object counter; Hardware: Fan, Network, Temperature, Casing Open; PTZ: Autotracking, Error, Moving, Ready, Preset Reached; Storage: Disruption, Recording; System: System Ready; Time: Recurrence, Use Schedule; Input signal: Manual trigger, Virtual input
EVENT ACTIONS:	Day/night mode, overlay text, video recording to edge storage, pre- and post-alarm video buffering, send SNMP trap PTZ: PTZ preset, start/stop guard tour File upload via FTP, SFTP, HTTP, HTTPS network share and Email; Notification via email, HTTP, HTTPS and TCP
DATA STREAMING	Event data
BUILT IN INSTALLATION AIDS	Pixel Counter
<u>GENERAL</u>	
CASING:	IP66-, NEMA 4X- and IK10-rated Metal casing (aluminum), polycarbonate (PC) clear dome, sunshield (PC/ASA)
SUSTAINABILITY:	PVC Ffree
MEMORY:	512 MB RAM, 128 MB Flash
POWER CAMERA:	Axis High PoE midspan 1-port: 100–240 V AC, max 74 W Camera consumption: typical 16 W, max 60 W
CONNECTORS:	RJ45 10BASE-T/100BASE-TX PoE, RJ45 Push-pull Connector (IP66) included
EDGE STORAGE:	Support for SD/SDHC/SDXC card Support for recording to dedicated network-attached storage (NAS); For SD card and NAS recommendations see <a href="http://www.axis.com">www.axis.com</a>
OPERATING CONDITIONS:	With 30 W midspan: -20 °C to 50 °C (-4 °F to 122 °F) With 60 W midspan: -50 °C to 50 °C (-58 °F to 122 °F) Maximum temperature (intermittent): 60 °C (140 °F) Arctic Temperature Control: Start-up as low as -40 °C (-40 °F) Humidity 10–100% RH (condensing)

**APPROVALS:**

EMC: EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 55024, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 22 Class A, KCC KN32 Class A, KN35

Safety: IEC/EN/UL 60950-1, IEC/EN/UL 60950-22

Environment: EN 50121-4, IEC 62236-4, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60721-4-3, NEMA 250 Type 4X, IEC 60068-2-30, IEC 60068-2-60, IEC 60068-2-78, IEC/EN 60529 IP66, NEMA TS-2-2003 v02.06, Subsection 2.2.7, 2.2.8, 2.2.9; IEC 62262 IK10, ISO 4892-2

Midspan: EN 60950-1, GS, UL, cUL, CE, FCC, VCCI, CB, KCC, UL-AR

**WEIGHT:** 3.7 kg (8.2 lb.)

**INCLUDED ACCESSORIES:** Axis High PoE 60 W midspan 1-port, RJ45 Push-pull Connector (IP66), Sunshield, Installation Guide, Windows decoder 1-user license

**VIDEO MANAGEMENT SOFTWARE:** AXIS Camera Companion, AXIS Camera Station, Video management software from Axis' Application Development Partners available on [www.axis.com/techsup/software](http://www.axis.com/techsup/software)

**WARRANTY:** Axis 3-year warranty and AXIS Extended Warranty option

**Environmental Enclosure/Housing**

The environmental enclosure shall be designed to physically protect the integrated camera from the outdoor environment and moisture via a sealed enclosure. If the option exists in the standard product line of the manufacturer, the assembly shall be supplied with an integral sun shield. The enclosure shall be fully water and weather resistant with a NEMA 4 rating or better.

The camera dome shall be constructed of distortion free acrylic or equivalent material that must not degrade from environmental conditions. The environmental housing shall include a camera-mounting bracket. In addition, the environmental housing shall include a heater, blower, and power surge protector. An integral fitting compatible with a standard 1-1/2 in (38.1 mm) NPT pipe, suitable for outdoor pendant mounting shall also be provided.

The enclosure shall be equipped with a heater controlled by a thermostat. The heater shall turn on when the temperature within the enclosure falls below 40° F (4.4°C). The heater shall turn off when the temperature exceeds 60°F (15.6°C). The heater will minimize internal fogging of the dome faceplate when the assembly is operated in cold weather.

In addition, a fan shall be provided as part of the enclosure. The fan will provide airflow to ensure effective heating and to minimize condensation.

The enclosure shall be equipped with a hermetically sealed, weatherproof connector, located near the top for external interface with power, video, and control feeds.

#### CCTV Dome Camera Mounting Supports

The Contractor shall furnish and install an Axis Pole Mount Bracket T91L61 (Part Number 5801-721) for camera installation on traffic signal mast arms and CCTV camera poles and stainless-steel banding as required. The CAT5 cable shall be terminated inside the bracket by using the IEC punch down blocks.

Mounting supports shall be configured as shown on the camera support detail plans and as approved by the Engineer. Mount shall be of aluminum construction with enamel or polyester powder coat finish. Braces, supports, and hardware shall be stainless steel. Wind load rating shall be designed for sustained gusts up to 90 mph (145 km/hr), with a 30% gust factor. Load rating shall be designed to support up to 75 lb. (334 N). For roof or structural post/light pole mounting, mount shall have the ability to swivel inward for servicing. The mounting flange shall use standard 1-1/2 inches (38.1 mm) NPT pipe thread.

#### Connecting Cables

The Contractor shall furnish and install outdoor rated, shielded CAT 5E cable at the locations shown on the plan sheets. The cable shall be terminated using the terminal block inside the camera bracket and the IDC connector and pre-formed IP66 rated RJ-45 connector on the camera end and a shielded RJ-45 connector in the cabinet. The Contractor shall test the cable prior after termination.

Cable will be paid for separately as CAT 5 ETHERNET CABLE.

### CONSTRUCTION REQUIREMENTS

#### General

The Contractor shall prepare a shop drawing detailing the complete CCTV Dome Camera Assembly and installation of all components to be supplied for approval of the Engineer. Particular emphasis shall be given to the cabling and the interconnection of all of the components.

The Contractor shall install the CCTV dome camera assembly at the locations indicated in the Plans. The CCTV Dome Camera Assembly shall be mounted on a pole, wall, or other structure.

#### Testing

The Contractor shall test each installed CCTV Dome Camera Assembly. The test shall be conducted from the field cabinet using the standard communication protocol and a laptop computer. The Contractor shall verify that the camera can be fully exercised and moved through the entire limits of Pan, Tilt, Zoom, Focus and Iris adjustments, using both the manual control and presets. The Contractor shall maintain a log of all testing and the results. A representative of the Contractor and a representative of the Engineer shall sign the log as witnessing the results. Records of all tests shall be submitted to the Engineer prior to accepting the installation.



Method of Measurement. The closed-circuit television dome camera bid item will be measured for payment by the Actual Number of CCTV dome camera assemblies furnished, installed, tested, and accepted.

Basis of Payment. Payment will be made at the contract unit price for Each CLOSED-CIRCUIT TELEVISION DOME CAMERA, HD including all equipment, material, testing, documentation, and labor detailed in the contract documents for this bid item.

## **CAT 5 ETHERNET CABLE**

This work shall be in accordance with Sections 873, 1076, and 1088 of the Standard Specifications except as modified herein.

This work shall consist of furnishing and installing an outdoor rated CAT5E cable in conduits, handholes, and poles.

The cable shall be rated for outdoor use and conform to the following specifications:

- Outdoor CMX Rated Jacket (climate/oil resistant jacket)
- UV Resistant Outer Jacket Material (PVC-UV, UV Stabilized)
- Outer Jacket Ripcord
- Designed for Outdoor Above- Ground or Conduit Duct applications
- Cat5E rated to 350MHz (great for 10/100 or even 1000mbps Gigabit Ethernet)
- Meets TIA/EIA 568b.2 Standard
- Shielded Twist Pair
- 4 Pairs, 8 Conductors
- 24AWG, Solid Core Copper
- UL 444 ANSI TIA/EIA-568.2, ISO/IEC 11801
- RoHS Compliant
- Water Blocking Gel

Basis of Payment: This work will be paid for at the contract unit price per Foot for CAT 5 ETHERNET CABLE, which shall be payment in full for all labor, equipment, and materials required to provide and install the cable described above, complete.

## **CONTROLLER CABINET TYPE IV**

This work shall be in accordance with Sections 857, 1073, and 1074 of the Standard Specifications except as modified herein.

The Contractor shall remove existing photocell relays, DIN rail mounted communications equipment, detection equipment, emergency vehicle preemption equipment, CCTV equipment, and fiber optic enclosures from existing traffic signal controller cabinets and install the equipment in the proposed controller cabinets at each location.

This item shall consist of furnishing and installing a 20A 1 Pole circuit breaker, button photocell in a cabinet overhang, terminal blocks, wiring, and all other items required to provide photocell control inside an existing controller cabinet for LED roadway luminaires at an intersection.

All luminaires shall be wired for 120V operation.

The Contractor shall relocate battery backup system cabinets and components from the existing traffic signal controller cabinets to the proposed controller cabinets.

The Contractor shall remove the existing traffic signal cabinet and components and dispose of them off site. The Contractor shall allow the Department to salvage any traffic signal components from the existing cabinets prior to disposal.

The existing Econolite Cobalt or ASC/3 controller will be used with the proposed cabinet.

The cabinet shall be compliant with NEMA TS-2 standards and NTCIP Standards 1201 and 1202.

The traffic signal cabinet shall have a NEMA TS-2 back panel. All flashing yellow left turn overlaps shall be configured for Mode G.

The proposed traffic signal cabinet emergency vehicle preemption functionality shall be configured to match the channels currently in use for the city of Peoria confirmation beacons and GPS EVP detectors. The cabinet shall be wired to drive the emergency vehicle preemption confirmation beacons using the red channels of load switches 13-16.

The cabinet shall include a malfunction management unit to allow enhanced fault monitoring capabilities. The malfunction management unit shall support flashing yellow arrow operation and be a Reno A&E model MMU2-1600G equipped with a graphical display and Ethernet port.

The malfunction management unit shall be equipped with the latest software and firmware revisions. The cabinet shall be equipped with a plexi-glass shield that covers the power panel which houses the mercury bus relay, line filter, circuit breakers, and other electrical components.

The cabinet shall be equipped with a TS-2 detector rack (rack is required only for cabinets with inductive loop detectors), load switches, flash transfer relays, bus interface units, and all other components required for operation.

\*\*\*\*\*No fiber optic telemetry components are required.\*\*\*\*\*

The cabinet shall be equipped with a plexi-glass shield that covers the thermostat and a LED lighting assembly that turns on when the door is opened. The lighting assembly shall be mounted in a location that will not interfere with cabinet maintenance.

The traffic signal cabinet shall be equipped with a sixteen-load switch back panel to accommodate future expansion.

The cabinet shall be equipped with a cabinet riser that raises the cabinet approximately twelve inches above the concrete foundation. The riser shall bolt directly to the existing foundation anchor bolts and the riser shall be attached to the cabinet using galvanized steel hardware.

The riser shall be fabricated from 0.125-inch (3 mm) sheet aluminum with flanges on the top and bottom to provide rigidity. The riser shall be equipped with mounting flanges as required to connect with the controller cabinet and foundation anchor bolts. The outside surface of the riser shall have a smooth, uniform, natural finish.

The cabinet shall be furnished with a compact heater strip to be used for moisture reduction during cold weather. The heater shall be thermostatically controlled, operate at 120 volts, have a minimum wattage of 150 watts, a maximum wattage of 250 watts, have a shield to protect service personnel and equipment from damaging heat, be separately fused, and be mounted where it does not interfere with a person working in the cabinet.

The traffic signal cabinets shall be equipped with two non GFCI duplex NEMA 5-15R receptacles to be used to provide power to auxiliary equipment.

The cabinet shall be equipped with toggle switch guards for all switches located on the door to prevent accidental switching. The cabinet shall include a re-usable deluxe filter.

The cabinet shall be equipped with additional surge protection for the controller, malfunction management unit, and detector amplifiers, and/or video detection system. The surge protector shall be a Transtector model ACP100BWN3 and shall be included in addition to an EDCO SHA-1250 IRS protector. The EDCO SHA-1250 IRS surge protector is to be provided in accordance with Section 1085.47 A(4a) and shall be wired to provide surge protection for the controller, malfunction management unit, and detector amplifiers. The Transtector surge suppressor may be wired to the equipment protected power terminals of the EDCO SHA-1250 IRS unit provided that the controller, MMU, and detection system are protected.

The cabinet shall be equipped with an aluminum slide-out drawer with document storage. The slide-out drawer shall be able to support 50 lbs. when fully extended.

The Contractor shall set up each cabinet in his or her shop for inspection by the Engineer. All phases that are utilized shall be hooked up to a light board to provide observation for each signal indication. The Engineer shall be notified when the setup is complete so that all pertinent timings may be entered into each traffic signal controller. The facility shall be subject to a seven-day burn-in period before installation will be allowed.

After installing the cabinet in the field, prior to resuming normal signal operation, the Contractor shall test the cabinet by connecting a jumper to the cabinet field terminals to ensure that all conflicting signals will place the cabinet into conflict flash and to verify that the cabinet, controller, and malfunction management unit are operating correctly. The Contractor shall make arrangements with the local police agency to provide traffic control during the conflict test.

Basis of Payment: This work will be paid for at the contract unit price Each for CONTROLLER CABINET TYPE IV and shall be payment in full for all labor, materials, and equipment required to remove the existing traffic signal cabinet and furnish, install, and test the traffic signal cabinet described above, complete.

## **DILEMMA ZONE DETECTION SYSTEM**

Description: This work shall consist of furnishing and installing a mast arm mounted continuous tracking advance detector (CTAD) and all necessary wiring, brackets, software, testing and accessories required for proper installation and performance. The CTAD shall be capable of detecting high profile vehicles out to 900 feet and standard automobiles out to 600 feet. The system shall be able to individually detect multiple vehicles in multiple lanes, track their speeds, determine if vehicles are in the dilemma zone and be integrated with the traffic signal controller to extend the green time.

The CTAD shall be able to simultaneously detect and report information from up to 25 vehicles on the roadway when they are serially sequenced between the near and far boundaries.

The CTAD shall turn on a zone output when the range, speed, ETA, and qualified count or instantaneous roadway efficiency requirements for that zone are satisfied.

The CTAD shall turn on an alert output on when the user defined zone output combinational logical is satisfied.

The CTAD shall turn on a normal channel output when any of the channel's alerts is on and the channel's delay and extend time constraints are satisfied.

The CTAD shall turn on a latched channel output when the on alert is turned on and the delay time is satisfied. The CTAD shall turn off a latched channel output when the off alert is turned on or the max timer expires, and the extension time is satisfied.

The CTAD shall provide vehicle call and extend data on up to eight (8) channels that can be connected to contact closure modules compliant with NEMA TS 1, NEMA TS 2, 170, and 2070 controller cabinets.

The CTAD shall be capable of providing data for each tracked detection over the serial ports.

The CTAD shall have Pulse channel outputs for intersection arrival-time information.

### Cabinet Interface Device (CID)

The CTAD shall include a cabinet interface device that accommodates one to four detection sensors and provides a SDLC connection for direct integration into TS-2 controllers and cabinets.

A total of one cabinet interface device is required for each intersection.

The CTAD shall come equipped with an SDLC splitter cable to allow for direct connection to the signal controller cabinets equipped with TS-1 back panels.

The cabinet interface device shall conform to the following specifications:

Product description: The CID shall be a module that provides power and surge protection and that communicates with contact closure devices, Ethernet, and controllers through SDLC. The CID shall be shipped with the AC power cord, jumper cables and terminal blocks necessary for wiring it, as well as with an extra fuse.

Physical: The CID shall not exceed 5 lbs. (2.25 kg) in weight.

The CID shall not exceed 7.8 in. x 10.3 in. x 3.9 in. (19.8 cm x 26.2 cm x 9.9 cm) in its physical dimensions.

The CID shall operate in the temperature range of -29°F to 165°F (-34°C to 74°C) and in humidity up to 95% RH.

Mounting: The CID shall be shelf mounted. It shall be capable of being mounted on the side of the traffic cabinet with the aid of U channel mounting brackets.

Power: The power supply voltage of the CID shall be 90 to 260 VAC. Its AC frequency shall be 50–60 Hz and the maximum power shall be 75 W at 80°C.

The CID's sensor connectors shall output 24 VDC.

Connections and communication. The CID shall include the following connections for power and communication:

Power. The CID shall have an IEC AC input.

Terminal block connectors. The CID shall have four terminal block connectors for connecting to sensors. These connectors shall be for terminating cables that carry power and RS-485 communications to and from the sensors.

Data RJ-11 connectors. The CID shall have four RJ-11 jacks for sending detection data from sensors to contact closure devices such as rack cards via jumper cables. This data shall be sent via RS-485. These jacks shall make up the physical interface of a dedicated data bus.

Control Connectors. The CID shall have four other communication ports. These ports shall make up the physical interface of a dedicated control bus and shall allow users to connect to the sensors and configure them.

- DB-9 port for communicating via RS-232
- Two RJ-11 jacks for communicating via RS-485
- USB mini-B connector
- T-bus port for connecting to a T-bus

Ethernet Connector. The CID shall have an RJ-45 10/100 Ethernet port to allow connection to a local network.

SDLC Port. The CID shall have an SDLC port for direct connection to a traffic controller.

Other Features. The CID shall have the following other features:

- An LED that indicates when the device has power
- An LED that indicates if the device has been disabled by surges
- An LED that indicates when data is being transmitted on the control bus
- An LED that indicates when data is being received on the control bus.

Data RJ-11 jack features. The four jacks that make up the physical interface of the data bus (and that each correspond to one sensor) shall have a switch for turning their corresponding sensor off and an LED that indicates when that sensor has power.

Power switch. The CID shall have a switch for turning power off for the entire device.

OLED panel with keypad. The CID shall have an OLED panel on the device with a keypad for device configuration.

Web interface. The CID shall have a web interface for device configuration, accessible through a web browser from a network connected device.

Configuration. The CID configuration shall support up to 64 detector channels.

NEMA TS2-2003 testing. The CID shall comply with the applicable standards stated in the NEMA TS2-2003 Standard. Test results shall be made available for each of the following tests:

- Shock pulses of 10g, 11 ms half sine wave
- Vibration of 0.5 Grms up to 30 Hz
- 300 V positive/negative pulses applied at one pulse per second at minimum and maximum AC supply voltage
- Cold temperature storage at -49°F (-45°C) for 24 hours
- High temperature storage at 185°F (85°C) for 24 hours
- Low temp, low DC supply voltage at -29.2°F (-34°C) and 89 VAC
- Low temp, high DC supply voltage at -29.2°F (-34°C) and 135 VAC
- High temp, high DC supply voltage at 165.2°F (74°C) and 135 VAC
- High temp, low DC supply voltage at 165.2°F (74°C) and 89 VAC

FCC testing. The CID shall be FCC-compliant.

Testing. Before shipping, each CID shall have passed a manufacturer's test.

Surge immunity. The sensor ports of the CID shall conform to IEC/EN 61000-4-5 level 4 standards; the AC input of the CID shall conform to IEC/EN 61000-4-5 level 3 standards.

Warranty. The CID shall be warranted to be free from material and workmanship defects for a period of two years from date of shipment.

Mounting Location. The CTAD shall be mounted on the mast arm for the opposing or approaching traffic to maximize detection range and provide optimal performance. The Contractor shall perform a site analysis of the existing mast arm layout and intersection geometry to determine the optimum sensor location at each intersection.

Detection Range. The CTAD shall be able to detect and report information on the roadway located with the near boundary at 50 ft. (15.2 m) from directly below the mast arm on which the CTAD is mounted.

The CTAD shall be able to detect and report information on the roadway located with the far boundary at 900 ft. (274.3 m) from directly below the mast arm on which the CTAD is mounted. For incoming traffic, 90 percent of large vehicles (high-profile trucks and buses) within the line-of-sight of the CTAD shall be detected and reported before they arrive 700 ft. (213.4 m) from the sensor. For incoming traffic, 90 percent of all motor vehicles within the line-of-site of the CTAD shall be detected and reported before they arrive 450 ft. (137.2 m) from the sensor.

#### Performance.

**Detection accuracy.** The CTAD shall detect at least 98 percent of large vehicles like truck-trailer combinations and at least 95 percent of all motor vehicles within the line-of-sight of the CTAD sensor where multiple detections of multi-unit vehicles are not considered false detections and merged detections of adjacent lane vehicles are not considered missed detections.

**Range accuracy.** The CTAD shall provide range measurements in which 90% of the measurements are accurate within 10 ft. (3 m) when the vehicle is tracked independently. **Speed accuracy.** The CTAD shall provide per vehicle speed measurements in which 90% of the measurements are accurate within 5 mph (8 kph) when tracked independently.

**ETA accuracy.** The CTAD shall provide estimated time-of-arrival (ETA) measurements in which 85% of the measurements are accurate within one second, when the detected vehicles are tracked independently at a constant speed above 40 mph (64 kph) and are within 2.5 and 5.5 seconds of the stop bar.

**Performance maintenance.** The CTAD shall not require cleaning or adjustment to maintain performance. The CTAD shall not rely on battery backup to store configuration information, thus eliminating any need for battery replacement. Once the CTAD is calibrated, it shall not require recalibration to maintain performance unless the roadway configuration changes. The mean time between failures shall be 10 years, which is estimated based on manufacturing techniques.

#### Physical Properties.

The CTAD shall not exceed 4 lbs. (1.8 kg) in weight.

The CTAD shall not exceed 14 in. × 11 in. × 4 in. (35.6 cm x 27.9 cm x 10.2 cm) in its physical dimensions.

All external parts of the CTAD shall be ultraviolet-resistant, corrosion-resistant, and protected from fungus growth and moisture deterioration.

The CTAD shall be enclosed in a Lexan polycarbonate.

The enclosure shall be classified "f1" outdoor weatherability in accordance with UL 746C.

The CTAD shall be classified as watertight according to the NEMA 250 standard.

The CTAD enclosure shall conform to test criteria set forth in the NEMA 250 standard for type 4X enclosures. Test results shall be provided for each of the following type 4X criteria:

- External icing (NEMA 250 clause 5.6)
- Hose-down (NEMA 250 clause 5.7)
- 4X corrosion protection (NEMA 250 clause 5.10)
- Gasket (NEMA 250 clause 5.14)

The CTAD shall be able to withstand a drop of up to 5 ft. (1.5 m) without compromising its functional and structural integrity.

The CTAD enclosure shall include a connector that meets the MIL-C-26482 specification. The MIL-C-26482 connector shall provide contacts for all data and power connections.

#### Electrical.

The CTAD shall consume less than 4 W @ 12 VDC.

The CTAD shall operate with a DC input between 10 VDC and 28 VDC.

The CTAD shall have onboard surge protection.

#### Communication Ports.

The CTAD shall have two serial communication ports, and both ports shall communicate independently and simultaneously.

The CTAD shall have an Ethernet port for connection into a Wide Area Network for remote management.

The CTAD shall have a SDLC port for integration into NEMA TS-2 controllers and cabinets.

The CTAD shall support the upload of new firmware into the CTAD's non-volatile memory over either communication port.

The CTAD shall support the user configuration of the following:

Baud rate:

- Communication port response delay
- Contact closure output frequency

Both communication ports shall support each of the following baud rates: 9,600, 19,200, 38,400, 57,600, and 115,200 bps.

The contact closure output frequency shall be user configurable as short as 10 ms, with a default near 130 ms for compatibility.



Contact closure data shall be reliably communicated over homerun cable connections as long as 600 ft. (182.9 m) with latency from the time of channel requirement satisfaction to the eventual reporting of the detections on the back edge of the contact closure card in 15 ms or less.

#### Radar Design.

**Frequency stability.** The circuitry shall be void of any manual tuning elements that could lead to human error and degraded performance over time.

All transmit modulated signals shall be generated by means of digital circuitry, such as a direct digital synthesizer, that is referenced to a frequency source that is at least 50 parts per million (ppm) stable over the specified temperature range, and ages less than 6 ppm per year. Any up conversion of a digitally generated modulated signal shall preserve the phase stability and frequency stability inherent in the digitally generated signal.

The CTAD shall not rely on temperature compensation circuitry to maintain transmit frequency stability.

The bandwidth of the transmit signal of the CTAD shall not vary by more than 1% under all specified operating conditions and over the expected life of the CTAD.

**Antenna design.** The CTAD antennas shall be designed on printed circuit boards.

The vertical beam width of the CTAD at the 6 dB points of the two-way pattern shall be 65 degrees or greater.

The horizontal beam width of the CTAD at the 6 dB points of the two-way pattern shall be 11 degrees or less.

The sidelobes in the CTAD two-way antenna pattern shall be -40 dB or less.

**RF channels.** The CTAD shall provide at least eight RF channels so that multiple units can be mounted in the same vicinity without causing interference between them.

#### Configuration.

**Auto-configuration.** The CTAD shall have a method for automatically configuring the sensitivity of detection in at least 7.5-ft. (2.29-m) increments.

The auto-configuration method shall not prohibit the ability of the user to manually adjust the CTAD configuration.

The CTAD shall support the configuration of up to eight channel outputs with up to four alerts per channel and up to four zones per alert, resulting in 32 configurable alerts and 128 configurable zones.

**Zone configuration.** The CTAD shall support the configuring of zones in 5-ft. (1.5-m) increments.

The CTAD shall support detection zones of up to 850 ft. (251.9 m).

The CTAD shall support user configurable high-speed and low-speed detection filters for each zone.

The CTAD shall support the configuring of speed filters in 1-mph (1.6-kph) increments.

The CTAD shall support user configurable upper and lower estimated time-of-arrival (ETA) filters for each zone.

The CTAD shall support the configuring of ETA filters in increments of 0.1 seconds.

The CTAD shall provide configurable upper and lower count filters that help determine if a required number of qualified detections are present.

The CTAD shall support the configuring of qualified count filters in increments of one.

**Windows®-based software.** The CTAD shall include graphical user interface software that displays the current traffic pattern using a graphical traffic representation.

The graphical user interface shall also display all configured alerts and provide visual representation of their actuation.

The graphical user interface shall provide a means of logging the vehicular track files with an update rate of greater than five times per second.

The graphical interface shall operate on Windows Mobile, Windows XP, Windows Vista, Windows 7, Windows 8, and Windows 10 in the .NET framework.

The software shall support the following functionality:

- Automatically find the correct baud rate
- Automatically find the correct serial communication port
- Operate over a TCP/IP connection
- Provide a virtual sensor connection for software usability without a sensor
- Give the operator the ability to save/back up the CTAD configuration to a file or load/restore the CTAD configuration from a file

**Operating conditions.** The CTAD shall maintain accurate performance in all weather conditions, including rain, freezing rain, dry snowfall, moist snowfall, wind, dust, fog, and changes in temperature and light, including direct light on sensor at dawn and dusk. The CTAD shall maintain accurate performance with ice and dry snow buildup on the sensor front.

CTAD operation shall continue in rain up to 2 in. (5.08 cm) per hour.

The CTAD shall be capable of continuous operation over an ambient temperature range of -40°F to 165°F (-40°C to 74°C).

The CTAD shall be capable of continuous operation over a relative humidity range of 5% to 95% (non-condensing).

#### Testing.

**FCC.** Each CTAD shall be Federal Communications Commission (FCC) certified under CFR 47, part 15, section 15.245, or 15.249 as an intentional radiator.

The FCC certification shall be displayed on an external label on each CTAD according to the rules set forth by the FCC.

The CTAD shall comply with FCC regulations under all specified operating conditions and over the expected life of the CTAD.

The CTAD shall be tested under IEC 61000-4-5 class 4 (lightning surge protection).

**NEMA TS 2-1998 testing.** The CTAD shall comply with the applicable standards stated in the NEMA TS 2-1998 Standard. Third party test results shall be made available for each of the following tests:

- Shock pulses of 10 g, 11 ms half sine wave
- Vibration of 0.5 g up to 30 Hz
- 300 V positive/negative pulses applied at one pulse per second at minimum and maximum DC supply voltage
- Cold temperature storage at -49°F (-45°C) for 24 hours
- High temperature storage at 185°F (85°C) for 24 hours
- Low temp, low DC supply voltage at -29.2°F (-34°C) and 10.8 VDC
- Low temp, high DC supply voltage at -29.2°F (-34°C) and 26.5 VDC
- High temp, high DC supply voltage at 165.2°F (74°C) and 26.5 VDC
- High temp, low DC supply voltage at 165.2°F (74°C) and 10.8 VDC

#### Manufacturing.

The CTAD shall be manufactured and assembled in the USA.

The internal electronics of the CTAD shall utilize automation for surface mount and wave solder assembly and shall comply with the requirements set forth in IPC-A-610C Class 2, Acceptability of Electronic Assemblies.

The CTAD shall undergo a rigorous sequence of operational testing to ensure product functionality and reliability. Testing shall include the following:

- Functionality testing of all internal sub-assemblies
- Unit level burn-in testing of 48 hours' duration or greater
- Final unit functionality testing prior to shipment

Test results and all associated data for the above testing shall be provided for each purchased CTAD by serial number, upon request.

Support.

The CTAD manufacturer shall provide both training and technical support services.

**Training.** The manufacturer-provided training shall be enough to fully train installers and operators in the installation, auto-configuration, and use of the CTAD to ensure accurate CTAD performance.

The manufacturer-provided training shall consist of comprehensive classroom labs and hands-on, in-the-field, installation, and configuration training.

Classroom lab training shall involve presentations outlining and defining the CTAD, its functions, and the procedures for proper operation. These presentations shall be followed by hands-on labs in which trainees shall practice using the equipment to calibrate and configure a virtual CTAD. To facilitate the classroom presentation and hands-on labs, the manufacturer-provided training shall include the following items:

- Knowledgeable trainer or trainers thoroughly familiar with the CTAD and its processes
- Presentation materials, including visual aids, printed manuals and other handout materials for each student
- Computer files, including video and raw data, to facilitate the virtual configuration of the CTAD
- Laptop computers with the necessary software, and all necessary cables, connectors, etc.

Field training shall provide each trainee with the hands-on opportunity to install and configure the CTAD at the roadside. Training shall be such that each trainee will mount and align the CTAD correctly.

Technical assistance. The manufacturer-provided technical support shall be available according to contractual agreements and a technical representative available to assist with the physical installation, alignment, and configuration of each supplied CTAD.

Technical support shall be provided thereafter to assist with troubleshooting, maintenance, or replacement of CTADs should such services be required.

Documentation.

CTAD documentation shall include a comprehensive user guide as well as an installer quick-reference guide and a user quick-reference guide.

The CTAD manufacturer shall supply the following documentation and specification test results at the time of the bid submittal:

- Detection accuracy
- Range accuracy
- Earliest range of detection
- Speed accuracy
- ETA accuracy
- FCC CFR 47 certification
- NEMA 250 standard for Type 4X Enclosure third-party test data
- NEMA TS 2-1998 standard third-party test data
- IEC 61000-4-5 class 4 test report (surge)

Warranty.

The CTAD shall be warranted free from material and workmanship defects for a period of two years from date of shipment.

Mounting and installation.

**Mounting assembly.** The CTAD shall be mounted directly onto an overhead mast arm. The CTAD mounting assembly shall provide the necessary degrees of rotation to ensure proper installation.

The CTAD mounting assembly shall be constructed of weather-resistant materials and shall be able to support a 20-lb. (9.1-kg) load.

**Mounting location.** The CTAD shall be mounted at a height that is within the manufacturer's recommended mounting heights.

The CTAD shall be mounted over the center of the lanes.

The CTAD shall be mounted in a forward-fire position, looking towards either approaching or departing traffic.

The CTAD shall be mounted so that it is pointed within 10 ft. (3 m) of the target point as defined by the manufacturer's table of target points for mounting offsets and mounting heights.

The CTAD shall be mounted so that its vertical center line is within 5 degrees of the lanes of interest as described the manufacturer's documentation.

Aligning the CTAD's center line with the roadway ensures that the antenna beam of the CTAD is positioned along the roadway.

Two CTAD units shall not be mounted so that they are pointed directly at each other.

CTADs that are mounted within 20 ft. (6.1 m) of each other shall be configured to operate on different RF channels regardless of the pointing direction of the CTAD.

The CTAD shall not be installed in areas with overhead structures. For example, overhead sign bridges, tunnels, and overpasses should be avoided. The CTAD shall be mounted at least 30 ft. (9.1 m) to the side of any such overhead structures.

**Cabling.** The cable end connector shall meet the MIL-C-26482 specification and shall be designed to interface with the appropriate MIL-C-26482 connector. The connector back shell shall be an environmentally sealed shell that offers excellent immersion capability. All conductors that interface with the connector shall be encased in a single jacket, and the outer diameter of this jacket shall be within the backshell's cable O.D. range to ensure proper sealing. The backshell shall have a strain relief with enough strength to support the cable slack under extreme weather conditions. Recommended connectors are Cannon's KPT series, and recommended backshells are Glenair Series 37 cable sealing backshells.

The cable shall conform to the following specifications:

- The RS-485 conductors shall be a twisted pair.
- The RS-485 conductors shall have nominal capacitance conductor to conductor of less than 40 pF/ft at 1 kHz.
- The RS-485 conductors shall have nominal conductor DC resistance of less than 16.7 ohms/1000 ft. (304.8 m) at 68°F (20°C).
- The power conductors shall be one twisted pair with nominal conductor DC resistance of less than 11.5 ohms/1000 ft. (304.8 m) at 68°F (20°C).
- Each wire bundle or the entire cable shall be shielded with an aluminum/mylar shield with a drain wire.

The cable shall be terminated only on the two farthest ends of the cable.

The cable length shall not exceed 2,000 ft. (609.6 m) for the operational baud rate of RS-485 communications (9.6 Kbps).

If 12 VDC is being supplied for the CTAD then the cable length shall not exceed 110 ft. (33.5 m).

If 24 VDC is being supplied for the CTAD then the cable length shall not exceed 600 ft. (182.9 m).

Both communication and power conductors can be bundled together in the same cable as long as the abovementioned conditions are met.

If a cable length of 600 ft. (182.9 m) to 2,000 ft. (609.6 m) is required, the power cable shall be an ANIXTER 2A-1402 or equivalent cable that meets the following requirements:

- 10 AWG conductor size/gauge
- 2 conductor count
- Stranded cable type
- Bare copper material
- 600 V range
- 194°F (90°C) temperature rating
- PVC/nylon insulation material
- PVC—polyvinyl chloride jacketing material
- 25 A per conductor

Both communication and power conductors can be bundled together in the same cable as long as the following conditions are met.

**Lightning surge protection.** The CTAD has onboard surge protection; proper grounding is required for effective surge protection.

Appropriate lightning surge protection shall be installed in the traffic cabinet to protect the cabinet equipment. These lightning surge protection devices shall meet or exceed the EN 61000-4-5 Class 4 specifications. The lightning surge protection unit supplied shall be physically compatible with the cable provided and approved by the CTAD manufacturer.

**Power supply.** The CTAD shall be installed using an AC to DC power converter approved by the CTAD manufacturer that meets the following specifications.

The power converter shall be power rated at 15 W or greater at 77°F (25°C) and 10 W or greater at 165°F (74°C).

The power converter shall operate in the temperature range of to -29°F to 165°F (-34°C to 74°C).

The power converter shall operate in the humidity range of 5% to 95% at 77°F (25°C) noncondensing.

The power converter shall accept an input voltage of 85 to 264 VAC or 120 to 370 VDC.

The power converter shall operate at an input frequency of 47 Hz to 63 Hz.

The power converter shall produce an output voltage of 24 VDC  $\pm 4\%$ .

The power converter shall have a hold-up time of greater than 20 ms at 120 VAC.

The power converter shall withstand a voltage across its input and output of 2 kV. The power converter shall withstand a voltage across its input and ground of 1.5 kV.

The power converter shall conform to safety standards UL 60950 and EN 60950.

The power converter shall conform to EMC standards EN 55022 Class B and EN 61000-3-2, 3. In brown-out conditions (i.e. < 85 VAC input), the output voltage of the power converter shall be less than 1 VDC.

**Input file cards.** Input file cards shall be used that are approved by the CTAD manufacturer and that meets the following specifications.

The input file cards shall be compatible with 170, 2070, NEMA TS 1, and NEMA TS 2 style input racks.

The input file card shall translate data packets from the CTAD into contact closure outputs.

The input file card shall support presence detection.

The input file card shall receive data packets over an RS-485 bus at a baud rate of 9600 bps.

The input file card shall autobaud and auto-detect an CTAD over wired and wireless communication channels that have a maximum latency of 500 ms.

The input file card shall comply with the NEMA TS 2-1998 Traffic Controller Assemblies with NTCIP Requirements (Section 2.8 specification).

Method of Measurement. The Dilemma Zone Detection System bid item will be measured for payment by the actual number of Dilemma Zone Detection Systems furnished, installed, tested, and accepted. One Dilemma Zone Detection System sensor is required for each approach.

Basis of Payment. Payment will be made at the contract unit price per Each for DILEMMA ZONE DETECTION SYSTEM including all equipment, material, testing, documentation, and labor as detailed in the contract documents.

## **HANDHOLE, PORTLAND CEMENT CONCRETE**

This work shall consist of furnishing the materials and constructing a handhole in accordance with the applicable Articles of Section 814 and 1088 of the Standard Specifications with the following modifications:

The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 3/8 inch in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 3/8 inch in diameter. The lift ring and loop shall be recessed in the cover.

The Contractor shall install heavy-duty, fully galvanized hooks, with a minimum diameter of 1/2" in the proposed handhole. The Contractor shall submit this material to the Engineer prior to construction of the handholes.

The lid shall be marked with the legend "Traffic Signals".

Pre-cast handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.



Basis of Payment: This work will be paid for at the contract unit price Each for HANDHOLE, PORTLAND CEMENT CONCRETE which price shall be payment in full for all labor, materials, and equipment required to provide the handhole described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

## **LED MODULE AND HPS LAMP RECYCLING**

The Contractor shall recycle all LED modules and high-pressure sodium lamps through a certified recycling company. The Contractor shall submit detailed information pertaining to LED module recycling to the Department for review along with the electrical material submittals. The Contractor shall submit proof of recycling to the Department.

Basis of Payment: This work will not be paid for separately but shall be included in the contract unit price for the traffic signal removal items.

## **MODIFY EXISTING CONCRETE FOUNDATION**

This work shall be in accordance with the applicable Articles of Sections 878, 1006, and 1020 of the Standard Specifications with the following modifications:

This item shall consist of modifying an existing mast arm foundation to accommodate a traffic signal post.

The Contractor shall perform the following:

- The Contractor shall remove the existing mast arm anchor bolts by cutting them off flush with the top of the foundation and disposing of them off the job site.
- The Contractor shall furnish and install four new anchor bolts. The anchor bolts shall be drilled into the foundation at a minimum depth of 12" inches and secured with epoxy. The Contractor shall submit catalog cuts for the proposed anchor bolts and epoxy to the Department for approval prior to commencing work.
- The Contractor shall perform all other work including, but not limited excavating, drilling, backfilling, form work, etc. to that is required to install the proposed traffic signal post onto the existing foundation.

Basis of Payment: This work will be paid for at the contract unit price per Each for MODIFY EXISTING CONCRETE FOUNDATION which price shall be payment in full for all labor, materials, and equipment required to modify the existing mast arm foundation to accommodate the installation of the proposed traffic signal post.

**PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER**

This work shall be in accordance with Section 881 and 1078 of the Standard Specifications except as modified herein.

The pedestrian signal head shall consist of a single 16" polycarbonate section and shall be equipped with an overlaid LED indication with countdown timer (Walking Person/Upraised Hand).

The traffic signal head shall have a black finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED signal face shall have international symbols (Upraised Hand – Color: Portland Orange, Walking Person – Color: Lunar White). Only filled indications will be allowed.

The LED modules shall conform to the specifications listed under the section TRAFFIC SIGNAL LED MODULE SPECIFICATIONS.

Combination hand/person pedestrian signal modules shall incorporate separate power supplies for the hand and the person displays.

All costs associated with furnishing and installing new pedestrian signal head bracketing shall be included in the cost of this pay item. The Contractor shall minimize the total number of holes drilled in a mast arm to no more than three.

Basis of Payment: This work will be paid for at the contract unit prices Each for PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER and will be payment in full for all labor, equipment, and materials required to provide and install the pedestrian traffic signal heads equipped with LED indications described above, complete.

**SIGNAL HEAD, LED**

This work shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

The traffic signal heads shall consist of 12" polycarbonate sections and shall be equipped with LED assemblies for all red bulb, yellow bulb, green bulb, red arrow, yellow arrow, and green arrow indications.

The traffic signal heads shall have a black finish with black doors and tunnel visors.

The LED signal faces shall be equipped with spade connectors and connected to the traffic signal head terminal block.

The LED modules shall conform to the specifications listed under the section TRAFFIC SIGNAL LED MODULE SPECIFICATIONS.

All costs associated with furnishing and installing new galvanized steel signal head bracketing shall be included in the cost of this pay item. The Contractor shall minimize the total number of holes drilled in a mast arm to no more than three.

Basis of Payment: This work will be paid for at the contract unit prices Each for SIGNAL HEAD, LED of the type specified and will be payment in full for all labor, equipment, and materials required to remove the existing signal heads and bracketing and furnish and install traffic signal heads equipped with LED indications and new bracketing as described above, complete.

## **TRAFFIC SIGNAL LED MODULE SPECIFICATIONS**

The material requirement shall be in accordance with Sections 880 and 1078 of the Standard Specifications except as modified herein.

The LED assemblies for the red, yellow, and green solid and arrow indications shall meet or exceed the following minimum specifications:

All LED modules shall be designed for an extended service life of fifteen years.

### SOLID INDICATION LED MODULE SPECIFICATIONS

Compliance: Fully compliant with ITE VTCSH LED Circular Signal Supplement specifications dated and adopted June 27, 2005

Compliance Verification: Intertek ETL verified compliance – Product must be listed on the "Directory of LED Modules Certified Products" list located on the ETL website at <http://www.intertek.com/lighting/performance-testing/traffic-signals/>

Diameter: 12" (300mm)

Lens: UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, Incandescent Appearance

LEDs: Hi-Flux

Operating Temperature Range: -40°C to +74°C (-40°F to +165°F)

Operating Voltage Range: 80 to 135 V (60Hz AC)

Power Factor (PF): > 90%

Total Harmonic Distortion (THD): < 20%

Minimum Voltage Turn-Off: 35V

<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	10.0 W (Red), 18.0W (Yellow), 12.5 W (Green)
<u>Nominal Wavelength:</u>	625-626 nm (Red), 589-590 nm (Yellow), 500-502 nm (Green)
<u>Minimum Maintained Intensity:</u>	365 Cd (Red), 910 Cd (Yellow), 475 Cd (Green)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	15-year replacement (materials, workmanship, and intensity)

#### ARROW INDICATION LED MODULE SPECIFICATIONS (RED, YELLOW, GREEN)

<u>Compliance:</u>	Fully compliant with ITE VTCSH LED Vehicle Arrow Supplement specifications adopted July 1, 2007
<u>Compliance Verification:</u>	Intertek ETL verified compliance – Product must be listed on the "Directory of LED Modules Certified Products" list located on the ETL website at <a href="http://www.intertek.com/lighting/performance-testing/traffic-signals/">http://www.intertek.com/lighting/performance-testing/traffic-signals/</a>
<u>Diameter:</u>	12" (300mm)
<u>Lens:</u>	Clear Frosted, UV stabilized scratch resistant polycarbonate, tinted red or yellow, clear for green, uniform non-pixelated illumination, incandescent appearance, omni-directional
<u>LEDs:</u>	Hi-flux LEDs
<u>Operating Temperature Range:</u>	-40°C to +74°C (-40°F to +165°F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	5.0-7.0 W (Red), 6.0-12.5W (Yellow), 5.0-7.0 W (Green)

<u>Nominal Wavelength:</u>	625-628 nm (Red), 590 nm (Yellow), 500nm (Green)
<u>Minimum Maintained Intensity:</u>	56.8-58.4 Cd (Red), 141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	15-year replacement (materials, workmanship, and intensity)

ARROW INDICATION LED MODULE SPECIFICATIONS (YELLOW/GREEN DUAL MODE)

<u>Diameter:</u>	12" (300mm)
<u>LEDs:</u>	Interconnected to minimize the effect of single LED failures
<u>Lens:</u>	Clear UV stabilized scratch resistant polycarbonate, uniform non-pixelated illumination, incandescent appearance
<u>Operating Temperature Range:</u>	-40°C to +74°C (-40°F to +165°F)
<u>Operating Voltage Range:</u>	80 to 135 V (60Hz AC)
<u>Power Factor (PF):</u>	> 90%
<u>Total Harmonic Distortion (THD):</u>	< 20%
<u>Minimum Voltage Turn-Off:</u>	35V
<u>Turn-On/Turn-Off Time:</u>	<75 ms
<u>Nominal Power:</u>	8.0-10.0 W (Yellow), 8.0-10.0 W (Green)
<u>Nominal Wavelength:</u>	590-592 nm (Yellow), 505-508 nm (Green)
<u>Minimum Maintained Intensity:</u>	141.6-146.0 Cd (Yellow), 73.9-76.0 Cd (Green)
<u>Standard Conformance:</u>	FCC compliant for electrical noise, MIL-STD-810F for moisture resistance, MIL-STD-883 for mechanical vibration, NEMA TS2 Transient Voltage Protection
<u>Warranty:</u>	15-year replacement (materials, workmanship, and intensity)

## **REPLACE HANDHOLE COVER**

This work shall consist of furnishing and installing the materials to replace an existing handhole cover in accordance with the applicable Articles of Section 814, 895, and 1088 of the Standard Specifications with the following modifications:

### **CONSTRUCTION REQUIREMENTS**

The Contractor shall perform the following items:

- The Contractor shall remove the existing handhole lids and hardware and dispose of them off of the Right-of-Way. The Contractor shall furnish and install a new handhole lid.
- The handhole installation shall be in accordance with the latest revision of Highway Standard 814001.
- The Contractor shall provide protection for the handhole cables during all phases of construction.
- The Contractor shall ground the handhole lids and frame in accordance with NEC requirements using #6 XLP-USE green copper conductor cable which shall be bonded to all items and their associated ground rods utilizing mechanical lugs and bolts. The use of split bolts will not be allowed.

Material Requirements:

- The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 10mm (3/8 inch) in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 10 mm (3/8 inch) in diameter. The lift ring and loop shall be recessed in the cover.
- The lid shall be marked with the legend "Traffic Signals".

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

**Basis of Payment:** This work will be paid for at the contract unit price Each for REPLACE HANDHOLE LID which price shall be payment in full for all labor, materials, and equipment required to remove the existing handhole lid and furnish and install the new handhole lid as described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

## **TRAFFIC SIGNAL BATTERY BACKUP SYSTEM**

The following models of Battery Backup Systems are approved for use within District Four:

- Alpha Technologies Novus XFM HP1100 (with standard IDOT cabinet or Alpha Technologies Side Mount 6 Integrated BBS Cabinet), Equipped with Ethernet SNMP Interface and Enhanced Capability Battery Monitoring System (AlphaGuard Plus)
- Multilink, EP 2200-T, 1500 Watts/2 kVA, 48 Volt, Equipped with Internal Communication Card and Monitoring Software
- Myers Emergency Powers Systems, Model MP2000CA, Equipped with Ethernet SNMP card and Web Based Configuration

The Contractor may elect to submit an alternate product for consideration provided that it meets the minimum requirements contained in this specification.

The Contractor shall be responsible for providing Battery Backup Systems that are sized appropriately for the intersection load. The total system load shall not exceed the manufacturer's specifications.

The Battery Backup System shall be equipped with a deluxe pleated air filter and plexiglass covers to prevent accidental contact to terminal strips and connections carrying line voltage.

The battery backup systems for the existing traffic signal cabinets shall be installed as shown on the plan detail sheets and as follows:

- A separate circuit breaker shall be installed in the battery backup system cabinet (or in the traffic signal cabinet). The circuit breaker shall be rated equivalent to the main power circuit breaker rating in the existing traffic signal cabinet. The Contractor shall install #6 wiring from the test circuit breaker to the line voltage in the traffic signal cabinet. The circuit breaker shall be used to shut off the incoming utility power to test the battery backup system.
- The cabinet light, ventilation fans, heater strips, and service receptacle shall be wired to a separate circuit that will not be powered by the battery backup system
- A hole of sufficient size for the cables will be drilled into the side of the cabinet to accommodate the battery backup system cables and harnesses from the BBS cabinet. The hole shall be free of sharp edges and equipped with a plastic or rubber grommet.
- The fail-safe automatic by-pass switch and blue indicator light shall be installed in the battery backup cabinet (or in the existing traffic signal cabinet).

**GENERAL REQUIREMENTS:** The Battery Back-up System (BBS) shall include but not be limited to the following: inverter/charger, power transfer relay, batteries, battery cabinet, a separate failsafe automatic bypass switch and all necessary hardware and interconnect wiring. The BBS shall provide reliable emergency power to a traffic signal in the event of a power failure or interruption. The transfer from utility power to battery power and vice versa shall not interfere with the normal operation of traffic controller, conflict monitor/malfunction management unit or any other peripheral devices within the traffic controller assembly.

The BBS shall provide power for full run-time operation for an "LED-only" intersection (all colors red, yellow, and green) or flashing mode operation for an intersection using Red LED's. As the battery reserve capacity reaches 50%, the intersection shall automatically be placed in all-red flash. The BBS shall allow the controller to automatically resume normal operation after the power has been restored. The BBS shall log an alarm in the controller for each time it is activated.

All 48-volt Battery Backup Systems shall include four batteries, and all 36-volt Battery Backup Systems shall include six batteries.

The BBS shall be designed for outdoor applications, and shall meet the environmental requirements of, "NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies," or applicable successor NEMA specifications, except as modified herein.

The BBS shall conform to the following specifications:

1.0 **OPERATION**

- 1.1 The BBS shall be online and provide voltage regulation and power conditioning when utilizing utility power.
- 1.2 The BBS shall provide a minimum two (2) hours of full run-time operation and four (4) hours all-red flash operation for an "LED-only" intersection (minimum 1000W/1000VA active output capacity, with 80% minimum inverter efficiency).
- 1.3 The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 150 milliseconds.
- 1.4 The BBS shall provide the user with 4-sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel-mounted terminal block, rated at a minimum 120V/1A, and labeled to identify each contact. For typical configuration, see the plan detail sheet.
- 1.5 A first set of NO and NC contact closures shall be energized whenever the unit switches to battery power. Contact shall be labeled or marked "On Batt."
- 1.6 The second set of NO and NC contact closures shall be energized whenever the battery approaches approximately 40% of remaining useful capacity. Contact shall be labeled or marked "Low Batt."
- 1.7 The third set of NO and NC contact closures shall be energized two hours after the unit switches to battery power. Contact shall be labeled or marked "Timer."



- 1.8 The fourth set of NO and NC contact closures shall be energized in the event of inverter/charger failure, battery failure or complete battery discharge. Contact shall be labeled or marked "BBS Fail or Status."
- 1.9 A surge suppression unit shall be provided for the output power if available as an option by the BBS manufacturer.
- 1.10 Operating temperature for both the inverter/power transfer relay and failsafe automatic bypass switch shall be -37°C to +74°C.
- 1.11 The Power Transfer Relay shall be rated at 240VAC/30AMPS minimum and failsafe automatic bypass switch shall be rated at 240VAC/20 amps, minimum.
- 1.12 The fail-safe automatic bypass switch shall be wired to provide power to the BBS when the switch is set to bypass.
- 1.13 The BBS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 2.5 – 4.0 mV/°C per cell.
- 1.14 The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 2 meters (6'-6") of wire.
- 1.15 Batteries shall not be recharged when battery temperature exceeds 50°C ±3°C.
- 1.16 BBS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 100VAC to 130VAC (±2VAC).
- 1.17 When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, pure sine wave output, ±3% THD, 60Hz ±3Hz.
- 1.18 BBS shall be compatible with Illinois DOT's traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.
- 1.19 When the utility line power has been restored at above 105 VAC ±2 VAC for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.
- 1.20 When the utility line power has been restored at below 125VAC ±2 VAC for more than 30 seconds, the BBS shall dropout of battery backup mode and return to utility line mode.
- 1.21 BBS shall be equipped to prevent malfunction feedback to the cabinet or from feeding back to the utility service.
- 1.22 In the event of inverter/charger failure, battery failure or complete battery discharge, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. The BBS shall always revert to utility line power and shall be designed to revert to utility line power in the event of a BBS fault condition.
- 1.23 Recharge time for the battery, from "protective low-cutoff" to 80% or more of full battery charge capacity, shall not exceed twenty (20) hours.

- 1.24 When the intersection is in battery operation, the BBS shall bypass all internal cabinet lights, ventilation fans, heater strips, and service receptacles.
- 1.25 The fail-safe automatic bypass switch shall be wired to provide power to the BBS when the switch is set to bypass.
- 1.26 A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the BBS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted, and the BBS is in operation. The light shall be a minimum 1" diameter, be viewable from the driving lanes, and shall be large enough and visible enough to be seen from 200 ft. away.
- 1.27 All 36-volt and 48-volt systems shall include an external component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries. All cables, harnesses, cards, and other components that are required to provide the functionality described above shall be included in the unit bid price for the battery backup system. The following products are currently approved for use within District 4: Alpha Technologies: AlphaGuard with Charge Management Technology Module and Approved Equivalent
- 1.28 The BBS shall be equipped with an integrated safety switch that will interrupt inverter output power in the event of a cabinet knockdown. The safety switch may be either internal to the inverter/charger or externally mounted inside of the BBS cabinet. The safety switch shall be designed to interrupt output power in the event that the charger/inverter is tilted more than twenty degrees on any axis. The switch shall be mechanically latching to ensure that power is not automatically restored to the BBS until the charger/inverter has been "reset". The switch shall also be resettable and reusable unless it has been physically damaged.
- 1.29 The BBS shall be equipped with an Ethernet port and network management card.

## 2.0 MOUNTING AND CONFIGURATION

### 2.1 GENERAL

- 2.2 Inverter/Charger Unit shall be rack or shelf mounted.
- 2.3 (Reserved).
- 2.4 All interconnect wiring provided between Power Transfer Relay, Bypass Switch and Cabinet Terminal Service Block shall be no greater than two (2) meters (6'-6") of #10 AWG wire.
- 2.5 Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be #18 AWG wire.
- 2.6 All necessary hardware for mounting (shelf angles, rack, etc.) shall be included in the bid price of the BBS. The swing-trays shall be screwed to the Type IV or Type V NEMA cabinets using continuous stainless steel or aluminum piano hinge. All bolts/fasteners and washers shall be ½" diameter galvanized or stainless steel.

3.0 EXTERNAL BATTERY CABINET

- 3.1 The external cabinet shall be a rated NEMA Type 3R Cabinet.
- 3.2 Inverter/Charger and Power Transfer Relay shall be installed inside the external battery cabinet and the failsafe automatic bypass switch shall be installed inside the existing traffic signal cabinet or proposed battery backup cabinet.
- 3.3 Batteries shall be housed in the external cabinet which shall be NEMA Standard rated cabinet mounted to the side of the Type IV or Type V Cabinet (see plan sheets for details). This external battery cabinet shall conform to the IDOT Standard Specifications for traffic signal cabinets for the construction and finish of the cabinet.
- 3.4 The external battery cabinet shall mount to the Type IV or Type V NEMA Cabinet with a minimum of four (4) bolts to the satisfaction of the Engineer.
- 3.5 The dimensions of the external battery cabinet shall be 25" (L) x 16" (W) x 41" (H) and installed in accordance with the plan sheet cabinet detail and this specification.
- 3.6 The cabinet shall include heater mats for each battery shelf and/or battery. If the BBS charger/inverter does not have facilities to accommodate heater mat connections, thermostatically controlled heater mats shall be provided with the system. The heater mat thermostat shall be a separate thermostat (from the ventilation fan thermostat) and be adjustable from 0°F to 32°F for heater mat turn-on.
- 3.7 A warning sticker shall be placed on the outside of the cabinet indicating that there is an Uninterruptible Power Supply inside the cabinet.
- 3.8 The external battery cabinet shall be ventilated through the use of louvered vents (2), filters, and one thermostatically controlled fan as per NEMA TS 2 Specifications. The cabinet shall include a cleanable or replaceable cabinet filter.
- 3.9 External battery cabinet fan shall be AC operated from the same line output of the bypass Switch that supplies power to the Type IV or Type V Cabinet.
- 3.10 The BBS with external battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting. The external battery cabinet shall have a hinged door opening to the entire cabinet. The cabinet shall include a bottom constructed from the same material as the cabinet.
- 3.11 The external cabinet shall be equipped with a power receptacle to accommodate the inverter/charger. The receptacle shall be wired to the line output of the manual bypass switch.

4.0 MAINTENANCE, DISPLAYS, CONTROLS AND DIAGNOSTICS

- 4.1 The BBS shall include a display and /or meter to indicate current battery charge status and conditions.
- 4.2 The BBS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.
- 4.3 The BBS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.
- 4.4 The BBS and batteries shall be easily replaced with all needed hardware and shall not require any special tools for installation.
- 4.5 The BBS shall be equipped with a RS-232 port.
- 4.6 The BBS shall include a resettable front-panel event counter display to indicate the number of times the BBS was activated and a front-panel hour meter to display the total number of hours the unit has operated on battery power.
- 4.7 Manufacturer shall include two (2) sets of equipment lists, operation and maintenance manuals, and board-level schematic and wiring diagrams of the BBS, and the battery data sheets. Manufacturer shall include any software needed to monitor, diagnose, and operate the BBS. The manufacturer shall include any required cables to connect to a laptop computer.
- 4.8 The BBS shall include a data cable for the serial connection to the RS232 port and diagnostic software if it is available as an option with the unit (only two cables required for project).
- 4.9 One copy of the owner/maintenance manuals shall be provided with the BBS.

5.0 BATTERY SYSTEM

- 5.1 Individual batteries shall be 12V type and shall be easily replaced and commercially available off the shelf.
- 5.2 The batteries shall be premium gel type with a 5-year full replacement warranty.
- 5.3 Batteries used for BBS shall consist of a minimum of four (4) to eight (8) batteries with a cumulative minimum rated capacity of 280 amp-hours.
- 5.4 Batteries shall be deep cycle, completely sealed, silver alloy VRLA (Valve Regulated Lead Acid) requiring no maintenance with maximum run time.
- 5.5 Batteries shall be certified by the manufacturer to operate over a temperature range of – 40°C to +71°C.
- 5.6 The batteries shall be provided with appropriate interconnect wiring and corrosion resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.

- 5.7 Batteries shall indicate maximum recharge data and recharging cycles.
- 5.8 Battery interconnect wiring shall be via modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. Harness shall be equipped with mating power-pole style connectors for batteries and a single, insulated plug-in style connection to inverter/charger unit. Harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.

- 5.9 Battery terminals shall be covered and insulated to prevent accidental shorting.

#### 6.0 QUALITY ASSURANCE

- 6.1 BBS shall be manufactured in accordance with a manufacturer quality assurance (QA) program. The QA program shall include two types of quality assurance: (1) Design quality assurance and (2) Production quality assurance. The production quality assurance shall include statistically controlled routine tests to ensure minimum performance levels of BBS units built to meet this specification and a documented process of how problems are to be resolved.
- 6.2 QA process and test results documentation shall be kept on file for a minimum period of seven years.
- 6.3 Battery Backup System designs not satisfying design qualification testing and the production quality assurance testing performance requirements described below shall not be labeled, advertised, or sold as conforming to this specification.

#### 7.0 DESIGN QUALIFICATION TESTING

- 7.1 The manufacturer, or an independent testing lab hired by the manufacturer, shall perform design Qualification Testing on new BBS designs, and when a major design change has been implemented on an existing design. A major design change is defined as a design change (electrical or physical) which changes any of the performance characteristics of the system, or results in a different circuit configuration.
- 7.2 Burn In. The sample systems shall be energized for a minimum of 5 hours, with full load of 700 watts, at temperatures of +74°C and -37°C., excluding batteries, before performing any design qualification testing.
- 7.3 Any failure of the BBS, which renders the unit non-compliant with the specification after burn-in, shall be cause for rejection.
- 7.4 For Operational Testing, all specifications may be measured including, but not limited to:
- 7.5 Run time while in battery backup mode, at full load.
- 7.6 Proper operation of all relay contact closures ("On-Batt", "Low-Batt", "Timer" and "BBS-Fail").

- 7.7 Inverter output voltage, frequency, harmonic distortion, and efficiency, when in battery backup mode.
- 7.8 All utility mode – battery backup mode transfer voltage levels. See Section 1 Operation.
- 7.9 Power transfer time from loss of utility power to switchover to battery backed inverter power.
- 7.10 Backfeed voltage to utility when in battery backup mode.
- 7.11 IEEE/ANSI C.62.41 compliance.
- 7.12 Battery charging time.
- 7.13 Event counter and runtime meter accuracy.

#### 8.0 PRODUCTION QUALITY CONTROL TESTING

- 8.1 Production Quality Control tests shall consist of all of the above listed tests and shall be performed on each new system prior to shipment. Failure to meet requirements of any of these tests shall be cause for rejection. The manufacturer shall retain test results for seven years.
- 8.2 Each BBS shall be given a minimum 100-hour burn-in period to catch any premature failures.
- 8.3 Each system shall be visually inspected for any exterior physical damage or assembly anomalies. Any defects shall be cause for rejection.

#### 9.0 WARRANTY

- 9.1 Manufacturers shall provide a minimum two (2) year factory-repair warranty for parts and labor on the BBS from date of acceptance by the State. Batteries shall be warranted for full replacement for five (5) years from date of purchase. The warranty shall be included in the total bid price of the BBS.
- 9.2 The Contractor shall furnish a warranty certificate for each Battery Backup System that includes the equipment description and details, serial numbers, effective dates, and the details of the warranty regarding materials and labor. The warranty period shall begin on the date of installation and the warranty certificate shall reflect this date.

Basis of Payment: The above work will be paid for at the contract unit price Each for TRAFFIC SIGNAL BATTERY BACKUP SYSTEM shall be payment in full for all labor, materials, and equipment required to provide, install, and test the battery backup system described above, complete.

## **TRAFFIC SIGNAL POST, GALVANIZED STEEL**

This work shall be in accordance with Sections 878 and 1077 of the Standard Specifications except as modified herein.

The traffic signal post shall be attached to the foundation with four 3/4" x 18" galvanized anchor bolts. The post base shall be secured to the foundation using galvanized nuts and galvanized steel flat washers that have a minimum thickness of 1/4" and are trapezoidal in shape. The washers shall be sized as such to completely capture the mounting flanges of the traffic signal base. Round washers will not be acceptable.

The traffic signal post, breakaway base, caps, and appurtenances shall be galvanized.

Basis of Payment: This work will be paid for at the contract unit price Each for TRAFFIC SIGNAL POST, GALVANIZED STEEL of the height specified which price shall be payment in full for all labor, material, and equipment required to provide and install the traffic signal post and base described above.

## **CONTRACT GUARANTEE**

The Contractor shall guarantee all electrical equipment, apparatus, materials, and workmanship provided under the contract for a period of six (6) months after the date of final inspection according to Article 801.14 of the Standard Specifications.

All instruction sheets required to be furnished by the manufacturer for materials and supplies and for operations shall be delivered to the Engineer prior to the acceptance of the project, with the following warranties and guarantees:

The manufacturer's standard written warranty for each piece of electrical equipment or apparatus furnished under the contract.

The Contractor's written guarantee that, for a period of six (6) months after the date of final inspection of the project, all necessary repairs to or replacement of said warranted equipment, or apparatus shall be made by the Contractor at no cost to the Department.

The Contractor's written guarantee for satisfactory operation of all electrical systems furnished and constructed under the contract for a period of 6 months after final inspection of the project.

## **CONSTRUCTION PERMITS**

The Contractor shall be responsible for obtaining all required permits from counties, municipalities, and other entities prior to beginning work. The Contractor shall pay all costs associated with obtaining the permits.

Basis of Payment. This work will not be paid for separately but shall be included in the contract bid price.

## **AS-BUILT DOCUMENTATION**

The Contractor shall locate all proposed conduit, cables that are saw cut into sidewalk and pavement, pedestrian pushbutton posts, traffic signal posts, handholes, junction boxes, light poles, and camera poles every 100 feet using a GIS locating device that is accurate to the nearest Foot.

The Contractor shall provide a GIS based map of the conduit route and a complete listing of all of map coordinates in an electronic format (Google Earth KML or KMZ shape file).

Basis of Payment. This work will not be paid for separately but shall be included in the contract bid price.

## **THIRTY DAY ACCEPTANCE PERIOD FOR TRAFFIC SIGNAL COMPONENTS**

All traffic signal components including, but not limited to controllers, controller cabinets, video detection systems, battery backup systems, LED modules, APS, pedestrian pushbuttons, and communications equipment will be subject to a 30-day acceptance period in accordance with Article 801.15(c) of the Standard Specifications.

## **RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD**

This work shall be in accordance with Sections 880, 895 and 1078 of the Standard Specifications except as modified herein.

The Contractor shall relocate the existing traffic signal heads as shown in the plans and in the table below:

<b>Signal Head</b>	<b>Existing Location</b>	<b>Signal Head Type</b>	<b>Proposed Location</b>	<b>Proposed Wiring</b>
E	EX. MA-3/4 Strain Pole	1-Face Pedestrian	PROP. TS-4	SIGNAL, NO. 14 5/C

All costs associated with furnishing and installing new bracketing for signal heads relocated from the strain poles shall be included in the cost of this pay item.

Basis of Payment: This work will be paid for at the contract unit prices Each for RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD and will be payment in full for all labor, equipment, and materials required to relocate the existing signal heads, and furnish and install new bracketing as described above, complete.



## **RELOCATE EXISTING ILLUMINATED SIGN**

This work shall be in accordance with Sections 880, 895 and 1078 of the Standard Specifications except as modified herein.

The Contractor shall relocate the existing Illuminated Signs as shown in the plans and in the table below.

<b>Sign Location</b>	<b>Existing Location</b>	<b>Proposed Location</b>	<b>Proposed Wiring</b>
Cummings NB RT	EX. MA-3/4 Strain Pole	PROP. TS-4	SIGNAL, NO. 14, 3/C

All costs associated with furnishing and installing new bracketing for Illuminated Signs relocated from the strain poles shall be included in the cost of this pay item.

Basis of Payment: This work will be paid for at the contract unit prices Each for RELOCATE EXISTING ILLUMINATED SIGN and will be payment in full for all labor, equipment, and materials required to relocate the existing Illuminated signs, and furnish and install new bracketing as described above, complete.

## **ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 12 1 PAIR**

The Contractor shall furnish and install No. 12 lead-in cable for all detector loops.

This work shall be in accordance with Sections 873 and 1076 of the Standard Specifications except as modified herein.

The Contractor shall install one separate lead-in cable from each detector loop to the controller cabinet. The detector loop lead-in cable shall be No. 12 AWG twisted/shielded cable.

The design shall meet the requirement of IMSA 50-2.

Basis of Payment: This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 12 1 PAIR, which price shall be payment in full for all labor, materials, and equipment required to furnish, install, and test the lead-in cable described above.

## **RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON**

This work shall be in accordance with Sections 880, 895 and 1078 of the Standard Specifications except as modified herein.

The Contractor shall relocate the existing pedestrian pushbuttons/ Accessible Pedestrian Signals (APS) as shown in the plans and in the table below:

<b>US 24 (Boyd) &amp; Cummings</b>			
<b>Pushbutton/APS</b>	<b>Existing Location</b>	<b>Proposed Location</b>	<b>Proposed Wiring</b>
P1	Ex. TS-1	Prop. TS-1	SIGNAL, NO. 14, 5/C
P2	Ex. TS-2	Prop. TS-2	SIGNAL, NO. 14, 5/C
P3	Ex. TS-3	Prop. TS-3	SIGNAL, NO. 14, 5/C

The relocated pedestrian push-button (APS) shall be installed in accordance with the 2009 MUTCD. For all installations, reach range (distance between the face of the push-button and the clear space) shall not exceed 10 inches. The relocated pedestrian push-button (APS) shall be installed with the face of the sign parallel to the crosswalk associated with the push-button. If the existing bracketing does not allow these requirements to be met, the Contractor shall furnish and install swivel bracketing to meet this requirement.

The cost to modify or relocate any APS that were not installed according to MUTCD requirements and contract specifications will be the responsibility of the Contractor.

Basis of Payment: This work will be paid for at the contract unit prices Each for RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON and will be payment in full for all labor, equipment, and materials required to relocate the existing pedestrian push-buttons, and re-use or furnish and install new bracketing as described above, complete.

## **DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE**

This work shall consist of removing the existing single handhole and furnishing the materials and constructing a double handhole in accordance with the applicable Articles of Section 814 and 1088 of the Standard Specifications with the following modifications:

### **CONSTRUCTION REQUIREMENTS**

The Contractor shall perform the following items:

- The Contractor shall remove the existing handhole casting, lids, and hardware and dispose of them off of the right-of-way.
- The Contractor shall remove a minimum of 12 inches of concrete from the existing handhole walls that will be re-used and the entirety of one of the wall. The new concrete shall be dowelled into the existing concrete.
- The Contractor shall furnish and install a new double handhole casting and lid.

- The handhole installation shall be in accordance with the latest revision of Highway Standard 814006.
- The Contractor shall provide protection for the handhole cables during all phases of construction.
- The Contractor shall ground the handhole lids and frame in accordance with NEC requirements using #6 XLP-USE green copper conductor cable which shall be bonded to all items and their associated ground rods utilizing mechanical lugs and bolts. The use of split bolts will not be allowed.

The lift ring for the cover shall consist of a solid closed ring of stainless steel at least 3/8 inch in diameter. The lift ring shall be attached to the cover by a loop of stainless steel at least 3/8 inch in diameter. The lift ring and loop shall be recessed in the cover.

The Contractor shall install heavy-duty, fully galvanized hooks, with a minimum diameter of 1/2" in the proposed handhole. The Contractor shall submit this material to the Engineer prior to construction of the handholes.

The lid shall be marked with the legend "Traffic Signals".

Pre-cast handholes are not allowed.

All unsuitable materials shall be disposed of by the Contractor outside the job limits.

Basis of Payment: This work will be paid for at the contract unit price Each for DOUBLE HANDHOLE, PORTLAND CEMENT CONCRETE which price shall be payment in full for all labor, materials, and equipment required to provide the handhole described above as well as any necessary excavating, backfilling, disposal of unsuitable materials, and furnishing all materials within the limits of the handhole.

## **ACCESSIBLE PEDESTRIAN SIGNALS (APS) (BDE)**

Effective: April 1, 2003

Revised: January 1, 2022

Description. This work shall consist of furnishing and installing accessible pedestrian signals (APS). Each APS shall consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a light emitting diode (LED) indicator light, a solid-state electronic control board, a power supply, wiring, and mounting hardware. The APS shall meet the requirements of the MUTCD and Sections 801 and 888 of the Standard Specifications, except as modified herein.

Electrical Requirements. The APS shall operate with systems providing 95 to 130 VAC, 60 Hz and throughout an ambient air temperature range of -29 to +160 °F (-34 to +70 °C).

The APS shall contain a power protection circuit consisting of both fuse and transient protection.

Audible Indications. A pushbutton locator tone shall sound at each pushbutton and shall be deactivated during the associated walk indication and when associated traffic signals are in flashing mode. Pushbutton locator tones shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals. Each actuation of the pushbutton shall be accompanied by the speech message "Wait".

If two accessible pedestrian pushbuttons are placed less than 10 ft (3 m) apart or placed on the same pole, the audible walk indication shall be a speech walk message. This message shall sound throughout the WALK interval only. The verbal message shall be modeled after: "Street Name. Walk Sign is on to cross "Street Name." For signalized intersections utilizing exclusive pedestrian phasing, the verbal message shall be "Walk sign is on for all crossings". In addition, a speech pushbutton information message shall be provided by actuating the APS pushbutton when the WALK interval is not timing. This verbal message shall be modeled after: "Wait. Wait to cross 'Street Name' at 'Street Name'".

Where two accessible pedestrian pushbuttons are separated by at least 10 ft (3 m), the walk indication shall be an audible percussive tone. It shall repeat at 8 to 10 ticks per second with a dominant frequency of 880 Hz.

Automatic volume adjustments in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dBA. Locator tone and verbal messages shall be no more than 5 dB louder than ambient sound.

At locations with railroad interconnection, an additional speech message stating "Walk time shortened when train approaches" shall be used after the speech walk message. At locations with emergency vehicle preemption, an additional speech message "Walk time shortened when emergency vehicle approaches" shall be used after the speech walk message.

Pedestrian Pushbutton. Pedestrian pushbuttons shall be at least 2 in. (50 mm) in diameter or width. The force required to activate the pushbutton shall be no greater than 3.5 lb (15.5 N).

A red LED shall be located on or near the pushbutton which, when activated, acknowledges the pedestrians request to cross the street.

Signage. A sign shall be located immediately above the pedestrian pushbutton and parallel to the crosswalk controlled by the pushbutton. The sign shall conform to one of the following standard MUTCD designs: R10-3, R10-3a, R10-3e, R10-3i, R10-4, and R10-4a.

Tactile Arrow. A tactile arrow, pointing in the direction of travel controlled by a pushbutton, shall be provided on the pushbutton.

Vibrotactile Feature. The pushbutton shall pulse when depressed and shall vibrate continuously throughout the WALK interval.

Method of Measurement. This work will be measured for payment as each, per pushbutton.

Basis of Payment. This work will be paid for at the contract unit price per each for ACCESSIBLE PEDESTRIAN SIGNALS.

## **BITUMINOUS MATERIALS COST ADJUSTMENTS (BDE)**

Effective: November 2, 2006

Revised: August 1, 2017

**Description.** Bituminous material cost adjustments will be made to provide additional compensation to the Contractor, or credit to the Department, for fluctuations in the cost of bituminous materials when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract.

The adjustments shall apply to permanent and temporary hot-mix asphalt (HMA) mixtures, bituminous surface treatments (cover and seal coats), and preventative maintenance type surface treatments that are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply to bituminous prime coats, tack coats, crack filling/sealing, joint filling/sealing, or extra work paid for at a lump sum price or by force account.

**Method of Adjustment.** Bituminous materials cost adjustments will be computed as follows.

$$CA = (BPI_P - BPI_L) \times (\%AC_V / 100) \times Q$$

Where: CA = Cost Adjustment, \$.  
BPI<sub>P</sub> = Bituminous Price Index, as published by the Department for the month the work is performed, \$/ton (\$/metric ton).  
BPI<sub>L</sub> = Bituminous Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/ton (\$/metric ton).  
%AC<sub>V</sub> = Percent of virgin Asphalt Cement in the Quantity being adjusted. For HMA mixtures, the % AC<sub>V</sub> will be determined from the adjusted job mix formula. For bituminous materials applied, a performance graded or cutback asphalt will be considered to be 100% AC<sub>V</sub> and undiluted emulsified asphalt will be considered to be 65% AC<sub>V</sub>.  
Q = Authorized construction Quantity, tons (metric tons) (see below).

For HMA mixtures measured in square yards:  $Q, \text{ tons} = A \times D \times (G_{mb} \times 46.8) / 2000$ . For HMA mixtures measured in square meters:  $Q, \text{ metric tons} = A \times D \times (G_{mb} \times 1) / 1000$ . When computing adjustments for full-depth HMA pavement, separate calculations will be made for the binder and surface courses to account for their different  $G_{mb}$  and % AC<sub>V</sub>.

For bituminous materials measured in gallons:  $Q, \text{ tons} = V \times 8.33 \text{ lb/gal} \times SG / 2000$   
For bituminous materials measured in liters:  $Q, \text{ metric tons} = V \times 1.0 \text{ kg/L} \times SG / 1000$

Where: A = Area of the HMA mixture, sq yd (sq m).  
D = Depth of the HMA mixture, in. (mm).  
G<sub>mb</sub> = Average bulk specific gravity of the mixture, from the approved mix design.  
V = Volume of the bituminous material, gal (L).  
SG = Specific Gravity of bituminous material as shown on the bill of lading.

**Basis of Payment.** Bituminous materials cost adjustments may be positive or negative but will only be made when there is a difference between the BPI<sub>L</sub> and BPI<sub>P</sub> in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(BPI_L - BPI_P) \div BPI_L\} \times 100$$

Bituminous materials cost adjustments will be calculated for each calendar month in which applicable bituminous material is placed; and will be paid or deducted when all other contract requirements for the work placed during the month are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

**CEMENT, FINELY DIVIDED MINERALS, ADMIXTURES, CONCRETE, AND MORTAR (BDE)**

Effective: January 1, 2025

Revised: January 1, 2026

Revise the first paragraph of Article 285.05 of the Standard Specifications to read:

**“285.05 Fabric Formed Concrete Revetment Mat.** The grout shall consist of a mixture of cement, fine aggregate, and water so proportioned and mixed as to provide a pumpable slurry. Fly ash or ground granulated blast furnace (GGBF) slag, and concrete admixtures may be used at the option of the Contractor. The grout shall have an air content of not less than 6.0 percent nor more than 9.0 percent of the volume of the grout. The mix shall obtain a compressive strength of 2500 psi (17,000 kPa) at 28 days according to Article 1020.09.”

Revise Article 302.02 of the Standard Specifications to read:

**“302.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement .....	1001
(b) Water .....	1002
(c) Hydrated Lime .....	1012.01
(d) By-Product, Hydrated Lime .....	1012.02
(e) By-Product, Non-Hydrated Lime .....	1012.03
(f) Lime Slurry .....	1012.04
(g) Fly Ash .....	1010
(h) Soil for Soil Modification (Note 1) .....	1009.01
(i) Bituminous Materials (Note 2) .....	1032

Note 1. This soil requirement only applies when modifying with lime (slurry or dry).

Note 2. The bituminous materials used for curing shall be emulsified asphalt RS-2, CRS-2, HFE 90, or HFE 150; rapid curing liquid asphalt RC-70; or medium curing liquid asphalt MC-70 or MC-250.”

Revise Article 312.07(c) of the Standard Specifications to read:

“(c) Cement .....1001”

Add Article 312.07(i) of the Standard Specifications to read:

“(i) Ground Granulated Blast Furnace (GGBF) Slag .....1010”

Revise the first paragraph of Article 312.09 of the Standard Specifications to read:

**“312.09 Proportioning and Mix Design.** At least 60 days prior to start of placing CAM II, the Contractor shall submit samples of materials to be used in the work for proportioning and testing. The mixture shall contain a minimum of 200 lb (120 kg) of cement per cubic yard (cubic meter). Cement may be replaced with fly ash or ground granulated blast furnace (GGBF) slag according to Article 1020.05(c)(1) or 1020.05(c)(2), respectively, however the minimum cement content in the mixture shall be 170 lbs/cu yd (101 kg/cu m). Blends of coarse and fine aggregates will be permitted, provided the volume of fine aggregate does not exceed the volume of coarse aggregate. The Engineer will determine the proportions of materials for the mixture according to the “Portland Cement Concrete Level III Technician Course” manual. However, the Contractor may substitute their own mix design. Article 1020.05(a) shall apply, and a Level III PCC Technician shall develop the mix design.”

Revise Article 352.02 of the Standard Specifications to read:

**“352.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement (Note 1) .....	1001
(b) Soil for Soil-Cement Base Course .....	1009.03
(c) Water .....	1002
(d) Bituminous Materials (Note 2) .....	1032

Note 1. Bulk cement may be used for the traveling mixing plant method if the equipment for handling, weighing, and spreading the cement is approved by the Engineer.

Note 2. The bituminous materials used for curing shall be emulsified asphalt RS-2, CRS-2, HFE 90, or HFE 150; rapid curing liquid asphalt RC-70; or medium curing liquid asphalt MC-70 or MC-250.”

Revise Article 404.02 of the Standard Specifications to read:

**“404.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement .....	1001
(b) Water .....	1002
(c) Fine Aggregate .....	1003.08
(d) Bituminous Material (Tack Coat) .....	1032.06
(e) Emulsified Asphalts (Note 1) (Note 2) .....	1032.06
(f) Fiber Modified Joint Sealer .....	1050.05
(g) Additives (Note 3)	

Note 1. When used for slurry seal, the emulsified asphalt shall be CQS-1h according to Article 1032.06(b).

Note 2. When used for micro-surfacing, the emulsified asphalt shall be CQS-1hP according to Article 1032.06(e).

Note 3. Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They shall be included as part of the mix design and be compatible with the other components of the mix.

Revise the last sentence of the fourth paragraph of Article 404.08 of the Standard Specifications to read:

“When approved by the Engineer, the sealant may be dusted with fine sand, cement, or mineral filler to prevent tracking.”

Revise Note 2 of Article 516.02 of the Standard Specifications to read:

“Note 2. The sand-cement grout mix shall be according to Section 1020 and shall be a 1:1 blend of sand and cement comprised of a Type I, IL, or II cement at 185 lb/cu yd (110 kg/cu m). The maximum water cement ratio shall be sufficient to provide a flowable mixture with a typical slump of 10 in. (250 mm).”

Revise Note 2 of Article 543.02 of the Standard Specifications to read:

“Note 2. The grout mixture shall be 6.50 hundredweight/cu yd (385 kg/cu m) of cement plus fine aggregate and water. Fly ash or ground granulated blast furnace (GGBF) slag may replace a maximum of 5.25 hundredweight/cu yd (310 kg/cu m) of the cement. The water/cement ratio, according to Article 1020.06, shall not exceed 0.60. An air-entraining admixture shall be used to produce an air content, according to Article 1020.08, of not less than 6.0 percent nor more than 9.0 percent of the volume of the grout. The Contractor shall have the option to use a water-reducing or high range water-reducing admixture.”

Revise Article 583.01 of the Standard Specifications to read:

“**583.01 Description.** This work shall consist of placing cement mortar along precast, prestressed concrete bridge deck beams as required for fairing out any unevenness between adjacent deck beams prior to placing of waterproofing membrane and surfacing.”

Revise Article 583.02(a) of the Standard Specifications to read:

“(a) Cement .....1001”

Revise the first paragraph of Article 583.03 of the Standard Specifications to read:

“**583.03 General.** This work shall only be performed when the air temperature is 45 °F (7 °C) and rising. The mixture for cement mortar shall consist of three parts sand to one part cement by volume. The amount of water shall be no more than that necessary to produce a workable, plastic mortar.”

Revise Article 606.02(h) of the Standard Specifications to read:

“(h) Fibers (Note 1) .....1014”



Revise Note 1 in Article 606.02(h) of the Standard Specifications to read:

“Note 1. Fibers, when required, shall only be used in the concrete mixture for slipform applications.”

Revise the third paragraph in Article 606.10 of the Standard Specifications to read:

“Welded wire fabric shall be 6 x 6 in. (150 x 150 mm) mesh, #4 gauge (5.74 mm), 58 lb (26 kg) per 100 sq ft (9 sq m).”

Revise Article 1001.01(d) of the Standard Specifications to read:

“(d) Rapid Hardening Cement. Rapid hardening cement shall be according to the Bureau of Materials Policy Memorandum “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”, and ASTM C 1600, Type URH, Type VRH, or Type RH-CAC. It shall be used according to Article 1020.04 or when approved by the Engineer. The Contractor shall submit a report from the manufacturer or an independent lab that contains results for testing according to ASTM C 1600 which shows the cement meets the requirements of either Type URH, Type VRH, or Type RH-CAC. Test data shall be less than 1 year old from the date of submittal.

Revise Article 1001.01(e) of the Standard Specifications to read:

“(e) Other Cements. Other cements shall be according to the Bureau of Materials Policy Memorandum “Portland or Blended Cement Acceptance Procedure for Qualified and Non-Qualified Plants”, and ASTM C 1157 or ASTM C 1600, as applicable. Other cements shall be used according to Article 1020.04 or when approved by the Engineer. For cements according to ASTM C 1157, the Contractor shall submit a report from the manufacturer or an independent lab that contains results of tests which shows the cement meets the requirements Type GU, HE, MS, MH, or LH. For cements according to ASTM C 1600, the Contractor shall submit a report from the manufacturer or an independent lab that contains results of tests which shows the cement meets the requirements Type MRH or GRH. Test data shall be less than 1 year old from the date of submittal.”

Revise Article 1002.02 of the Standard Specifications to read:

“**1002.02 Quality.** Water used with cement in concrete or mortar and water used for curing concrete shall be clean, clear, and free from sugar. In addition, water shall be tested and evaluated for acceptance according to one of the following options.

OPTION 1.

(a) Acceptable limits for acidity and alkalinity when tested according to ITP T 26.

- (1) Acidity -- 0.1 Normal NaOH ..... 2 ml max.\*
- (2) Alkalinity -- 0.1 Normal HCl..... 10 ml max.\*

\*To neutralize 200 ml sample.

(b) Acceptable limits for solids when tested according to the following.

- (1) Organic (ITP T 26).....0.02% max.
- (2) Inorganic (ITP T 26).....0.30% max.
- (3) Sulfate (SO<sub>4</sub>) (ASTM D 516-82) .....0.05% max.
- (4) Chloride (ASTM D 512) .....0.06% max.

(c) The following tests shall be performed on the water sample and on deionized water. The same cement and sand shall be used for both tests.

- (1) Unsoundness (ASTM C 151).
- (2) Initial and Final Set Time (ASTM C 266).
- (3) Strength (ASTM C 109).

The test results for the water sample shall not deviate from the test results for the deionized water, except as allowed by the precision in the test method.

OPTION 2. Water shall meet the requirements ASTM C 1602 Tables 1 and 2 as outlined in Sections 5.1, 5.2, and 5.4.”

Revise Note 2/ in Article 1003.01(b) of the Standard Specifications to read:

“2/ Applies only to sand. Sand exceeding the colorimetric test standard of 11 (Illinois Modified AASHTO T 21) will be checked for mortar making properties according to Illinois Modified ASTM C 87 and shall develop a compressive strength at the age of 14 days when using Type I, IL, or II cement of not less than 95 percent of the comparable standard.

Revise the second sentence of Article 1003.02(e)(1) of the Standard Specifications to read:

“The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content (Na<sub>2</sub>O + 0.658K<sub>2</sub>O) of 0.90 percent or greater.”

Revise the first sentence of the second paragraph of Article 1003.02(e)(3) of the Standard Specifications to read:

“The ASTM C 1293 test shall be performed with Type I, IL, or II portland cement having a total equivalent alkali content (Na<sub>2</sub>O + 0.658K<sub>2</sub>O) of 0.80 percent or greater.”

Revise the second sentence of Article 1004.02(g)(1) of the Standard Specifications to read:

“The test will be performed with Type I, IL, or II portland cement having a total equivalent alkali content (Na<sub>2</sub>O + 0.658K<sub>2</sub>O) of 0.90 percent or greater.”

Add the following Section to the Standard Specifications.

**“SECTION 1014. FIBERS FOR CONCRETE**

**1014.01 General.** Fibers used in concrete shall be Type II or Type III (polyolefin or carbon) according to ASTM C 1116. The testing required for Type II fibers or Type III polyolefin fibers shall be performed by an independent lab a minimum of once every five years, and the test results provided to the Department. Manufacturers of Type III carbon fibers shall provide materials certification documentation not more than 6 years old a minimum of once every 5 years to the Department. The Department will maintain a qualified product list. The method of inclusion of fibers into concrete mixtures shall be according to the manufacturer's specifications.

At the discretion of the Engineer, the concrete mixture shall be evaluated in a field demonstration for fiber clumping, ease of placement, and ease of finishing. The field demonstration shall consist of a minimum 2 cu yd (1.5 cu m) trial batch placed in a 12 ft x 12 ft (3.6 m x 3.6 m) slab.

**1014.02 Concrete Gutter, Curb, Median and Paved Ditch.** Fibers shall be Type III. Fibers shall have a minimum length of 1/2 in. (13 mm) and a maximum length of 0.75 in. (19 mm). The maximum dosage rate in the concrete mixture shall not exceed 1.5 lb/cu yd (0.9 kg/cu m). The minimum dosage rate shall be per the manufacturer's recommendation.

**1014.03 Concrete Inlay or Overlay.** Fibers shall be Type III. Fibers shall have a minimum length of 1.0 in. (25 mm), a maximum length of 2 1/2 in. (63 mm), and a maximum aspect ratio (length divided by the equivalent diameter of the fiber) of 150. The maximum dosage rate shall not exceed 5.0 lb/cu yd (3.0 kg/cu m). The minimum dosage rate shall be per the manufacturer's recommendation.

**1014.04 Bridge Deck Fly Ash, Ground Granulated Blast Furnace (GGBF) Slag, High Reactivity Metakaolin, or Microsilica (Silica Fume) Concrete Overlay.** Fibers shall be Type III. The dosage rate shall be a minimum of 3.0 lb/cu yd (1.8 kg/cu m), unless a field demonstration according to Article 1014.01 indicates that a lower dosage rate is necessary. Based on the results of the field demonstration, the Department has the option to reduce the dosage rate of fibers, but the dosage will not be reduced to less than 2.0 lb / cu yd (1.2 kg/cu m).

**1014.05 Bridge Deck Latex Concrete Overlay.** Fibers shall be Type II or III. Fibers shall have a minimum length of 0.75 in. (19 mm), a maximum length of 1.75 in. (45 mm), and an aspect ratio (length divided by the equivalent diameter of the fiber) of between 70 and 100. The dosage rate shall be a minimum of 3.0 lb/cu yd (1.8 kg/cu m), unless a field demonstration according to Article 1014.01 indicates that a lower dosage rate is necessary. Based on the results of the field demonstration, the Department has the option to reduce the dosage rate of fibers, but the dosage will not be reduced to less than 2.0 lb/cu yd (1.2 kg/cu m)."

Add the following Section to the Standard Specifications:

**“SECTION 1015. HIGH PERFORMANCE SHOTCRETE**

**1015.01 Packaged Shotcrete With Aggregate.** The packaged shotcrete with aggregate shall be a pre-blended dry combination of materials for the wet-mix shotcrete method according to ASTM C 1480, Type FA or CA, Grade FR, Class I. The fibers shall be Type III according to

Article 1014.01. The cement and finely divided minerals in the mixture shall be a minimum 6.65 cwt/cu yd (395 kg/cu m), and the portland cement shall not be below 4.70 cwt/cu yd (279 kg/cu m). Microsilica is required in the mixture and shall be a minimum of 5 percent by weight (mass) of cementitious material, and a maximum of 10 percent. Strength requirements shall be according to ASTM C 1480 except that the strength at 28 days shall be at least 4000 psi (27,500 kPa). Strength testing shall be according to ASTM C 1140. The air content as shot shall be 4.0 – 8.0 percent when tested according to AASHTO T 152, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm).

The packaged shotcrete shall have a water soluble chloride ion content of less than 0.15% by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260.

The testing according to ASTM C 1480, ASTM C 1140, AASHTO 152, and ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Batching and mixing shall be per the manufacturer's recommendations.

**1015.02 Packaged Shotcrete Without Aggregate.** The packaged shotcrete that does not include pre-blended aggregate shall be according to Article 1015.01, except the added aggregate shall be according to Articles 1003.02 and 1004.02. The aggregate gradation shall be according to the manufacturer. The Department will maintain a qualified product list. Batching and mixing shall be per the manufacturer's recommendations."

Revise Section 1017 of the Standard Specifications to read:

**"SECTION 1017. PACKAGED, DRY, COMBINED MATERIALS FOR MORTAR AND CONCRETE**

**1017.01 Mortar.** The mortar shall be high-strength according to ASTM C 387 and shall have a minimum 80.0 percent relative dynamic modulus of elasticity when tested according to AASHTO T 161. For prestressed concrete applications, the mortar shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The testing according to ASTM C 387, AASHTO T 161, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing of the high-strength mortar shall be according to the manufacturer's specifications.

**1017.02 Concrete.** The materials, testing, and preparation of aggregate for the "high slump" packaged concrete mixture shall be according to ASTM C 387. The mixture shall be air entrained, the slump shall be 5-10 in. (125-250 mm), and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). Strength requirements shall be according to ASTM C 387 except that the strength at 28 days shall be at least 4000 psi (27,500 kPa). The "high slump" packaged concrete mixture shall have a water soluble chloride ion content of less than 0.15% by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260. The testing according to ASTM C 387, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing shall be per the manufacturer's recommendations.

**1017.02 Self-Consolidating Concrete.** The materials, testing, and preparation of aggregate for the “self-consolidating concrete” packaged concrete mixture shall be according to ASTM C 387. The mixture shall be air entrained, it should be uniformly graded, and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). Strength requirements shall be according to ASTM C 387 except that the strength at 28 days shall be at least 4000 psi (27,500 Pa). Slump flow range shall be 22 in. (550 mm) minimum to 28 in. (700 mm) maximum when tested according to AASHTO T 347. The visual stability index shall be a maximum of 1 when tested according to AASHTO T 351. At the option of the manufacturer, either the J-Ring value shall be a maximum of 2 in. (50 mm) when tested according to AASHTO T 347 or the L-Box blocking ratio shall be a minimum of 80 percent when tested according AASHTO T 419. The hardened visual stability index shall be a maximum of 1 when tested according to AASHTO R 81.

The “self -consolidating concrete” packaged concrete mixture shall have a water soluble chloride ion content of less than 0.15 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260.

The testing according to ASTM C 387, AASHTO T 347, AASHTO T 351, AASHTO T 419, AASHTO R 81, ASTM C 1218 and AASHTO T 260 shall be performed by an independent lab a minimum of once every 5 years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing shall be per the manufacturer’s recommendations.”

Revise Article 1018.01 of the Standard Specifications to read:

**“1018.01 Requirements.** The rapid hardening mortar or concrete shall be according to ASTM C 928 and shall have successfully completed and remain current with the AASHTO Product Eval and Audit Rapid Hardening Concrete Patching Materials (RHCP) testing program. R1, R2, or R3 concrete shall be air entrained, the slump shall be 5-10 in. (125-250 mm), and the coarse aggregate shall be a maximum size of 1/2 in. (12.5 mm). For prestressed concrete applications, the mortar or concrete shall have a water-soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride content shall be less than 0.15 percent by weight of cementitious material. The Department will maintain a qualified product list. Mixing of the mortar or concrete shall be according to the manufacturer’s specifications..”

Revise Article 1019.02 of the Standard Specifications to read:

**“1019.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement .....	1001
(b) Water .....	1002
(c) Fine Aggregate for Controlled Low-Strength Material (CLSM) .....	1003.06
(d) Fly Ash .....	1010
(e) Ground Granulated Blast Furnace (GGBF) Slag.....	1010
(f) Admixtures (Note 1)	

Note 1. The air-entraining admixture may be in powder or liquid form. The air content produced by the admixture shall be 15-25 percent when incorporated into Mix 2 or an equivalent mixture as determined by the Department and tested according to AASHTO

T 121 or AASHTO T 152. The testing according to AASHTO T 121 or AASHTO T 152 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list.”

Revise the third paragraph of Article 1019.04 of the Standard Specifications to read:

“The Engineer will instruct the Contractor to adjust the proportions of the mix design in the field as needed to meet the design criteria, provide adequate flowability, maintain proper solid suspension, or other criteria established by the Engineer.”

Revise Article 1019.05 of the Standard Specifications to read:

“**1019.05 Department Mix Design.** The Department mix design shall be Mix 1, 2, or 3 and shall be proportioned to yield approximately one cubic yard (cubic meter).

Mix 1	
Cement	50 lb (30 kg)
Fly Ash – Class C or F, and/or GGBF Slag	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2900 lb (1720 kg)
Water	50-65 gal (248-322 L)
Air Content	No air is entrained

Mix 2	
Cement	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2500 lb (1483 kg)
Water	35-50 gal (173-248 L)
Air Content	15-25 %

Mix 3	
Cement	40 lb (24 kg)
Fly Ash – Class C or F, and/or GGBF Slag	125 lb (74 kg)
Fine Aggregate – Saturated Surface Dry	2500 lb (1483 kg)
Water	35-50 gal (179-248 L)
Air Content	15-25 %”

Revise Article 1020.04, Table 1, Note (8) of the Standard Specifications to read:

“(8) In addition to the Type III portland cement, 100 lb/cu yd of ground granulated blast-furnace slag and 50 lb/cu yd of microsilica (silica fume) shall be used. For an air temperature greater than 85 °F, the Type III portland cement may be replaced with Type I, IL, or II portland cement.”

Revise Article 1020.04, Table 1 (Metric), Note (8) of the Standard Specifications to read:

“(8) In addition to the Type III portland cement, 60 kg/cu m of ground granulated blast-furnace slag and 30 kg/cu m of microsilica (silica fume) shall be used. For an air temperature greater than 30 °C, the Type III portland cement may be replaced with Type I, IL, or II portland cement.”

Revise Note 9 of Table 1 of Article 1020.04 of the Standard Specifications to read:

- “(9) The cement shall be a rapid hardening according to Article 1001.01(d). Minimum or maximum cement factor may be adjusted when approved by the Engineer.”

Revise the second paragraph of Article 1020.05(a) of the Standard Specifications to read:

“For a mix design using a portland-pozzolan cement, portland blast-furnace slag cement, portland-limestone cement, or replacing portland cement with finely divided minerals per Articles 1020.05(c) and 1020.05(d), the Contractor may submit a mix design with a minimum portland cement content less than 400 lbs/cu yd (237 kg/cu m), but not less than 375 lbs/cu yd (222 kg/cu m), if the mix design is shown to have a minimum relative dynamic modulus of elasticity of 80 percent determined according to AASHTO T 161. Testing shall be performed by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete.”

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

“Corrosion inhibitors and concrete admixtures shall be according to the qualified product lists.”

Delete the fourth and fifth sentences of the second paragraph of Article 1020.05(b) of the Standard Specifications.

Revise Article 1020.05(b)(5) of the Standard Specifications to read:

- “(5) For Class PP-4 concrete, a high range water-reducing admixture, retarder, and/or hydration stabilizer may be used in addition to the air-entraining admixture. The Contractor also has the option to use a water-reducing admixture with the high range water-reducing admixture. An accelerator shall not be used. A mobile portland cement concrete plant shall be used to produce the patching mixture.

For PP-5 concrete, a non-chloride accelerator, high range water-reducing admixture, retarder, hydration stabilizer, and/or air-entraining admixture may be used. The accelerator, high range water-reducing admixture, retarder, hydration stabilizer, and/or air-entraining admixture shall be per the Contractor's recommendation and dosage. The qualified product list of concrete admixtures shall not apply. A mobile portland cement concrete plant shall be used to produce the patching mixture.”

Revise second paragraph of Article 1020.05(b)(10) of the Standard Specifications to read:

“When calcium nitrite is used, it shall be added at the rate of 4 gal/cu yd (20 L/cu m) and shall be added to the mix immediately after all compatible admixtures have been introduced to the batch. Other corrosion inhibitors shall be added per the manufacturer's specifications.”

Delete the third paragraph of Article 1020.05(b)(10) of the Standard Specifications.

Revise Article 1020.15(b)(1)c. of the Standard Specifications to read:

- “c. The minimum portland cement content in the mixture shall be 375 lbs/cu yd (222 kg/cu m). When the total of organic processing additions, inorganic processing additions, and limestone addition exceed 5.0 percent in the cement, the minimum portland cement content in the mixture shall be 400 lbs/cu yd (237 kg/cu m). For a drilled shaft, foundation, footing, or substructure, the minimum portland cement may be reduced to as low as 330 lbs/cu yd (196 kg/cu m) if the concrete has adequate freeze/thaw durability. The Contractor shall provide freeze/thaw test results according to AASHTO T 161, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Testing shall be performed by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete. Freeze/thaw testing will not be required for concrete that will not be exposed to freezing and thawing conditions as determined by the Engineer.”

Revise Article 1021.01 of the Standard Specifications to read:

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

Concrete admixtures shall be on one of the Department's qualified product lists. Unless otherwise noted, admixtures shall have successfully completed and remain current with the AASHTO Product Eval and Audit Concrete Admixture (CADD) testing program. For admixture submittals to the Department; the product brand name, manufacturer name, admixture type or types, an electronic link to the product's technical data sheet, and the NTPEP testing number which contains an electronic link to all test data shall be provided. In addition, a letter shall be submitted certifying that no changes have been made in the formulation of the material since the most current round of tests conducted by AASHTO Product Eval and Audit. After 28 days of testing by AASHTO Product Eval and Audit, air-entraining admixtures may be provisionally approved and used on Departmental projects. For all other admixtures, unless otherwise noted, the time period after which provisionally approved status may be earned is 6 months.

The manufacturer shall include the following in the submittal to the AASHTO Product Eval and Audit CADD testing program: the manufacturing range for specific gravity, the midpoint and manufacturing range for residue by oven drying, and manufacturing range of pH. The submittal shall also include an infrared spectrophotometer trace no more than five years old.

For air-entraining admixtures according to Article 1021.02, the specific gravity allowable manufacturing range established by the manufacturer shall be according to AASHTO M 194. For residue by oven drying and pH, the allowable manufacturing range and test methods shall be according to AASHTO M 194.



For admixtures according to Articles 1021.03, 1021.04, 1021.05, 1021.06, 1021.07, and 1021.08, the pH allowable manufacturing range established by the manufacturer shall be according to ASTM E 70. For specific gravity and residue by oven drying, the allowable manufacturing range and test methods shall be according to AASHTO M 194.

All admixtures, except chloride-based accelerators, shall contain a maximum of 0.3 percent chloride by weight (mass) as determined by an appropriate test method. To verify the test result, the Department will use Illinois Modified AASHTO T 260, Procedure A, Method 1.

Prior to final approval of an admixture, the Engineer reserves the right to request a sample for testing. The test and reference concrete mixtures tested by the Engineer will contain a cement content of 5.65 cwt/cu yd (335 kg/cu m). For freeze-thaw testing, the Department will perform the test according to Illinois Modified AASHTO T 161. The flexural strength test will be performed according to AASHTO T 177. If the Engineer decides to test the admixture, the manufacturer shall submit AASHTO T 197 water content and set time test results on the standard cement used by the Department. The manufacturer may select their lab or an independent lab to perform this testing. The laboratory is not required to be accredited by AASHTO.

Random field samples may be taken by the Department to verify an admixture meets specification. A split sample will be provided to the manufacturer if requested. Admixtures that do not meet specification requirements or an allowable manufacturing range established by the manufacturer shall be replaced with new material.”

Revise Article 1021.03 of the Standard Specifications to read:

**“1021.03 Retarding and Water-Reducing Admixtures.** The admixture shall be according to the following.

- (a) Retarding admixtures shall be according to AASHTO M 194, Type B (retarding) or Type D (water-reducing and retarding).
- (b) Water-reducing admixtures shall be according to AASHTO M 194, Type A.
- (c) High range water-reducing admixtures shall be according to AASHTO M 194, Type F (high range water-reducing) or Type G (high range water-reducing and retarding).”

Revise Article 1021.05 of the Standard Specifications to read:

**“1021.05 Self-Consolidating Admixtures.** Self-consolidating admixture systems shall consist of either a high range water-reducing admixture only or a high range water-reducing admixture combined with a separate viscosity modifying admixture. The one or two component admixture system shall be capable of producing a concrete that can flow around reinforcement and consolidate under its own weight without additional effort and without segregation.

High range water-reducing admixtures shall be according to AASHTO M 194, Type F.

Viscosity modifying admixtures shall be according to AASHTO M 194, Type S (specific performance).”

Revise Article 1021.06 of the Standard Specifications to read:

**“1021.06 Rheology-Controlling Admixture.** Rheology-controlling admixtures shall be capable of producing a concrete mixture with a lower yield stress that will consolidate easier for slipform applications used by the Contractor. Rheology-controlling admixtures shall be according to AASHTO M 194, Type S (specific performance).”

Revise Article 1021.07 of the Standard Specifications to read:

**“1021.07 Corrosion Inhibitor.** The corrosion inhibitor shall be according to one of the following.

- (a) Calcium Nitrite. Corrosion inhibitors shall contain a minimum 30 percent calcium nitrite by weight (mass) of solution and shall comply with either the requirements of AASHTO M 194, Type C (accelerating) or the requirements of ASTM C 1582. The corrosion inhibiting performance requirements of ASTM C 1582 shall not apply.
- (b) Other Materials. The corrosion inhibitor shall be according to ASTM C 1582.

For submittals requiring testing according to ASTM M 194, Type C (accelerating), the admixture shall meet the requirements of the AASHTO Product Eval and Audit CADD testing program according to Article 1021.01.

For submittals requiring testing according to ASTM C 1582, a report prepared by an independent laboratory accredited by AASHTO re:source for portland cement concrete shall be provided. The report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications. However, ASTM G 109 test information specified in ASTM C 1582 is not required to be from an independent accredited lab. All other information in ASTM C 1582 shall be from an independent accredited lab. Test data and other information required to be submitted to AASHTO Product Eval and Audit according to Article 1021.01, shall instead be submitted directly to the Department.”

Add Article 1021.08 of the Standard Specifications as follows:

**“1021.08 Other Specific Performance Admixtures.** Other specific performance admixtures shall, at a minimum, be according to AASHTO M 194, Type S (specific performance). The Department also reserves the right to require other testing, as determined by the Engineer, to show evidence of specific performance characteristics.

Initial testing according to AASHTO M 194 may be conducted under the AASHTO Product Eval and Audit CADD testing program according to Article 1021.01, or by an independent laboratory accredited by AASHTO re:source for Portland Cement Concrete. In either case, test data and other information required to be submitted to AASHTO Product Eval and Audit according to Article 1021.01, shall also be submitted directly to the Department. The independent accredited lab report shall show the results of physical tests conducted no more than five years prior to the time of submittal, according to applicable specifications.”

Add Article 1021.09 of the Standard Specifications as follows:

**“1021.09 Latex Admixtures.** The latex admixture shall be a uniform, homogeneous, non-toxic, film-forming, polymeric emulsion in water to which all stabilizers have been added at the point of manufacture. The latex admixture shall not contain any chlorides and shall contain 46-49 percent solids.

In lieu of meeting the requirements of Article 1021.01, the Contractor shall submit a manufacturer's certification that the latex emulsion meets the requirements of FHWA Research Report RD-78-35, Chapter VI. The certificate shall include the date of manufacture of the latex admixture, batch or lot number, quantity represented, manufacturer's name, and the location of the manufacturing plant. The latex emulsion shall be sampled and tested in accordance with RD-78-35, Chapter VII, Certification Program.

The latex admixture shall be packaged and stored in containers and storage facilities which will protect the material from freezing and from temperatures above 85°F (30°C). Additionally, the material shall not be stored in direct sunlight and shall be shaded when stored outside of buildings during moderate temperatures.”

Revise Article 1024.01 of the Standard Specifications to read:

**“1024.01 Requirements for Grout.** The grout shall be proportioned by dry volume, thoroughly mixed, and shall have a minimum temperature of 50 °F (10 °C). Water shall not exceed the minimum needed for placement and finishing.

Materials for the grout shall be according to the following.

Item	Article/Section
(a) Cement .....	1001
(b) Water .....	1002
(c) Fine Aggregate .....	1003.02
(d) Fly Ash .....	1010
(e) Ground Granulated Blast Furnace (GGBF) Slag.....	1010
(f) Concrete Admixtures .....	1021”

Revise Note 1 of Article 1024.02 of the Standard Specifications to read:

“Note 1. Nonshrink grout shall be according to ASTM C 1107.

For prestressed concrete applications, the nonshrink grout shall have a water soluble chloride ion content of less than 0.06 percent by weight of cementitious material when tested according to ASTM C 1218 or AASHTO T 260; and for non-prestressed concrete applications, the water soluble chloride ion content shall be less than 0.15 percent by weight of cementitious material. The testing according to ASTM 1107, and either ASTM C 1218 or AASHTO T 260 shall be performed by an independent lab a minimum of once every five years, and the test results shall be provided to the Department. The Department will maintain a qualified product list. Mixing of the nonshrink grout shall be according to the manufacturer's specifications.”

Revise Article 1029.02 of the Standard Specifications to read:

“ **1029.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Cement.....	1001
(b) Fly Ash .....	1010
(c) Ground Granulated Blast Furnace (GGBF) Slag .....	1010
(d) Water.....	1002
(e) Fine Aggregate .....	1003
(f) Concrete Admixtures .....	1021
(g) Foaming Agent (Note 1)	

Note 1. The manufacturer shall submit infrared spectrophotometer trace and test results indicating the foaming agent meets the requirements of ASTM C 869 in order to be on the Department's qualified product list. Submitted data/results shall not be more than five years old.”

Revise the second paragraph of Article 1103.03(a)(4) the Standard Specifications to read:

“The dispenser system shall provide a visual indication that the liquid admixture is actually entering the batch, such as via a transparent or translucent section of tubing or by independent check with an integrated secondary metering device. If approved by the Engineer, an alternate indicator may be used for admixtures dosed at rates of 25 oz/cwt (1630 mL/100 kg) or greater, such as accelerating admixtures, corrosion inhibitors, and viscosity modifying admixtures.”

Revise Article 1103.04 of the Standard Specifications to read:

“ **1103.04 Mobile Portland Cement Concrete Plants.** The mobile concrete plant shall be according to AASHTO M 241 and the Bureau of Materials Policy Memorandum “Approval of Volumetric Mobile Mixers for Concrete”. The mixer shall be capable of carrying sufficient unmixed materials to produce not less than 6 cu yd (4.6 cu m) of concrete.”

Revise the first two sections of Check Sheet #11 “Subsealing of Concrete Pavements” of the Recurring Special Provisions to read:

“Description. This work shall consist of filling voids beneath rigid and composite pavements with cement grout.

Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications:

Item	Article/Section
(a) Cement .....	1001
(b) Water .....	1002
(c) Fly Ash .....	1010
(d) Ground Granulated Blast Furnace (GGBF) Slag.....	1010
(e) Admixtures .....	1021
(f) Packaged Rapid Hardening Mortar or Concrete .....	1018”

Revise the Materials section of Check Sheet #28 "Portland Cement Concrete Inlay or Overlay" of the Recurring Special Provisions to read:

**"Materials.** Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(a) Portland Cement Concrete (Note 1) .....	1020
(b) Fibers for Concrete.....	1014
(c) Protective Coat.....	1023.01

Note 1. Class PV concrete shall be used, except the cement factor for central mixed concrete shall be 6.05 cwt/cu yd (360 kg/cu m). A cement factor reduction according to Article 1020.05(b)(8) of the Standard Specifications will be permitted. CA 5 shall not be used and CA 7 may only be used for overlays that are a minimum of 4.5 in. (113 mm) thick. The Class PV concrete shall have a minimum flexural strength of 550 psi (3800 kPa) or a minimum compressive strength of 3000 psi (20,700 kPa) at 14 days."

## 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."

## **FUEL COST ADJUSTMENT (BDE)**

Effective: April 1, 2009

Revised: August 1, 2017

Description. Fuel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in fuel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate "Yes" for any category of work will make that category of work exempt from fuel cost adjustment.



General. The fuel cost adjustment shall apply to contract pay items as grouped by category. The adjustment shall only apply to those categories of work checked "Yes", and only when the cumulative plan quantities for a category exceed the required threshold. Adjustments to work items in a category, either up or down, and extra work paid for by agreed unit price will be subject to fuel cost adjustment only when the category representing the added work was subject to the fuel cost adjustment. Extra work paid for at a lump sum price or by force account will not be subject to fuel cost adjustment. Category descriptions and thresholds for application and the fuel usage factors which are applicable to each are as follows:

(a) Categories of Work.

- (1) Category A: Earthwork. Contract pay items performed under Sections 202, 204, and 206 including any modified standard or nonstandard items where the character of the work to be performed is considered earthwork. The cumulative total of all applicable item plan quantities shall exceed 25,000 cu yd (20,000 cu m). Included in the fuel usage factor is a weighted average 0.10 gal/cu yd (0.50 liters/cu m) factor for trucking.
- (2) Category B: Subbases and Aggregate Base Courses. Contract pay items constructed under Sections 311, 312 and 351 including any modified standard or nonstandard items where the character of the work to be performed is considered construction of a subbase or aggregate, stabilized or modified base course. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is a 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (3) Category C: Hot-Mix Asphalt (HMA) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 355, 406, 407 and 482 including any modified standard or nonstandard items where the character of the work to be performed is considered HMA bases, pavements and shoulders. The cumulative total of all applicable item plan quantities shall exceed 5000 tons (4500 metric tons). Included in the fuel usage factor is 0.60 gal/ton (2.50 liters/metric ton) factor for trucking.
- (4) Category D: Portland Cement Concrete (PCC) Bases, Pavements and Shoulders. Contract pay items constructed under Sections 353, 420, 421 and 483 including any modified standard or nonstandard items where the character of the work to be performed is considered PCC base, pavement or shoulder. The cumulative total of all applicable item plan quantities shall exceed 7500 sq yd (6000 sq m). Included in the fuel usage factor is 1.20 gal/cu yd (5.94 liters/cu m) factor for trucking.
- (5) Category E: Structures. Structure items having a cumulative bid price that exceeds \$250,000 for pay items constructed under Sections 502, 503, 504, 505, 512, 516 and 540 including any modified standard or nonstandard items where the character of the work to be performed is considered structure work when similar to that performed under these sections and not included in categories A through D.

(b) Fuel Usage Factors.

English Units Category	Factor	Units
A - Earthwork	0.34	gal / cu yd
B – Subbase and Aggregate Base courses	0.62	gal / ton

C – HMA Bases, Pavements and Shoulders	1.05	gal / ton
D – PCC Bases, Pavements and Shoulders	2.53	gal / cu yd
E – Structures	8.00	gal / \$1000

Metric Units

Category	Factor	Units
A - Earthwork	1.68	liters / cu m
B – Subbase and Aggregate Base courses	2.58	liters / metric ton
C – HMA Bases, Pavements and Shoulders	4.37	liters / metric ton
D – PCC Bases, Pavements and Shoulders	12.52	liters / cu m
E – Structures	30.28	liters / \$1000

(c) Quantity Conversion Factors.

Category	Conversion	Factor
B	sq yd to ton	0.057 ton / sq yd / in depth
	sq m to metric ton	0.00243 metric ton / sq m / mm depth
C	sq yd to ton	0.056 ton / sq yd / in depth
	sq m to metric ton	0.00239 m ton / sq m / mm depth
D	sq yd to cu yd	0.028 cu yd / sq yd / in depth
	sq m to cu m	0.001 cu m / sq m / mm depth

Method of Adjustment. Fuel cost adjustments will be computed as follows.

$$CA = (FPI_P - FPI_L) \times FUF \times Q$$

Where: CA = Cost Adjustment, \$

FPI<sub>P</sub> = Fuel Price Index, as published by the Department for the month the work is performed, \$/gal (\$/liter)

FPI<sub>L</sub> = Fuel Price Index, as published by the Department for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price, \$/gal (\$/liter)

FUF = Fuel Usage Factor in the pay item(s) being adjusted

Q = Authorized construction Quantity, tons (metric tons) or cu yd (cu m)

The entire FUF indicated in paragraph (b) will be used regardless of use of trucking to perform the work.

Basis of Payment. Fuel cost adjustments may be positive or negative but will only be made when there is a difference between the FPI<sub>L</sub> and FPI<sub>P</sub> in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(FPI_L - FPI_P) \div FPI_L\} \times 100$$

Fuel cost adjustments will be calculated for each calendar month in which applicable work is performed; and will be paid or deducted when all other contract requirements for the items of work are satisfied. The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

## **GUARDRAIL (BDE)**

Effective: November 1, 2025

Revise Article 701.17(f) of the Standard Specifications to read:

“(f) Guardrail. Where guardrail is temporarily removed or where the guardrail installation is incomplete, Type II barricades or drums shall be placed at 50 ft (15 m) centers during completion of the work.

Guardrail installation shall be completed within three calendar days of removal or shielded with a temporary longitudinal traffic barrier approved by the Engineer.

On staged construction projects all guardrail and end terminal installations shall be complete prior to switching traffic.”

## **HOT-MIX ASPHALT (BDE)**

Effective: January 1, 2024

Revised: January 1, 2026

Add the following to the end of Article 406.06(c) of the Standard Specifications:

“The amount of HMA binder course placed shall be limited to that which can be surfaced during the same construction season.”

Revise the fifteenth through eighteenth paragraphs of Article 406.14 of the Standard Specifications to read:

“The mixture used in constructing acceptable HMA test strips will be paid for at the contract unit price. Unacceptable HMA test strips shall be removed and replaced at no additional cost to the Department.”

Revise the first and second paragraphs of Articles 1030.06(c)(2) of the Standard Specifications to read:

“(2) Personnel. The Contractor shall provide a QC Manager who shall have overall responsibility and authority for quality control. This individual shall maintain active certification as a Hot-Mix Asphalt Level II technician.

In addition to the QC Manager, the Contractor shall provide sufficient personnel to perform the required visual inspections, sampling, testing, and documentation in a timely manner. Mix designs shall be developed by personnel with an active certification as a Hot-Mix Asphalt Level III technician. Technicians performing mix design testing and plant sampling/testing shall maintain active certification as a Hot-Mix Asphalt Level I technician. The Contractor may provide a technician trainee who has successfully completed the Department's "Hot-Mix Asphalt Trainee Course" to assist in the activities completed by a Hot-Mix Asphalt Level I technician for a period of one year after the course completion date. The Contractor may also provide a Gradation Technician who has successfully completed the Department's "Gradation Technician Course" to run gradation tests only under the supervision of a Hot-Mix Asphalt Level II Technician. The Contractor shall provide a Hot-Mix Asphalt Density

Tester who has successfully completed the Department's "Nuclear Density Testing" course to run all nuclear density tests on the job site."

Add Article 1030.06(d)(3) to the Standard Specifications as follows:

"(3) The Contractor shall take possession of any Department HMA mixture samples or density specimens upon notification by the Engineer. The Contractor shall collect the HMA mixture samples or density specimens from the location designated by the Engineer and may add these materials to RAP stockpiles according to Section 1031."

Revise the second paragraph of Articles 1030.07(a)(11) and 1030.08(a)(9) of the Standard Specifications to read:

"When establishing the target density, the HMA maximum theoretical specific gravity ( $G_{mm}$ ) will be based on the running average of four available Department test results for that project. If less than four  $G_{mm}$  test results are available, an average of all available Department test results for that project will be used. The initial  $G_{mm}$  will be the last available Department test result from a QMP project. If there is no available Department test result from a QMP project, the Department mix design verification test result will be used as the initial  $G_{mm}$ ."

Revise the Quality Control Limits table in Article 1030.09(c) to read:

"CONTROL LIMITS"						
Parameter	IL-19.0, IL-9.5, IL-9.5FG, IL-19.0L, IL-9.5L		SMA-12.5, SMA-9.5		IL-4.75	
	Individual Test	Moving Avg. of 4	Individual Test	Moving Avg. of 4	Individual Test	Moving Avg. of 4
% Passing: <sup>1/</sup>						
1/2 in. (12.5 mm)	± 6 %	± 4 %	± 6 %	± 4 %		
3/8 in. (9.5mm)			± 4 %	± 3 %		
# 4 (4.75 mm)	± 5 %	± 4 %	± 5 %	± 4 %		
# 8 (2.36 mm)	± 5 %	± 3 %	± 4 %	± 2 %		
# 16 (1.18 mm)			± 4 %	± 2 %	± 4 %	± 3 %
# 30 (600 µm)	± 4 %	± 2.5 %	± 4 %	± 2.5 %		
Total Dust Content # 200 (75 µm)	± 1.5 %	± 1.0 %			± 1.5 %	± 1.0 %
Asphalt Binder Content	± 0.3 %	± 0.2 %	± 0.2 %	± 0.1 %	± 0.3 %	± 0.2 %
Air Voids <sup>2/</sup>	± 1.2 %	± 1.0 %	± 1.2 %	± 1.0 %	± 1.2 %	± 1.0 %
Field VMA <sup>3/</sup>	-0.7 %	-0.5 %	-0.7 %	-0.5 %	-0.7 %	-0.5 %

1/ Based on washed ignition oven or solvent extraction gradation.

2/ The air voids target value shall be 3.2 to 4.8 percent.

3/ Allowable limit below minimum design VMA requirement."

Revise Article 1030.09(g)(2) of the Standard Specifications to read:

“(2) The Contractor shall complete split verification sample tests listed in the Limits of Precision table in Article 1030.09(h)(1).”

In the Supplemental Specifications, replace the revision for the end of the third paragraph of Article 1030.09(h)(2) with the following:

“When establishing the target density, the HMA maximum theoretical specific gravity ( $G_{mm}$ ) will be the Department mix design verification test result.”

Replace the last sentence of the fourth paragraph of Article 1030.10 of the Standard Specifications with the following:

“The mixture test results shall meet the requirements of Article 1030.05(d), except tensile strength and TSR testing will only be conducted on the first use of a mix design for the year and Hamburg wheel tests will only be conducted on High ESAL mixtures. To be considered acceptable to remain in place, the Department’s mixture test results shall meet the acceptable limits stated in Article 1030.09(i)(1). In addition, no visible pavement distress such as, but not limited to, segregation, excessive coarse aggregate fracturing outside of growth curves, excessive dust balls, or flushing shall be present as determined by the Engineer.”

Revise the tenth paragraph of Article 1030.10 of the Standard Specifications to read:

“Production is not required to stop after a test strip has been constructed.”

Replace the eleventh paragraph of Article 1030.10 of the Standard Specifications with the following:

“If an initial Hamburg wheel or I-FIT test fails to meet the requirements of Article 1030.05(d), the Department will verify the results by testing the retained gyratory cylinders. Upon notification by the Engineer of a Hamburg wheel or I-FIT test failure on the retained gyratory cylinders, the Contractor shall substitute an approved mix design, submit a new mix design for mix verification testing according to Article 1030.05(d), or pave 250 tons with or without an adjustment and resample for Department Hamburg wheel and I-FIT testing as directed by the Engineer. Paving may continue as long as all other mixture criteria is being met. If Hamburg wheel or I-FIT tests on the resampled HMA fail, production of the affected mixture shall cease and the Contractor shall substitute an approved mix design or submit a new mix design for mix verification testing according to Article 1030.05(d).”

## **PAVEMENT MARKING (BDE)**

Effective: April 1, 2025

Revised: November 1, 2025

Revise the fourth sentence of the fourth paragraph of Article 780.05 of the Standard Specifications to read:

“Grooves for letters and symbols shall be cut in a rectangular shape or in the shape of the proposed marking so the entire marking will fit within the limits of the grooved area.”

Revise the last sentence of the third paragraph of Article 780.08 of the Standard Specifications to read:

“The Contractor shall install the preformed plastic pavement markings according to the manufacturer’s recommendations.”

Revise the second sentence of the first paragraph of Article 780.13 of the Standard Specifications to read:

“In addition, thermoplastic, preformed plastic, epoxy, preformed thermoplastic, polyurea, and modified urethane pavement markings will be inspected following a winter performance period that extends from November 15 to April 1 of the next year.”

## **PAVEMENT PATCHING (BDE)**

Effective: August 1, 2025

Revise the first sentence of the last paragraph of Article 442.06(a)(2) of the Standard Specifications to read:

“Type IV patches shall be reinforced with welded wire reinforcement according to the details shown on the plans.”

Revise Article 442.06(a)(3) of the Standard Specifications to read:

“(3) Class C Patching. Patches adjacent to a new lane of pavement, new portland cement concrete shoulder, or new curb and gutter of more than 20 ft (6 m) in length shall be tied with No. 6 (No. 19) tie bars, 24 in. (600 mm) long, embedded 8 in. (200 mm) at 36 in. (900 mm) centers according to Article 420.05(b).

When the patched pavement is not to be resurfaced, transverse contraction joints shall be formed on 15 ft (4.5 m) to 20 ft (6 m) centers by sawing in all patches that are more than 20 ft (6 m) in length. They shall be placed in line with joints or cracks in the existing slab whenever possible.”

Revise the eighth paragraph of Article 442.11 of the Standard Specifications to read:

“Pavement tie bars for patches will be paid for at the contract unit price per each for TIE BARS, of the diameter specified.”

## PERFORMANCE GRADED ASPHALT BINDER (BDE)

Effective: January 1, 2023

Revise Article 1032.05 of the Standard Specifications to read:

**“1032.05 Performance Graded Asphalt Binder.** These materials will be accepted according to the Bureau of Materials Policy Memorandum, “Performance Graded Asphalt Binder Qualification Procedure.” The Department will maintain a qualified producer list. These materials shall be free from water and shall not foam when heated to any temperature below the actual flash point. Air blown asphalt, recycle engine oil bottoms (ReOB), and polyphosphoric acid (PPA) modification shall not be used.

When requested, producers shall provide the Engineer with viscosity/temperature relationships for the performance graded asphalt binders delivered and incorporated in the work.

- (a) Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 “Standard Specification for Performance Graded Asphalt Binder” for the grade shown on the plans and the following.

Test	Parameter
Small Strain Parameter (AASHTO PP 113) BBR, $\Delta T_c$ , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5 °C min.

- (b) Modified Performance Graded (PG) Asphalt Binder. The asphalt binder shall meet the requirements of AASHTO M 320, Table 1 “Standard Specification for Performance Graded Asphalt Binder” for the grade shown on the plans.

Asphalt binder modification shall be performed at the source, as defined in the Bureau of Materials Policy Memorandum, “Performance Graded Asphalt Binder Qualification Procedure.”

Modified asphalt binder shall be safe to handle at asphalt binder production and storage temperatures or HMA construction temperatures. Safety Data Sheets (SDS) shall be provided for all asphalt modifiers.

- (1) Polymer Modification (SB/SBS or SBR). Elastomers shall be added to the base asphalt binder to achieve the specified performance grade and shall be either a styrene-butadiene diblock, triblock copolymer without oil extension, or a styrene-butadiene rubber. The polymer modified asphalt binder shall be smooth, homogeneous, and be according to the requirements shown in Table 1 or 2 for the grade shown on the plans.

Table 1 - Requirements for Styrene-Butadiene Copolymer (SB/SBS) Modified Asphalt Binders		
Test	Asphalt Grade SB/SBS PG 64-28 SB/SBS PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SB/SBS PG 76-22 SB/SBS PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

Table 2 - Requirements for Styrene-Butadiene Rubber (SBR) Modified Asphalt Binders		
Test	Asphalt Grade SBR PG 64-28 SBR PG 70-22	Asphalt Grade SB/SBS PG 64-34 SB/SBS PG 70-28 SBR PG 76-22 SBR PG 76-28
Separation of Polymer ITP, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions	4 (2) max.	4 (2) max.
Toughness ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	110 (12.5) min.	110 (12.5) min.
Tenacity ASTM D 5801, 77 °F (25 °C), 20 in./min. (500 mm/min.), in.-lbs (N-m)	75 (8.5) min.	75 (8.5) min.
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	40 min.	50 min.

- (2) Ground Tire Rubber (GTR) Modification. GTR modification is the addition of recycled ground tire rubber to liquid asphalt binder to achieve the specified performance grade. GTR shall be produced from processing automobile and/or truck tires by the ambient grinding method or micronizing through a cryogenic process. GTR shall not exceed 1/16 in. (2 mm) in any dimension and shall not contain free metal particles, moisture that would cause foaming of the asphalt, or other foreign 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 “Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates” or AASHTO PP 74 “Standard Practice for Determination of Size and Shape of Glass Beads Used in Traffic Markings by Means of Computerized Optical Method”, 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

GTR modified asphalt binder shall be tested for rotational viscosity according to AASHTO T 316 using spindle S27. GTR modified asphalt binder shall be tested for original dynamic shear and RTFO dynamic shear according to AASHTO T 315 using a gap of 2 mm.

The GTR modified asphalt binder shall meet the requirements of Table 3.

Table 3 - Requirements for Ground Tire Rubber (GTR) Modified Asphalt Binders		
Test	Asphalt Grade GTR PG 64-28 GTR PG 70-22	Asphalt Grade GTR PG 76-22 GTR PG 76-28 GTR PG 70-28
TESTS ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

- (3) Softener Modification (SM). Softener modification is the addition of organic compounds, such as engineered flux, bio-oil blends, modified vegetable oils, glycol amines, and fatty acid derivatives, to the base asphalt binder to achieve the specified performance grade. Softeners shall be dissolved, dispersed, or reacted in the asphalt binder to enhance its performance and shall remain compatible with the asphalt binder with no separation. Softeners shall not be added to modified PG asphalt binder as defined in Articles 1032.05(b)(1) or 1032.05(b)(2).

An Attenuated Total Reflectance-Fourier Transform Infrared spectrum (ATR-FTIR) shall be collected for both the softening compound as well as the softener modified asphalt binder at the dose intended for qualification. The ATR-FTIR spectra shall be collected on unaged softener modified binder, 20-hour Pressurized Aging Vessel (PAV) aged softener modified binder, and 40-hour PAV aged softener modified binder. The ATR-FTIR shall be collected in accordance with Illinois Test Procedure 601. The electronic files spectral files (in one of the following extensions or equivalent: \*.SPA, \*.SPG, \*.IRD, \*.IFG, \*.CSV, \*.SP, \*.IRS, \*.GAML, \*. [0-9], \*.IGM, \*.ABS, \*.DRT, \*.SBM, \*.RAS) shall be submitted to the Central Bureau of Materials.

Softener modified asphalt binders shall meet the requirements in Table 4.

Table 4 - Requirements for Softener Modified Asphalt Binders		
Test	Asphalt Grade	
	SM PG 46-28	SM PG 46-34
	SM PG 52-28	SM PG 52-34
	SM PG 58-22	SM PG 58-28
	SM PG 64-22	
Small Strain Parameter (AASHTO PP 113) BBR, $\Delta T_c$ , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	-5°C min.	
Large Strain Parameter (Illinois Modified AASHTO T 391) DSR/LAS Fatigue Property, $\Delta G^* _{peak}$ , 40 hrs PAV (40 hrs continuous or 2 PAV at 20 hrs)	≥ 54 %	

The following grades may be specified as tack coats.

Asphalt Grade	Use
PG 58-22, PG 58-28, PG 64-22	Tack Coat"

Revise Article 1031.06(c)(1) and 1031.06(c)(2) of the Standard Specifications to read:

“(1) RAP/RAS. When RAP is used alone or RAP is used in conjunction with RAS, the percentage of virgin ABR shall not exceed the amounts listed in the following table.

HMA Mixtures - RAP/RAS Maximum ABR % <sup>1/ 2/</sup>			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface <sup>3/</sup>
30	30	30	10
50	25	15	10
70	15	10	10
90	10	10	10

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the RAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When RAP/RAS ABR exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
- 3/ The maximum ABR percentages for ground tire rubber (GTR) modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.

- (2) FRAP/RAS. When FRAP is used alone or FRAP is used in conjunction with RAS, the percentage of virgin asphalt binder replacement shall not exceed the amounts listed in the following table.

HMA Mixtures - FRAP/RAS Maximum ABR % <sup>1/ 2/</sup>			
Ndesign	Binder	Surface	Polymer Modified Binder or Surface <sup>3/</sup>
30	55	45	15
50	45	40	15
70	45	35	15
90	45	35	15
SMA	- -	- -	25
IL-4.75	- -	- -	35

- 1/ For Low ESAL HMA shoulder and stabilized subbase, the FRAP/RAS ABR shall not exceed 50 percent of the mixture.
- 2/ When FRAP/RAS ABR exceeds 20 percent for all mixes, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent ABR would require a virgin asphalt binder grade of PG 64-22 to be reduced to a PG 58-28).
- 3/ The maximum ABR percentages for GTR modified mixes shall be equivalent to the percentages specified for SBS/SBR polymer modified mixes.”

Add the following to the end of Note 2 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 shall be capable of providing continuous mechanical mixing throughout and/or recirculation of the asphalt binder to provide a uniform mixture. The tank shall be heated and capable of maintaining the temperature of the asphalt binder at 300 °F to 350 °F (149 °C to 177 °C). The asphalt binder metering systems of dryer drum plants shall be calibrated with the actual GTR modified asphalt binder material with an accuracy of  $\pm 0.40$  percent.”

### **RAISED REFLECTIVE PAVEMENT MARKERS (BDE)**

Effective: November 1, 2025

Revise the eighth sentence of the second paragraph of Article 781.03(a) of the Standard Specifications to read:

“A rapid setting epoxy selected from the Department’s qualified product list for raised reflective pavement markers shall be poured into the cut to within 3/8 in. (9 mm) of the pavement surface.”

Revise the first sentence of Article 1096.01 of the Standard Specifications to read:

**“1096.01 Raised Reflective Pavement Markers.** Raised reflective pavement markers shall meet the following requirements and be on the Department’s qualified product list.”

## **REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES (BDE)**

Effective: January 1, 2024

Revised: April 1, 2024

Revise the first paragraph of Article 669.04 of the Standard Specifications to read:

**“669.04 Regulated Substances Monitoring.** Regulated substances monitoring includes environmental observation and field screening during regulated substances management activities. The excavated soil and groundwater within the work areas shall be managed as either uncontaminated soil, hazardous waste, special waste, or non-special waste.

As part of the regulated substances monitoring, the monitoring personnel shall perform and document the applicable duties listed on form BDE 2732 “Regulated Substances Monitoring Daily Record (RSMDR)”.

Revise the first two sentences of the nineteenth paragraph of Article 669.05 of the Standard Specifications to read:

“The Contractor shall coordinate waste disposal approvals with the disposal facility and provide the specific analytical testing requirements of that facility. The Contractor shall make all arrangements for collection, transportation, and analysis of landfill acceptance testing.”

Revise the last paragraph of Article 669.05 of the Standard Specifications to read:

“The Contractor shall select a permitted landfill facility or CCDD/USFO facility meeting the requirements of 35 Ill. Admin. Code Parts 810-814 or Part 1100, respectively. The Department will review and approve or reject the facility proposed by the Contractor based upon information provided in BDE 2730. The Contractor shall verify whether the selected facility is compliant with those applicable standards as mandated by their permit and whether the 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 use of a Contractor selected facility shall in no manner delay the construction schedule or alter the Contractor's responsibilities as set forth.”

Revise the first paragraph of Article 669.07 of the Standard Specifications to read:

**“669.07 Temporary Staging.** Soil classified according to Articles 669.05(a)(2), (b)(1), or (c) may be temporarily staged at the Contractor’s option. All other soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) shall be managed and disposed of without temporary staging to the greatest extent practicable. If circumstances beyond the Contractor’s control require temporary staging of these latter materials, the Contractor shall request approval from the Engineer in writing.

Topsoil for re-use as final cover which has been field screened and found not to exhibit PID readings over daily background readings as documented on the BDE 2732, visual staining or odors, and is classified according to Articles 669.05(a)(2), (a)(3), (a)(4), (b)(1), or (c) may be temporarily staged at the Contractor's option."

Add the following paragraph after the sixth paragraph of Article 669.11 of the Standard Specifications.

"The sampling and testing of effluent water derived from dewatering discharges for priority pollutants volatile organic compounds (VOCs), priority pollutants semi-volatile organic compounds (SVOCs), or priority pollutants metals, will be paid for at the contract unit price per each for VOCS GROUNDWATER ANALYSIS using EPA Method 8260B, SVOCs GROUNDWATER ANALYSIS using EPA Method 8270C, or RCRA METALS GROUNDWATER ANALYSIS using EPA Methods 6010B and 7471A. This price shall include transporting the sample from the job site to the laboratory."

Revise the first sentence of the eight paragraph of Article 669.11 of the Standard Specifications to read:

"Payment for temporary staging of soil classified according to Articles 669.05(a)(1), (a)(3), (a)(4), (a)(5), (a)(6), or (b)(2) to be managed and disposed of, if required and approved by the Engineer, will be paid according to Article 109.04."

## **SHORT TERM AND TEMPORARY PAVEMENT MARKINGS (BDE)**

Effective: April 1, 2024

Revised: April 2, 2024

Revise Article 701.02(d) of the Standard Specifications to read:

"(d) Pavement Marking Tapes (Note 3) ..... 1095.06"

Add the following Note to the end of Article 701.02 of the Standard Specifications:

"Note 3. White or yellow pavement marking tape that is to remain in place longer than 14 days shall be Type IV tape."

Revise Article 703.02(c) of the Standard Specifications to read:

"(c) Pavement Marking Tapes (Note 1) ..... 1095.06"

Add the following Note to the end of Article 703.02 of the Standard Specifications:

"Note 1. White or yellow pavement marking tape that is to remain in place longer than 14 days shall be Type IV tape."

Revise Article 1095.06 of the Standard Specifications to read:

**"1095.06 Pavement Marking Tapes.** Type I white or yellow marking tape shall consist of glass spheres embedded into a binder on a foil 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.

Type IV tape shall consist of white or yellow tape with wet reflective media incorporated to provide immediate and continuing retroreflection in wet and dry conditions. The wet retroreflective media shall be bonded to a durable polyurethane surface. The patterned surface shall have approximately  $40 \pm 10$  percent 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 reflective elements or particles.

Blackout tape shall consist of a matte black, non-reflective, patterned surface that is precoated with a pressure sensitive adhesive.

- (a) Color. The white and yellow markings 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 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.

Color	Daylight Reflectance %Y
White	65 min.
Yellow *	36 - 59

\*Shall match Aerospace Material Specification Standard 595 33538 (Orange Yellow) and the chromaticity limits as follows.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456

- (b) Retroreflectivity. The white and yellow markings shall be retroreflective. Reflective values measured in accordance with the photometric testing procedure of ASTM D 4061 shall not be less than those listed in the table below. The coefficient of retroreflected luminance,  $R_L$ , shall be expressed as average millicandelas/footcandle/sq ft (millicandelas/lux/sq m), measured on a 3.0 x 0.5 ft (900 mm x 150 mm) panel at 86 degree entrance angle.

Coefficient of Retroreflected Luminance, $R_L$ , Dry					
Type I			Type IV		
Observation Angle	White	Yellow	Observation Angle	White	Yellow
0.2°	2700	2400	0.2°	1300	1200
0.5°	2250	2000	0.5°	1100	1000

Wet retroreflectance shall be measured for Type IV under wet conditions according to ASTM E 2177 and meet the following.

Wet Retroreflectance, Initial $R_L$	
Color	$R_L$ 1.05/88.76
White	300
Yellow	200

- (c) Skid Resistance. The surface of Type IV and blackout markings shall provide a minimum skid resistance of 45 BPN when tested according to ASTM E 303.
- (d) Application. The pavement marking tape shall have a precoated pressure sensitive adhesive and shall require no activation procedures. Test pieces of the tape shall be applied according to the manufacturer's instructions and tested according to ASTM D 1000, Method A, except that a stiff, short bristle roller brush and heavy hand pressure will be substituted for the weighted rubber roller in applying the test pieces to the metal test panel. Material tested as directed above shall show a minimum adhesion value of 750 g/in. (30 g/mm) width at the temperatures specified in ASTM D 1000. The adhesive shall be resistant to oils, acids, solvents, and water, and shall not leave objectionable stains or residue after removal. The material shall be flexible and conformable to the texture of the pavement.
- (e) Durability. Type IV and blackout tape shall be capable of performing for the duration of a normal construction season and shall then be capable of being removed intact or in large sections at pavement temperatures above 40 °F (4 °C) either manually or with a roll-up device without the use of sandblasting, solvents, or grinding. The Contractor shall provide a manufacturer's certification that the material meets the requirements for being removed after the following minimum traffic exposure based on transverse test decks with rolling traffic.
- (1) Time in place - 400 days
  - (2) ADT per lane - 9,000 (28 percent trucks)
  - (3) Axle hits - 10,000,000 minimum

Samples of the material applied to standard specimen plates will be measured for thickness and tested for durability in accordance with ASTM D 4060, using a CS-17 wheel and 1000-gram load, and shall meet the following criteria showing no significant change in color after being tested for the number of cycles indicated.

Test	Type I	Type IV	Blackout
Minimum Initial Thickness, mils (mm)	20 (0.51)	65 (1.65) <sup>1/</sup> 20 (0.51) <sup>2/</sup>	65 (1.65) <sup>1/</sup> 20 (0.51) <sup>2/</sup>
Durability (cycles)	5,000	1,500	1,500

1/ Measured at the thickest point of the patterned surface.

2/ Measured at the thinnest point of the patterned surface.

The pavement marking tape, when applied according to the manufacturer's recommended procedures, shall be weather resistant and shall show no appreciable fading, lifting, or shrinkage during the useful life of the marking. The tape, as applied, shall be of good appearance, free of cracks, and edges shall be true, straight, and unbroken.

- (f) Sampling and Inspection.
- (1) Sample. Prior to approval and use of Type IV 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 independent laboratory test report shall state the lot tested, the manufacturer's name, and the date of manufacture.

After initial approval by the Department, samples and certification by the manufacturer shall be submitted for each subsequent batch of Type IV tape 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, the manufacturer's name, and the date of manufacture.

- (2) Inspection. The Contractor shall provide a manufacturer's certification to the Engineer stating the material meets all requirements of this specification. All material samples for acceptance tests shall be taken or witnessed by a representative of the Bureau of Materials and shall be submitted to the Engineer of Materials, 126 East Ash Street, Springfield, Illinois 62704-4766 at least 30 days in advance of the pavement marking operations."

#### **SIGN PANELS AND APPURTENANCES (BDE)**

Effective: January 1, 2025

Revised: January 1, 2026

Add Article 720.02(c) of the Standard Specifications to read:

"(c) Aluminum Epoxy Mastic .....1008.03"

Revise the second and third paragraphs of Article 720.02 of the Standard Specifications to read:

"The sign mounting support channel shall be manufactured from steel or aluminum and shall be according to Standard 720001.

Steel support channels shall be according to ASTM A 1011 (A 1011M), ASTM A 635 (A 635M), ASTM A 568 (A 568M), or ASTM A 684 (A 684M), and shall be galvanized. Galvanizing shall be according to ASTM A 653 (A 653M) when galvanized before fabrication, and AASHTO M 111 (M 111M) when galvanized after fabrication. Field or post fabricated drilled holes shall be spot painted with one coat of aluminum epoxy mastic paint prior to installation."

Revise the fifth paragraph of Article 720.02 of the Standard Specifications to read:

"The stainless steel banding for mounting signs or sign support channels to light or signal standards shall be according to ASTM A 240 (A 240M) Type 302 stainless steel."

Revise the first sentence of the tenth paragraph of Article 720.03 of the Standard Specifications to read:

"The backs of all sign panels shall be marked in a manner designed to last as long as the sign face material, in letters and numerals at least 3/8 in. (9.5 mm) but no more than 3/4 in. (19 mm) in height with the month and year of manufacture, the name of the sign manufacturer, the name of the sign sheeting manufacturer, the method of manufacture ("screened", "EC film", "direct applied", or "digital print"), and the initials IDOT."



Revise the first sentence of the fourth paragraph of Article 1091.03(a)(10) of the Standard Specifications to read:

“Transparent colors screened, or transparent acrylic electronic cutting films, or digital printing on white sheeting, shall meet the minimum initial coefficient of retroreflection values of the 0.2 degree observation angle, -4.0 degree entrance angle values as listed in the previous tables for the color being applied.”

Add the following after the fourth paragraph of Article 1091.03(a)(10) of the Standard Specifications:

“Digitally printed signs shall be produced using digital print technologies and ink systems, products and processes that comply with the sheeting manufacturer’s recommendation. The digitally printed signs shall be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlamine shall comply with the sheeting manufacturer’s recommendations to ensure proper adhesion and transparency.”

Add the following after the third paragraph of Article 1106.01 of the Standard Specifications:

“Digitally printed signs may omit protective overlay film.”

## **SOURCE OF SUPPLY AND QUALITY REQUIREMENTS (BDE)**

Effective: January 2, 2023

Revised: January 1, 2026

Revise the third through ninth paragraphs of Article 106.01 of the Standard Specifications to read:

“Articles, materials, and supplies shall be classified into only one of the following categories.

- (a) Iron and Steel. All iron and steel products, which are to be incorporated into the work, shall be domestically manufactured or produced and fabricated, unless an exception is expressly permitted under Federal and/or State law and written permission is given by the Department. The Contractor shall obtain from the iron or steel producer and/or fabricator, in addition to the mill analysis, a certification that all iron or steel materials meet these domestic source requirements.

The applications of all coatings, epoxy, galvanizing, painting, etc. to iron and steel products shall be domestically applied.

- (b) Manufactured Products. Manufactured products shall include articles, materials or supplies that have been processed into a specific form or shape; or have been combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. Manufactured products incorporated into the work shall have the final assembly for the manufacturing process occur domestically.

A manufactured product may include components that are construction materials, iron or steel products, or exempt materials.

Precast concrete products and intelligent transportation systems (ITS) or other electronic hardware systems shall comply with the requirements of Article 106.01(a) in addition to the requirements of manufactured products.

(c) Construction Materials. All manufacturing processes for construction materials shall occur within the United States. Construction materials shall include an article, material, or supply consisting of only one of the following.

- (1) Non-ferrous metals;
- (2) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- (3) Glass (including optic glass);
- (4) Fiber optic cable (including drop cable);
- (5) Optical fiber;
- (6) Lumber;
- (7) Drywall;
- (8) Engineered wood.

Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material.

(d) Exempt Materials. Materials exempt from domestic production requirements are cement or cementitious materials, aggregates, aggregate binding agents or additives, or items not permanently incorporated into the work. Exempt materials may be combined with other materials into a final form to produce a manufactured product.”

## **STEEL COST ADJUSTMENT (BDE)**

Effective: April 2, 2004

Revised: November 1, 2025

Description. Steel cost adjustments will be made to provide additional compensation to the Contractor, or a credit to the Department, for fluctuations in steel prices when optioned by the Contractor. The bidder shall indicate with their bid whether or not this special provision will be part of the contract. Failure to indicate “Yes” for any item of work will make that item of steel exempt from steel cost adjustment.

Types of Steel Products. An adjustment will be made for fluctuations in the cost of steel used in the manufacture of the following items:

Metal Piling (excluding temporary sheet piling)  
Structural Steel  
Reinforcing Steel

Other steel materials such as dowel bars, tie bars, welded reinforcement, guardrail, steel traffic signal and light poles, towers and mast arms, metal railings (excluding wire fence), and frames and grates will be subject to a steel cost adjustment when the pay items they are used in have a contract value of \$10,000 or greater.

The adjustments shall apply to the above items when they are part of the original proposed construction, or added as extra work and paid for by agreed unit prices. The adjustments shall not apply when the item is added as extra work and paid for at a lump sum price or by force account.

Documentation. The following documentation shall be furnished to the Engineer.

- (a) The dates and quantity of steel, in lb (kg), shipped from the mill to the fabricator.
- (b) The quantity of steel, in lb (kg), incorporated into the various items of work covered by this special provision. The Department reserves the right to verify submitted quantities.

Method of Adjustment. Steel cost adjustments will be computed as follows:

$$SCA = Q \times D$$

Where: SCA = steel cost adjustment, in dollars  
Q = quantity of steel incorporated into the work, in lb (kg)  
D = price factor, in dollars per lb (kg)

$$D = MPI_M - MPI_L$$

Where:  $MPI_M$  = The Materials Cost Index for steel as published by the Engineering News-Record for the month the steel is shipped from the mill. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

$MPI_L$  = The Materials Cost Index for steel as published by the Engineering News-Record for the month prior to the letting for work paid for at the contract price; or for the month the agreed unit price letter is submitted by the Contractor for extra work paid for by agreed unit price. The indices will be converted from dollars per 100 lb to dollars per lb (kg).

The unit weights (masses) of steel that will be used to calculate the steel cost adjustment for the various items will be derived from submitted documentation.

No steel cost adjustment will be made for any products manufactured from steel having a mill shipping date prior to the letting date.

If the Contractor fails to provide the required documentation, the method of adjustment will be calculated as described above; however, the  $MPI_M$  will be based on the date the steel arrives at the job site. In this case, an adjustment will only be made when there is a decrease in steel costs.

Basis of Payment. Steel cost adjustments may be positive or negative but will only be made when there is a difference between the  $MPI_L$  and  $MPI_M$  in excess of five percent, as calculated by:

$$\text{Percent Difference} = \{(MPI_L - MPI_M) \div MPI_L\} \times 100$$

Steel cost adjustments will be calculated by the Engineer and will be paid or deducted when all other contract requirements for the items of work are satisfied. Adjustments will only be made for fluctuations in the cost of the steel as described herein. No adjustment will be made for changes in the cost of manufacturing, fabrication, shipping, storage, etc.

The adjustments shall not apply during contract time subject to liquidated damages for completion of the entire contract.

#### **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.”

### **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%”

### **SUBMISSION OF BIDDERS LIST INFORMATION (BDE)**

Effective: January 2, 2025

Revised: March 2, 2025

In accordance with 49 CFR 26.11(c) all DBE and non-DBEs who bid as prime contractors and subcontractors shall provide bidders list information, including all DBE and non-DBE firms from whom the bidder has received a quote or bid to work as a subcontractor, whether or not the bidder has relied upon that bid in placing its bid as the prime contractor.

The bidders list information shall be submitted with the bid using the link provided within the “Integrated Contractor Exchange (iCX)” application of the Department’s “EBids System”.

### **SUBMISSION OF PAYROLL RECORDS (BDE)**

Effective: April 1, 2021

Revised: November 2, 2023

FEDERAL AID CONTRACTS. Revise the following section of Check Sheet #1 of the Recurring Special Provisions to read:

#### **“STATEMENTS AND PAYROLLS**

The payroll records shall include the worker’s name, social security number, last known address, telephone number, email address, classification(s) of work actually performed, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe

benefits or cash equivalents thereof), daily and weekly number of hours actually worked in total, deductions made, and actual wages paid.

The Contractor and each subcontractor shall submit certified payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers, last known addresses, telephone numbers, and email addresses shall not be included on weekly submittals. Instead, the payrolls need only include an identification number for each employee (e.g., the last four digits of the employee's social security number). The submittals shall be made using LCPTracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected."

**STATE CONTRACTS.** Revise Item 3 of Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

- "3. Submission of Payroll Records. The Contractor and each subcontractor shall, no later than the 15<sup>th</sup> day of each calendar month, file a certified payroll for the immediately preceding month to the Illinois Department of Labor (IDOL) through the Illinois Prevailing Wage Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/Prevailing-Wage-Portal.aspx>. Payrolls shall be submitted in the format prescribed by the IDOL.

In addition to filing certified payroll(s) with the IDOL, the Contractor and each subcontractor shall certify and submit payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers shall not be included on weekly submittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted. The submittals shall be made using LCPTracker Pro software. The software is web-based and can be accessed at <https://lcptracker.com/>. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected."

## **SURFACE TESTING OF PAVEMENTS – IRI (BDE)**

Effective: January 1, 2021

Revised: January 1, 2023

**Description.** This work shall consist of testing the ride quality of the finished surface of pavement sections with new concrete pavement, PCC overlays, full-depth HMA, and HMA overlays with at least 2.25 in. (57 mm) total thickness of new HMA combined with either HMA binder or HMA surface removal, according to Illinois Test Procedure 701, "Ride Quality Testing Using the International Roughness Index (IRI)". Work shall be according to Sections 406, 407, or 420 of the Standard Specifications, except as modified herein.

### **Hot-Mix Asphalt (HMA) Overlays**

Add the following to Article 406.03 of the Standard Specifications:

“(n) Pavement Surface Grinding Equipment..... 1101.04”

Revise Article 406.11 of the Standard Specifications to read:

**“406.11 Surface Tests.** Prior to HMA overlay pavement improvements, the Engineer will measure the smoothness of the existing high-speed mainline pavement. The Contractor shall measure the smoothness of the finished high-speed mainline, low-speed mainline, and miscellaneous pavements after the pavement improvement is complete but within the same construction season. Testing shall be performed in the presence of the Engineer and according to Illinois Test Procedure 701. The pavement will be identified as high-speed mainline, low-speed mainline, or miscellaneous as follows.

(a) Test Sections.

- (1) High-Speed Mainline Pavement. High-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit greater than 45 mph. These sections shall be tested with an inertial profiling system (IPS).
- (2) Low-Speed Mainline Pavement. Low-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit of 45 mph or less. These sections shall be tested using a 16 ft (5 m) straightedge or with an IPS analyzed using the rolling 16 ft (5 m) straightedge simulation in ProVAL.
- (3) Miscellaneous Pavement. Miscellaneous pavement are segments that either cannot readily be tested by an IPS or conditions beyond the control of the Contractor preclude the achievement of smoothness levels typically achievable with mainline pavement construction. This may include the following examples or as determined by the Engineer.
  - a. Pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1,000 ft (300 m) and the pavement within the superelevation transition of such curves;
  - b. Pavement on vertical curves having a length less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grade greater than or equal to 3 percent as may occur on urban ramps or other constricted-space facilities;
  - c. The first and last 50 ft (15 m) of a pavement section where the Contractor is not responsible for the adjoining surface;
  - d. Intersections and the 25 ft (7.6 m) before and after an intersection or end of radius return;
  - e. Variable width pavements;
  - f. Side street returns, to the end of radius return;

- g. Crossovers;
  - h. Pavement connector for bridge approach slab;
  - i. Bridge approach slab;
  - j. Pavement that must be constructed in segments of 600 ft (180 m) or less;
  - k. Pavement within 25 ft (7.6 m) of manholes, utility structures, at-grade railroad crossings, or other appurtenances;
  - l. Turn lanes; and
  - m. Pavement within 5 ft (1.5 m) of jobsite sampling locations for HMA volumetric testing that fall within the wheel path.
- Miscellaneous pavement shall be tested using a 16 ft (5 m) straightedge.
- (4) International Roughness Index (IRI). An index computed from a longitudinal profile measurement using a quarter-car simulation at a simulation speed of 50 mph (80 km/h).
  - (5) Mean Roughness Index (MRI). The average of the IRI values for the right and left wheel tracks.
    - a.  $MRI_O$ . The MRI of the existing pavement prior to construction.
    - b.  $MRI_I$ . The MRI value that warrants an incentive payment.
    - c.  $MRI_F$ . The MRI value that warrants full payment.
    - d.  $MRI_D$ . The MRI value that warrants a financial disincentive.
  - (6) Areas of Localized Roughness (ALR). Isolated areas of roughness, which can cause significant increase in the calculated MRI for a given subplot.
  - (7) Sublot. A continuous strip of pavement 0.1 mile (160 m) long and one lane wide. A partial subplot greater than or equal to 264 ft (80 m) will be subject to the same evaluation as a whole subplot. Partial sublots less than 264 ft (80 m) shall be included with the previous subplot for evaluation purposes.
- (b) Corrective Work. Corrective work shall be completed according to the following.
- (1) High-Speed Mainline Pavement. For high-speed mainline pavement, any 25 ft (7.6 m) interval with an ALR in excess of 200 in./mile (3,200 mm/km) will be identified by the Engineer and shall be corrected by the Contractor. Any subplot having a MRI greater than  $MRI_D$ , including ALR, shall be corrected to reduce the MRI to the  $MRI_F$ , or replaced at the Contractor's option.



- (2) Low-Speed Mainline Pavement. Surface variations in low-speed mainline pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.
- (3) Miscellaneous Pavements. Surface variations in miscellaneous pavement which exceed the 5/16 in. (8 mm) tolerance will be identified by the Engineer and shall be corrected by the Contractor.

Corrective work shall be completed with pavement surface grinding equipment or by removing and replacing the pavement. Corrective work shall be applied to the full lane width. When completed, the corrected area shall have uniform texture and appearance, with the beginning and ending of the corrected area perpendicular to the centerline of the paved surface.

Upon completion of the corrective work, the surface of the subplot(s) shall be retested. The Contractor shall furnish the data and reports to the Engineer within 2 working days after corrections are made. If the MRI and/or ALR still do not meet the requirements, additional corrective work shall be performed.

Corrective work shall be at no additional cost to the Department.

- (c) Smoothness Assessments. Assessments will be paid to or deducted from the Contractor for each subplot of high-speed mainline pavement per the Smoothness Assessment Schedule. Assessments will be based on the MRI of each subplot prior to performing any corrective work unless the Contractor has chosen to remove and replace the pavement. For pavement that is replaced, assessments will be based on the MRI determined after replacement.

The upper MRI thresholds for high-speed mainline pavement are dependent on the MRI of the existing pavement before construction ( $MRI_0$ ) and shall be determined as follows.

Upper MRI Thresholds <sup>1/</sup>	MRI Thresholds (High-Speed, HMA Overlay)	
	$MRI_0 \leq 125.0$ in./mile ( $\leq 1,975$ mm/km)	$MRI_0 > 125.0$ in./mile <sup>1/</sup> ( $> 1,975$ mm/km)
Incentive ( $MRI_I$ )	45.0 in./mile (710 mm/km)	$0.2 \times MRI_0 + 20$
Full Pay ( $MRI_F$ )	75.0 in./mile (1,190 mm/km)	$0.2 \times MRI_0 + 50$
Disincentive ( $MRI_D$ )	100.0 in./mile (1,975 mm/km)	$0.2 \times MRI_0 + 75$

1/  $MRI_0$ ,  $MRI_I$ ,  $MRI_F$ , and  $MRI_D$  shall be in in./mile for calculation.

Smoothness assessments for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, HMA Overlay)	
Mainline Pavement MRI Range	Assessment Per Sublot <sup>1/</sup>
$MRI \leq MRI_I$	$+ (MRI_I - MRI) \times \$20.00$ <sup>2/</sup>
$MRI_I < MRI \leq MRI_F$	$+ \$0.00$
$MRI_F < MRI \leq MRI_D$	$- (MRI - MRI_F) \times \$8.00$
$MRI > MRI_D$	$- \$200.00$

1/ MRI,  $MRI_I$ ,  $MRI_F$ , and  $MRI_D$  shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$300.00.

Smoothness assessments will not be paid or deducted until all other contract requirements for the pavement are satisfied. Pavement that is corrected or replaced for reasons other than smoothness, shall be retested as stated herein.”

### **Hot-Mix Asphalt (HMA) Pavement (Full-Depth)**

Revise the first paragraph of Article 407.03 of the Standard Specifications to read:

**“407.03 Equipment.** Equipment shall be according to Article 406.03.”

Revise Article 407.09 of the Standard Specifications to read:

**“407.09 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows:

The testing of the existing pavement prior to improvements shall not apply and the smoothness assessment for high-speed mainline pavement shall be determined according to the following table.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, Full-Depth HMA)	
Mainline Pavement MRI, in./mile (mm/km)	Assessment Per Sublot <sup>1/</sup>
$\leq 45.0$ (710)	$+ (45 - MRI) \times \$45.00$ <sup>2/</sup>
$> 45.0$ (710) to $75.0$ (1,190)	$+ \$0.00$
$> 75.0$ (1,190) to $100.0$ (1,580)	$- (MRI - 75) \times \$20.00$
$> 100.0$ (1,580)	$- \$500.00$

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$800.00.”

### **Portland Cement Concrete Pavement**

Delete Article 420.03(i) of the Standard Specifications.

Revise Article 420.10 of the Standard Specifications to read:

**“420.10 Surface Tests.** The finished surface of the pavement shall be tested for smoothness according to Article 406.11, except as follows.

The testing of the existing pavement prior to improvements shall not apply. The Contractor shall measure the smoothness of the finished surface of the pavement after the pavement has attained a flexural strength of 250 psi (3,800 kPa) or a compressive strength of 1,600 psi (20,700 kPa).

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

- (a) Corrective Work. No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to areas ground according to Article 420.18 at no additional cost to the Department.

Jointed portland cement concrete pavement corrected by removal and replacement, shall be corrected in full panel sizes.

- (b) Smoothness Assessments. Smoothness assessment for high-speed mainline pavement shall be determined as follows.

SMOOTHNESS ASSESSMENT SCHEDULE (High-Speed, PCC)	
Mainline Pavement MRI, in./mile (mm/km) <sup>3/</sup>	Assessment Per Sublot <sup>1/</sup>
≤ 45.0 (710)	+ (45 – MRI) × \$60.00 <sup>2/</sup>
> 45.0 (710) to 75.0 (1,190)	+ \$0.00
> 75.0 (1,190) to 100.0 (1,580)	– (MRI – 75) × \$37.50
> 100.0 (1,580)	– \$750.00

1/ MRI shall be in in./mile for calculation.

2/ The maximum incentive amount shall not exceed \$1200.00.

3/ If pavement is constructed with traffic in the lane next to it, then an additional 10 in./mile will be added to the upper thresholds.”

### **Removal of Existing Pavement and Appurtenances**

Revise the first paragraph of Article 440.04 of the Standard Specifications to read:

**“440.04 HMA Surface Removal for Subsequent Resurfacing.** The existing HMA surface shall be removed to the depth specified on the plans with a self-propelled milling machine. The removal depth may be varied slightly at the discretion of the Engineer to satisfy the smoothness requirements of the finished pavement. The temperature at which the work is performed, the nature and condition of the equipment, and the manner of performing the work shall be such that the milled surface is not torn, gouged, shoved or otherwise damaged by the milling operation. Sufficient cutting passes shall be made so that all irregularities or high spots are eliminated to the satisfaction of the Engineer. When tested with a 16 ft (5 m) straightedge, the milled surface shall have no surface variations in excess of 3/16 in. (5 mm).”

### **General Equipment**

Revise Article 1101.04 of the Standard Specifications to read:

**“1101.04 Pavement Surface Grinding Equipment.** The pavement surface grinding device shall have a minimum effective head width of 3 ft (0.9 m).

- (a) Diamond Saw Blade Machine. The machine shall be self-propelled with multiple diamond saw blades.
- (b) Profile Milling Machine. The profile milling machine shall be a drum device with carbide or diamond teeth with spacing of 0.315 in. (8 mm) or less and maintain proper forward speed for surface texture according to the manufacturer’s specifications.”

### **SURVEYING SERVICES (BDE)**

Effective: April 1, 2025

Delete the fourth paragraph of Article 667.04 of the Standard Specifications.

Delete Section 668 of the Standard Specifications.

### **TRAFFIC SIGNAL BACKPLATE (BDE)**

Effective: August 1, 2025

Revise the second sentence of the third paragraph of Article 1078.03 of the Standard Specifications to read:

“Retroreflective sheeting shall be Type AZ or Type ZZ according to Article 1091.03 and applied in the preferred orientation for the maximum angularity according to the manufacturer’s recommendations.”

## **TRAINING SPECIAL PROVISIONS (BDE)**

Effective: October 15, 1975

Revised: September 2, 2021

This Training Special Provision supersedes Section 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeyman in the type of trade or job classification involved. The number of trainees to be trained under this contract will be 8. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also ensure that this Training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within the reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the Illinois Department of Transportation for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee it employs on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

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

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

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the Illinois Department of Transportation and the Federal Highway Administration. The Illinois Department of Transportation and the Federal Highway Administration shall approve a program, if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the

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

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

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

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

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

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

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

For contracts with an awarded contract value of \$500,000 or more, the Contractor is required to comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules to the extent permitted by Section 20-20(g). For federally funded projects, the number of trainees to be trained under this contract, as stated in the Training Special Provisions, will be the established goal for the Illinois Works Apprenticeship Initiative 30 ILCS 559/20-20(g). The Contractor shall make a good faith effort to meet this goal. For federally funded projects, the Illinois Works Apprenticeship Initiative will be implemented using the FHWA approved OJT procedures. The Contractor must comply with the recordkeeping and reporting obligations of the Illinois Works Apprenticeship Initiative for the life of the project, including the certification as to whether the trainee/apprentice labor hour goals were met.

Method of Measurement. The unit of measurement is in hours.

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

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

Effective: August 1, 2012

Revised: February 2, 2017

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

IDOT funds, and various Illinois community colleges operate, pre-apprenticeship training programs throughout the State to provide training and skill-improvement opportunities to promote the increased employment of minority groups, disadvantaged persons and women in all aspects of the highway construction industry. The intent of this IDOT Pre-Apprenticeship Training Program Graduate (TPG) special provision (Special Provision) is to place these certified program graduates on the project site for this Contract in order to provide the graduates with meaningful on-the-job training. Pursuant to this Special Provision, the Contractor must make every reasonable effort to recruit and employ certified TPG trainees to the extent such individuals are available within a practicable distance of the project site.

Specifically, participation of the Contractor or its subcontractor in the Program entitles the participant to reimbursement for graduates' hourly wages at \$15.00 per hour per utilized TPG trainee, subject to the terms of this Special Provision. Reimbursement payment will be made even though the Contractor or subcontractor may also receive additional training program funds from other non-IDOT sources for other non-TPG trainees on the Contract, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving reimbursement from another entity through another program, such as IDOT through the TPG program. With regard to any IDOT funded construction training program other than TPG, however, additional reimbursement for other IDOT programs will not be made beyond the TPG Program described in this Special Provision when the TPG Program is utilized.

No payment will be made to the Contractor if the Contractor or subcontractor fails to provide the required on-site training to TPG trainees, as solely determined by IDOT. A TPG trainee must begin training on the project as soon as the start of work that utilizes the relevant trade skill and the TPG trainee must remain on the project site through completion of the Contract, so long as training opportunities continue to exist in the relevant work classification. Should a TPG trainee's employment end in advance of the completion of the Contract, the Contractor must promptly notify the IDOT District EEO Officer for the Contract that the TPG's involvement in the Contract has ended. The Contractor must supply a written report for the reason the TPG trainee involvement terminated, the hours completed by the TPG trainee on the Contract, and the number of hours for which the incentive payment provided under this Special Provision will be, or has been claimed for the separated TPG trainee.

Finally, the Contractor must maintain all records it creates as a result of participation in the Program on the Contract, and furnish periodic written reports to the IDOT District EEO Officer that document its contractual performance under and compliance with this Special Provision. Finally, through participation in the Program and reimbursement of wages, the Contractor is not relieved of, and IDOT has not waived, the requirements of any federal or state labor or employment law applicable to TPG workers, including compliance with the Illinois Prevailing Wage Act.

**Method of Measurement:** The unit of measurement is in hours.

**Basis of Payment:** This work will be paid for at the contract unit price of \$15.00 per hour for each utilized certified TPG Program trainee (TRAINEES TRAINING PROGRAM GRADUATE). The estimated total number of hours, unit price, and total price must be included in the schedule of prices for the Contract submitted by Contractor prior to beginning work. The initial number of TPG trainees for which the incentive is available for this contract is 8.

The Department has contracted with several educational institutions to provide screening, tutoring and pre-training to individuals interested in working as a TPG trainee in various areas of common construction trade work. Only individuals who have successfully completed a Pre-Apprenticeship Training Program at these IDOT approved institutions are eligible to be TPG trainees. To obtain a list of institutions that can connect the Contractor with eligible TPG trainees, the Contractor may contact: HCCTP TPG Program Coordinator, Office of Business and Workforce Diversity (IDOT OBWD), Room 319, Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois 62764. Prior to commencing construction with the utilization of a TPG trainee, the Contractor must submit documentation to the IDOT District EEO Officer for the Contract that provides the names and contact information of the TPG trainee(s) to be trained in each selected work classification, proof that the TPG trainee(s) has successfully completed a Pre-Apprenticeship Training Program, proof that the TPG is in an Apprenticeship Training Program approved by the U.S. Department of Labor Bureau of Apprenticeship Training, and the start date for training in each of the applicable work classifications.

To receive payment, the Contractor must provide training opportunities aimed at developing a full journeyworker in the type of trade or job classification involved. During the course of performance of the Contract, the Contractor may seek approval from the IDOT District EEO Officer to employ additional eligible TPG trainees. In the event the Contractor subcontracts a portion of the contracted work, it must determine how many, if any, of the TPGs will be trained by the subcontractor. Though a subcontractor may conduct training, the Contractor retains the responsibility for meeting all requirements imposed by this Special Provision. The Contractor must also include this Special Provision in any subcontract where payment for contracted work performed by a TPG trainee will be passed on to a subcontractor.



Training through the Program is intended to move TPGs toward journeyman status, which is the primary objective of this Special Provision. Accordingly, the Contractor must make every effort to enroll TPG trainees by recruitment through the Program participant educational institutions to the extent eligible TPGs are available within a reasonable geographic area of the project. The Contractor is responsible for demonstrating, through documentation, the recruitment efforts it has undertaken prior to the determination by IDOT whether the Contractor is in compliance with this Special Provision, and therefore, entitled to the Training Program Graduate reimbursement of \$15.00 per hour.

Notwithstanding the on-the-job training requirement of this TPG Special Provision, some minimal off-site training is permissible as long as the offsite training is an integral part of the work of the contract, and does not compromise or conflict with the required on-site training that is central to the purpose of the Program. No individual may be employed as a TPG trainee in any work classification in which he/she has previously successfully completed a training program leading to journeyman status in any trade, or in which he/she has worked at a journeyman level or higher.

#### **VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)**

Effective: November 1, 2021

Revised: November 1, 2022

Add the following paragraph after the first paragraph of Article 701.08 of the Standard Specifications:

“The Contractor shall equip all vehicles and equipment with high-intensity oscillating, rotating, or flashing, amber or amber-and-white, warning lights which are visible from all directions. In accordance with 625 ILCS 5/12-215, the lights may only be in operation while the vehicle or equipment is engaged in construction operations.”

#### **WORK ZONE TRAFFIC CONTROL DEVICES (BDE)**

Effective: March 2, 2020

Revised: January 1, 2026

Add the following to Article 701.03 of the Standard Specifications:

“(q) Temporary Sign Supports .....1106.02”

Revise Article 701.03(p) of the Standard Specifications to read:

“(p) Detectable Pedestrian Channelizing Barricades ..... 1106.02(m)”

Revise the third paragraph of Article 701.14 of the Standard Specifications to read:

“For temporary sign supports, the Contractor shall provide a FHWA eligibility letter for each device used on the contract. The letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device. The signs shall be supported within 20 degrees of vertical. Weights used to stabilize signs shall be attached to the sign support per the manufacturer’s specifications.”

Revise the first paragraph of Article 701.15 of the Standard Specifications to read:

“ **701.15 Traffic Control Devices.** For devices that must meet crashworthiness standards, the Contractor shall provide a manufacturer’s self-certification or a FHWA eligibility letter for each Category 1 device and a FHWA eligibility letter for each Category 2 and Category 3 device used on the contract. The self-certification or letter shall provide information for the set-up and use of the device as well as a detailed drawing of the device.”

Revise the first six paragraphs of Article 1106.02 of the Standard Specifications to read:

“ **1106.02 Devices.** Work zone traffic control devices and combinations of devices shall meet crashworthiness standards for their respective categories. The categories are as follows.

Category 1 includes small, lightweight, channelizing and delineating devices that have been in common use for many years and are known to be crashworthy by crash testing of similar devices or years of demonstrable safe performance. These include cones, tubular markers, plastic drums, and delineators, with no attachments (e.g. lights). Category 1 devices shall be MASH compliant.

Category 2 includes devices that are not expected to produce significant vehicular velocity change but may otherwise be hazardous. These include vertical panels with lights, barricades, temporary sign supports, and Category 1 devices with attachments (e.g. drums with lights). Category 2 devices shall be MASH compliant.

Category 3 includes devices that are expected to cause significant velocity changes or other potentially harmful reactions to impacting vehicles. These include crash cushions (impact attenuators), truck mounted attenuators, and other devices not meeting the definitions of Category 1 or 2. Category 3 devices manufactured after December 31, 2019 shall be MASH compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350, may be used on contracts let before December 31, 2029. Category 3 devices shall be crash tested for Test Level 3 or the test level specified.

Category 4 includes portable or trailer-mounted devices such as sign supports, speed feedback displays, arrow boards, changeable message signs, temporary traffic signals, and area lighting supports. It is preferable for Category 4 devices manufactured after December 31, 2019 to be MASH-16 compliant; however, there are currently no crash tested devices in this category, so it remains exempt from the NCHRP 350 or MASH compliance requirement.

For each type of device, when no more than one MASH compliant is available, an NCHRP 350 compliant device may be used, even if manufactured after December 31, 2019.”

Revise the first paragraph of Section 1106.02(a) of the Standard Specifications to read:

“(a) Lights. Lights shall meet the requirements of Chapter 13 of the “Equipment and Materials Standards of the Institute of Transportation Engineers,” 1998, Institute of Transportation Engineers, and shall be visible on a clear night from a distance of 3000 ft (900 m). Lights are classified as follows.”

Revise Articles 1106.02(g), 1106.02(k), 1106.02(l), and 1106.02(m) of the Standard Specifications to read:

“(g) Truck Mounted/Trailer Mounted Attenuators. The attenuator shall be approved for use at Test Level 3. Test Level 2 may be used for normal posted speeds less than or equal to 45 mph.

(k) Temporary Water Filled Barrier. The water filled barrier shall be a lightweight plastic shell designed to accept water ballast and be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings.

(l) Movable Traffic Barrier. The movable traffic barrier shall be on the Department’s qualified product list.

Shop drawings shall be furnished by the manufacturer and shall indicate the deflection of the barrier as determined by acceptance testing; the configuration of the barrier in that test; and the vehicle weight, velocity, and angle of impact of the deflection test. The Engineer shall be provided one copy of the shop drawings. The barrier shall be capable of being moved on and off the roadway on a daily basis.

(m) Detectable Pedestrian Channelizing Barricades. The top panel or handrail shall be continuous and there should be at least a 2 in. (50 mm) gap between the hand trailing edge and its support. When visible to vehicular traffic, the top rail shall have alternating white and orange retroreflective stripes sloping at 45 degrees. The bottom panel shall be continuous and have alternating white and orange retroreflective stripes sloping at 45 degrees. Barricade stripes shall be 6 in. (150 mm) in width. The predominant color for other barricade components shall be white, orange, or silver.”

**WORKING DAYS (BDE)**

Effective: January 1, 2002

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

## **PROJECT LABOR AGREEMENT**

Effective: May 18, 2007

Revised: April 1, 2025

**Description.** The Illinois Project Labor Agreements Act, 30 ILCS 571, states that the State of Illinois has a compelling interest in awarding public works contracts so as to ensure the highest standards of quality and efficiency at the lowest responsible cost. A project labor agreement (PLA) is a form of pre-hire collective bargaining agreement covering all terms and conditions of employment on a specific project that is intended to support this compelling interest. It has been determined by the Department that a PLA is appropriate for the project that is the subject of this contract. The PLA document, provided below, only applies to the construction site for this contract. It is the policy of the Department on this contract, and all construction projects, to allow all contractors and subcontractors to compete for contracts and subcontracts without regard to whether they are otherwise parties to collective bargaining agreements.

The Department reserves the right to rescind the PLA requirement from this project in the event FHWA disapproves of the inclusion of the PLA terms for this project. The contractor, by bidding, agrees that any rescission of the PLA requirement shall not constitute grounds for the withdrawal of its bid and further agrees to remove the PLA requirement from this contract upon notice from the Department should such be necessary at a later date.

**Execution of Letter of Assent.** A copy of the PLA applicable to this project is included as part of this special provision. As a condition of the award of the contract, the successful bidder and each of its subcontractors shall execute a "Contractor Letter of Assent", in the form attached to the PLA as Exhibit A. The successful bidder shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the subcontractor's performance of work on the project. Upon request, copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization at the pre-job conference.

**Quarterly Reporting.** Section 37 of the Illinois Project Labor Agreements Act requires the Department to submit quarterly reports regarding the number of minorities and females employed under PLAs. To assist in this reporting effort, the Contractor shall provide a quarterly workforce participation report for all minority and female employees working under the PLA of this contract. The data shall be reported on Construction Form BC 820, Project Labor Agreement (PLA) Workforce Participation Quarterly Reporting Form available on the Department's website <https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/idot-forms/bc/bc-820.pdf>.

The report shall be submitted no later than the 15th of the month following the end of each quarter (i.e., April 15 for the January – March reporting period). The form shall be emailed to [DOT.PLA.Reporting@illinois.gov](mailto:DOT.PLA.Reporting@illinois.gov) or faxed to (217) 524-4922.

Any costs associated with complying with this provision 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.

Illinois Department of Transportation  
**PROJECT LABOR AGREEMENT**

This Project Labor Agreement ("PLA" or "Agreement") is entered into this \_\_\_\_\_ day of

\_\_\_\_\_, 2026, by and between the Illinois Department of Transportation ("IDOT" or "Department") in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades signatory hereto as determined by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of each of its affiliated members (individually and collectively, the "Unions"). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT's Prime Contractor and each of its subcontractors of whatever tier ("Subcontractor" or "Subcontractors") on Contract No. (hereinafter, the "Project").

**ARTICLE I - INTENT AND PURPOSES**

- 1.1 This PLA is entered into in accordance with the Project Labor Agreement Act ("Act", 30 ILCS 571). It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays, or other disruptions to the prosecution of the work. The parties acknowledge the obligations of the Contractors and Subcontractors to comply with the provisions of the Act. The parties will work with the Contractors and Subcontractors within the parameters of other statutory and regulatory requirements to implement the Act's goals and objectives.
- 1.2 As a condition of the award of the contract for performance of work on the Project, IDOT's Prime Contractor and each of its Subcontractors shall execute a "Contractor Letter of Assent", in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. The Contractor shall submit a Subcontractor's Contractor Letter of Assent to the Department prior to the Subcontractor's performance of Construction Work on the Project. Upon request copies of the applicable collective bargaining agreements will be provided by the appropriate signatory labor organization consistent with this Agreement and at the pre-job conference referenced in Article III, Section 3.1.

- 1.3 Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Contractor Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company, or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company, or entity that does not agree in writing to become bound for the term of this Project by the terms of this PLA prior to commencing such work and to the applicable area-wide collective bargaining agreement(s) with the Union(s) signatory hereto.
- 1.4 It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The parties hereto also agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.
- 1.5 In the event of a variance or conflict, whether explicit or implicit, between the terms and conditions of this PLA and the provisions of any other applicable national, area, or local collective bargaining agreement, the terms and conditions of this PLA shall supersede and control. For any work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors, and for any instrument calibration work and loop checking performed under the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, the preceding sentence shall apply only with respect to Articles I, II, V, VI, and VII.

- 1.6 Subject to the provisions of paragraph 1.5 of this Article, it is the parties' intent to respect the provisions of any other collective bargaining agreements that may now or hereafter pertain, whether between the Prime Contractor and one or more of the Unions or between a Subcontractor and one or more of the Unions. Accordingly, except and to the extent of any contrary provision set forth in this PLA, the Prime Contractor and each of its Subcontractors agrees to be bound and abide by the terms of the following in order of precedence: (a) the applicable collective bargaining agreement between the Prime Contractor and one or more of the Unions made signatory hereto; (b) the applicable collective bargaining agreement between a Subcontractor and one or more of the Unions made signatory hereto; or (c) the current applicable area collective bargaining agreement for the relevant Union that is the agreement certified by the Illinois Department of Labor for purposes of establishing the Prevailing Wage applicable to the Project. The Union will provide copies of the applicable collective bargaining agreements pursuant to part (c) of the preceding sentence to the Prime Contractor. Assignments by the Contractors or Subcontractors amongst the trades shall be consistent with area practices; in the event of unresolved disagreements as to the propriety of such assignments, the provisions of Article VI shall apply.
- 1.7 Subject to the limitations of paragraphs 1.4 to 1.6 of this Article, the terms of each applicable collective bargaining agreement as determined in accordance with paragraph 1.6 are incorporated herein by reference, and the terms of this PLA shall be deemed incorporated into such other applicable collective bargaining agreements only for purposes of their application to the Project.
- 1.8 To the extent necessary to comply with the requirements of any fringe benefit fund to which the Prime Contractor or Subcontractor is required to contribute under the terms of an applicable collective bargaining agreement pursuant to the preceding paragraph, the Prime Contractor or Subcontractor shall execute all "Participation Agreements" as may be reasonably required by the Union to accomplish such purpose; provided, however, that such Participation Agreements shall, when applicable to the Prime Contractor or Subcontractor solely as a result of this PLA, be amended as reasonably necessary to reflect such fact. Upon written notice in the form of a lien of a Contractor's or Subcontractor's delinquency from any applicable fringe benefit fund, IDOT will withhold from the Contractor's periodic pay request an amount sufficient to extinguish any delinquency obligation of the Contractor or Subcontractor arising out of the Project.
- 1.9 In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

**ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS**

- 2.1 The term Construction Work as used herein shall include all “construction, demolition, rehabilitation, renovation, or repair” work performed by a “laborer or mechanic” at the “site of the work” for the purpose of “building” the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5 and Illinois labor laws.
- 2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.
- 2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.
- 2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre-fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.
- 2.5 The parties are mutually committed to promoting a safe working environment for all personnel at the job-site. It shall be the responsibility of each employer to which this PLA applies to provide and maintain safe working conditions for its employees, and to comply with all applicable federal, state, and local health and safety laws and regulations.
- 2.6 The use or furnishing of alcohol or drugs and the conduct of any other illegal activity at the job-site is strictly prohibited. The parties shall take every practical measure consistent with the terms of applicable collective bargaining agreements to ensure that the job-site is free of alcohol and drugs.
- 2.7 All parties to this PLA agree that they will not discriminate against any employee based on race, creed, religion, color, national origin, union activity, age, gender or sexual orientation and shall comply with all applicable federal, state, and local laws.



- 2.8 In accordance with the Act and to promote diversity in employment, IDOT will establish, in cooperation with the other parties, the apprenticeship hours which are to be performed by minorities and females on the Project. IDOT shall consider the total hours to be performed by these underrepresented groups, as a percentage of the workforce, and create aspirational goals for each Project, based on the level of underutilization for the service area of the Project (together "Project Employment Objectives"). IDOT shall provide a quarterly report regarding the racial and gender composition of the workforce on the Project.

Persons currently lacking qualifications to enter apprenticeship programs will have the opportunity to obtain skills through basic training programs as have been established by the Department. The parties will endeavor to support such training programs to allow participants to obtain the requisite qualifications for the Project Employment Objectives.

The parties agree that all Contractors and Subcontractors working on the Project shall be encouraged to utilize the maximum number of apprentices as permitted under the terms of the applicable collective bargaining agreements to realize the Project Employment Objectives.

The Unions shall assist the Contractor and each Subcontractor in efforts to satisfy Project Employment Objectives. A Contractor or Subcontractor may request from a Union specific categories of workers necessary to satisfy Project Employment Objectives. The application of this section shall be consistent with all local Union collective bargaining agreements, and the hiring hall rules and regulations established for the hiring of personnel, as well as the apprenticeship standards set forth by each individual Union.

- 2.9 The parties hereto agree that engineering consultants and materials testing employees, to the extent subject to the terms of this PLA, shall be fully expected to objectively and responsibly perform their duties and obligations owed to the Department without regard to the potential union affiliation of such employees or of other employees on the Project.
- 2.10 This Agreement shall not apply to IDOT employees or employees of any other governmental entity.

### **ARTICLE III - ADMINISTRATION OF AGREEMENT**

- 3.1 In order to assure that all parties have a clear understanding of the PLA, and to promote harmony, at the request of the Unions a post-award pre-job conference will be held among the Prime Contractor, all Subcontractors and Union representatives prior to the start of any Construction Work on the Project. No later than the conclusion of such pre-job conference, the parties shall, among other matters, provide to one another contact information for their respective representatives (including name, address, phone number, facsimile number, e-mail). Nothing herein shall be construed to limit the right of the Department to discuss or explain the purpose and intent of this PLA with prospective bidders or other interested parties prior to or following its award of the job.
- 3.2 Representatives of the Prime Contractor and the Unions shall meet as often as reasonably necessary following award until completion of the Project to assure the effective implementation of this PLA.
- 3.3 Any notice contemplated under Article VI and VII of this Agreement to a signatory labor organization shall be made in writing to the Local Union with copies to the local union's International Representative.

### **ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS**

- 4.1 The standard work day and work week for Construction Work on the Project shall be consistent with the respective collective bargaining agreements. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate. If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.
- 4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.
- 4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.

- 4.4 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, employment begins and ends at the Project site; employees shall be at their place of work at the starting time; and employees shall remain at their place of work until quitting time.
- 4.5 Except as may be otherwise expressly provided by the applicable collective bargaining agreement, there shall be no limit on production by workmen, no restrictions on the full use of tools or equipment, and no restrictions on efficient use of manpower or techniques of construction other than as may be required by safety regulations.
- 4.6 The parties recognize that specialized or unusual equipment may be installed on the Project. In such cases, the Union recognizes the right of the Prime Contractor or Subcontractor to involve the equipment supplier or vendor's personnel in supervising the setting up of the equipment, making modifications and final alignment, and performing similar activities that may be reasonably necessary prior to and during the start-up procedure in order to protect factory warranties. The Prime Contractor or Subcontractor shall notify the Union representatives in advance of any work at the job-site by such vendor personnel in order to promote a harmonious relationship between the equipment vendor's personnel and other Project employees.
- 4.7 For the purpose of promoting full and effective implementation of this PLA, authorized Union representatives shall have access to the Project job-site during scheduled work hours. Such access shall be conditioned upon adherence to all reasonable visitor and security rules of general applicability that may be established for the Project site at the pre-job conference or from time to time thereafter.

**ARTICLE V – GRIEVANCE PROCEDURES FOR DISPUTES ARISING UNDER A PARTICULAR COLLECTIVE BARGAINING AGREEMENT**

- 5.1 In the event a dispute arises under a particular collective bargaining agreement specifically not including jurisdictional disputes referenced in Article VI below, said dispute shall be resolved by the Grievance/Arbitration procedure of the applicable collective bargaining agreement. The resulting determination from this process shall be final and binding on all parties bound to its process.
- 5.2 Employers covered under this Agreement shall have the right to discharge or discipline any employee who violates the provisions of this Agreement. Such discharge or discipline by a contractor or subcontractor shall be subject to Grievance/Arbitration procedure of the applicable collective bargaining agreement only as to the fact of such violation of this agreement. If such fact is established, the penalty imposed shall not be disturbed. Work at the Project site shall continue without disruption or hindrance of any kind as a result of a Grievance/Arbitration procedure under this Article.

- 5.3 In the event there is a deadlock in the foregoing procedure, the parties agree that the matter shall be submitted to arbitration for the selection and decision of an Arbitrator governed under paragraph 6.8.

#### **ARTICLE VI –DISPUTES: GENERAL PRINCIPLES**

- 6.1 This Agreement is entered into to prevent strikes, lost time, lockouts and to facilitate the peaceful adjustment of jurisdictional disputes in the building and construction industry and to prevent waste and unnecessary avoidable delays and expense, and for the further purpose of at all times securing for the employer sufficient skilled workers.
- 6.2 A panel of Permanent Arbitrators are attached as addendum (A) to this agreement. By mutual agreement between IDOT and the Unions, the parties can open this section of the agreement as needed to make changes to the list of permanent arbitrators.

The arbitrator is not authorized to award back pay or any other damages for a miss assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.

- 6.3 The PLA Jurisdictional Dispute Resolution Process ("Process") sets forth the procedures below to resolve jurisdictional disputes between and among Contractors, Subcontractors, and Unions engaged in the building and construction industry. Further, the Process will be followed for any grievance or dispute arising out of the interpretation or application of this PLA by the parties except for the prohibition on attorneys contained in 6.11. All decisions made through the Process are final and binding upon all parties.

#### **DISPUTE PROCESS**

- 6.4 Administrative functions under the Process shall be performed through the offices of the President and/or Secretary-Treasurer of the Illinois State Federation of Labor, or their designated representative, called the Administrator. In no event shall any officer, employee, agent, attorney, or other representative of the Illinois Federation of Labor, AFL- CIO be subject to any subpoena to appear or testify at any jurisdictional dispute hearing.
- 6.5 There shall be no abandonment of work during any case participating in this Process or in violation of the arbitration decision. All parties to this Process release the Illinois State Federation of Labor ("Federation") from any liability arising from its action or inaction and covenant not to sue the Federation, nor its officers, employees, agents or attorneys.

- 6.6 In the event of a dispute relating to trade or work jurisdiction, all parties, including the employers, Contractors or Subcontractors, agree that a final and binding resolution of the dispute shall be resolved as follows:
- (a) Representatives of the affected trades and the Contractor or Subcontractor shall meet on the job site within two (2) business days after receiving written notice in an effort to resolve the dispute. (In the event there is a dispute between local unions affiliated with the same International Union, the decision of the General President, or his/her designee, as the internal jurisdictional authority of that International Union, shall constitute a final and binding decision and determination as to the jurisdiction of work.)
  - (b) If no settlement is achieved subsequent to the preceding Paragraph, the matter shall be referred to the local area Building & Construction Trades Council, which shall meet with the affected trades within two (2) business days subsequent to receiving written notice. In the event the parties do not wish to avail themselves of the local Building & Construction Trades Council, the parties may elect to invoke the services of their respective International Representatives with no extension of the time limitations. An agreement reached at this Step shall be final and binding upon all parties.
  - (c) If no settlement agreement is reached during the proceedings contemplated by Paragraphs "a" or "b" above, the matter shall be immediately referred to the Illinois Jurisdictional Dispute Process for final and binding resolution of said dispute. Said referral submission shall be in writing and served upon the Illinois State Federation of Labor, or the Administrator, pursuant to paragraph 6.4 of this agreement. The Administrator shall, within three (3) days, provide for the selection of an available Arbitrator to hear said dispute within this time period. Upon good cause shown and determined by the Administrator, an additional three (3) day extension for said hearing shall be granted at the sole discretion of the Administrator. Only upon mutual agreement of all parties may the Administrator extend the hearing for a period in excess of the time frames contemplated under this Paragraph. Business days are defined as Monday through Friday, excluding contract holidays.
- 6.7 The primary concern of the Process shall be the adjustment of jurisdictional disputes arising out of the Project. A sufficient number of Arbitrators shall be selected from list of approved Arbitrators as referenced Sec. 6.2 and shall be assigned per Sec. 6.8. Decisions shall be only for the Project and shall become effective immediately upon issuance and complied with by all parties. The authority of the Arbitrator shall be restricted and limited specifically to the terms and provisions of Article VI and generally to this Agreement as a whole.

- 6.8 Arbitrator chosen shall be randomly selected based on the list of Arbitrators in Sec. 6.2 and geographical location of the jurisdictional dispute and upon his/her availability, and ability to conduct a Hearing within two (2) business days of said notice. The Arbitrator may issue a "bench" decision immediately following the Hearing or he/she may elect to only issue a written decision, said decision must be issued within two (2) business days subsequent to the completion of the Hearing. Copies of all notices, pleadings, supporting memoranda, decisions, etc. shall be provided to all disputing parties and the Illinois State Federation of Labor.

Any written decision shall be in accordance with this Process and shall be final and binding upon all parties to the dispute and may be a "short form" decision. Fees and costs of the arbitrator shall be divided evenly between the contesting parties except that any party wishing a full opinion and decision beyond the short form decision shall bear the reasonable fees and costs of such full opinion. The decision of the Arbitrator shall be final and binding upon the parties hereto, their members, and affiliates.

In cases of jurisdictional disputes or other disputes between a signatory labor organization and another labor organization, both of which is an affiliate or member of the same International Union, the matter or dispute shall be settled in the manner set forth by their International Constitution and/or as determined by the International Union's General President whose decision shall be final and binding upon all parties. In no event shall there be an abandonment of work.

- 6.9 In rendering a decision, the Arbitrator shall determine:
- (a) First, whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between National or International Unions to the dispute or agreements between local unions involved in the dispute, governs;
  - (b) Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a previous decision of record governing the case, the Arbitrator shall give equal weight to such decision of record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record and established trade practice in the industry rather than the prevailing practice in the locality; and,

- (c) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.
  - (d) The arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an arbitrator.
- 6.10 The Arbitrator shall set forth the basis for his/her decision and shall explain his/her findings regarding the applicability of the above criteria. If lower ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the Project. Agreements of Record, for other PLA projects, are applicable only to those parties signatory to such agreements. Decisions of Record are those that were either attested to by the former Impartial Jurisdictional Disputes Board or adopted by the National Arbitration Panel.
- 6.11 All interested parties, as determined by the Arbitrator, shall be entitled to make presentations to the Arbitrator. Any interested labor organization affiliated to the PLA Committee and party present at the Hearing, whether making a presentation or not, by such presence shall be deemed to accept the jurisdiction of the Arbitrator and to agree to be bound by its decision. In addition to the representative of the local labor organization, a representative of the labor organization's International Union may appear on behalf of the parties. Each party is responsible for arranging for its witnesses. In the event an Arbitrator's subpoena is required, the party requiring said subpoena shall prepare the subpoena for the Arbitrator to execute. Service of the subpoena upon any witness shall be the responsibility of the issuing party.

Attorneys shall not be permitted to attend or participate in any portion of a Hearing.

The parties are encouraged to determine, prior to Hearing, documentary evidence which may be presented to the Arbitrator on a joint basis.

- 6.12 The Order of Presentation in all Hearings before an Arbitrator shall be
- I. Identification and Stipulation of the Parties
  - II. Unions(s) claiming the disputed work presents its case
  - III. Union(s) assigned the disputed work presents its case
  - IV. Employer assigning the disputed work presents its case
  - V. Evidence from other interested parties (i.e., general contractor, project manager, owner)
  - VI. Rebuttal by union(s) claiming the disputed work
  - VII. Additional submissions permitted and requested by Arbitrator
  - VIII. Closing arguments by the parties

- 6.13 All parties bound to the provisions of this Process hereby release the Illinois State Federation of Labor and IDOT, their respective officers, agents, employees or designated representatives, specifically including any Arbitrator participating in said Process, from any and all liability or claim, of whatsoever nature, and specifically incorporating the protections provided in the Illinois Arbitration Act, as amended from time to time.
- 6.14 The Process, as an arbitration panel, nor its Administrator, shall have any authority to undertake any action to enforce its decision(s). Rather, it shall be the responsibility of the prevailing party to seek appropriate enforcement of a decision, including findings, orders or awards of the Arbitrator or Administrator determining non-compliance with a prior award or decision.
- 6.15 If at any time there is a question as to the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process, the primary responsibility for any determination of the arbitrability of a dispute and the jurisdiction of the Arbitrator shall be borne by the party requesting the Arbitrator to hear the underlying jurisdictional dispute. The affected party or parties may proceed before the Arbitrator even in the absence or one or more stipulated parties with the issue of jurisdiction as an additional item to be decided by the Arbitrator. The Administrator may participate in proceedings seeking a declaration or determination that the underlying dispute is subject to the jurisdiction and process of the Illinois Jurisdictional Dispute Resolution Process. In any such proceedings, the non-prevailing party and/or the party challenging the jurisdiction of the Illinois Jurisdictional Dispute Resolution Process shall bear all the costs, expenses and attorneys' fees incurred by the Illinois Jurisdictional Dispute Resolution Process and/or its Administrator in establishing its jurisdiction.

#### **ARTICLE VII - WORK STOPPAGES AND LOCKOUTS**

- 7.1 During the term of this PLA, no Union or any of its members, officers, stewards, employees, agents or representatives shall instigate, support, sanction, maintain, or participate in any strike, picketing, walkout, work stoppage, slow down or other activity that interferes with the routine and timely prosecution of work at the Project site or at any other contractor's or supplier's facility that is necessary to performance of work at the Project site. Hand billing at the Project site during the designated lunch period and before commencement or following conclusion of the established standard workday shall not, in itself, be deemed an activity that interferes with the routine and timely prosecution of work on the Project.



7.2 Should any activity prohibited by paragraph 7.1 of this Article occur, the Union shall undertake all steps reasonably necessary to promptly end such prohibited activities.

7.2.A No Union complying with its obligations under this Article shall be liable for acts of employees for which it has no responsibility or for the unauthorized acts of employees it represents. Any employee who participates or encourages any activity prohibited by paragraph 7.1 shall be immediately suspended from all work on the Project for a period equal to the greater of (a) 60 days; or (b) the maximum disciplinary period allowed under the applicable collective bargaining agreement for engaging in comparable unauthorized or prohibited activity.

7.2.B Neither the PLA Committee nor its affiliates shall be liable for acts of employees for which it has no responsibility. The principal officer or officers of the PLA Committee will immediately instruct, order and use the best efforts of his office to cause the affiliated union or unions to cease any violations of this Article. The PLA Committee in its compliance with this obligation shall not be liable for acts of its affiliates. The principal officer or officers of any involved affiliate will immediately instruct, order or use the best effort of his office to cause the employees the union represents to cease any violations of this Article. A union complying with this obligation shall not be liable for unauthorized acts of employees it represents. The failure of the Contractor to exercise its rights in any instance shall not be deemed a waiver of its rights in any other instance.

During the term of this PLA, the Prime Contractor and its Subcontractors shall not engage in any lockout at the Project site of employees covered by this Agreement.

7.3 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.

7.4 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.5 of this Article.

- 7.5 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:
- 7.5.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to paragraph 6.8 of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.
  - 7.5.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not before twenty-four (24) hours after the written notice to all parties involved as required above.
  - 7.5.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.
  - 7.5.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.
  - 7.5.E Such Award may be enforced by any court of competent jurisdiction upon the filing of the Award and such other relevant documents as may be required. Facsimile or other hardcopy written notice of the filing of such enforcement proceedings shall be given to the other relevant parties. In a proceeding to obtain a temporary order enforcing the Permanent Arbitrator's Award as issued under this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The Court's order or orders enforcing the Permanent Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

- 7.6 Individuals found to have violated the provisions of this Article are subject to immediate termination. In addition, IDOT reserves the right to terminate this PLA as to any party found to have violated the provisions of this Article.
- 7.7 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by parties to whom they accrue.
- 7.8 The fees and expenses of the Permanent Arbitrator shall be borne by the party or parties found in violation, or in the event no violation is found, such fees and expenses shall be borne by the moving party.

#### **ARTICLE VIII – TERMS OF AGREEMENT**

- 8.1 If any Article or provision of this Agreement shall be declared invalid, inoperative or unenforceable by operation of law or by any of the above mentioned tribunals of competent jurisdiction, the remainder of this Agreement or the application of such Article or provision to persons or circumstances other than those as to which it has been held invalid, inoperative or unenforceable shall not be affected thereby.
- 8.2 This Agreement shall be in full force as of and from the date of the Notice of Award until the Project contract is closed.
- 8.3 This PLA may not be changed or modified except by the subsequent written agreement of the parties. All parties represent that they have the full legal authority to enter into this PLA. This PLA may be executed by the parties in one or more counterparts.
- 8.4 Any liability arising out of this PLA shall be several and not joint. IDOT shall not be liable to any person or other party for any violation of this PLA by any other party, and no Contractor or Union shall be liable for any violation of this PLA by any other Contractor or Union.
- 8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

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Addendum A

IDOT Slate of Permanent Arbitrators

1. Bruce Feldacker
2. Thomas F. Gibbons
3. Edward J. Harrick
4. Brent L. Motchan
5. Robert Perkovich
6. Byron Yaffee
7. Glenn A. Zipp

Exhibit A - Contractor Letter of Assent

(Date)

To All Parties:

In accordance with the terms and conditions of the contract for Construction Work on [Contract No. ], this Letter of Assent hereby confirms that the undersigned Prime Contractor or Subcontractor agrees to be bound by the terms and conditions of the Project Labor Agreement established and entered into by the Illinois Department of Transportation in connection with said Project.

It is the understanding and intent of the undersigned party that this Project Labor Agreement shall pertain only to the identified Project. In the event it is necessary for the undersigned party to become signatory to a collective bargaining agreement to which it is not otherwise a party in order that it may lawfully make certain required contributions to applicable fringe benefit funds, the undersigned party hereby expressly conditions its acceptance of and limits its participation in such collective bargaining agreement to its work on the Project.

(Authorized Company Officer)

(Company)

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

- I. General
- II. Nondiscrimination
- III. Non-segregated 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. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

**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, United States Code, as required in 23 CFR 633.102(b) (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). 23 CFR 633.102(e).

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. 23 CFR 633.102(e).

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) in accordance with 23 CFR 633.102. 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 solicitation-for-bids or request-for-proposals 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). 23 CFR 633.102(b).

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. 23 CFR 633.102(d).

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. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

**II. NONDISCRIMINATION** (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A 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 Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 230, Subpart A, 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 (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 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 Part 35 and 29 CFR Part 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. 23 CFR 230.409 (g)(4) & (5).

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, sexual orientation, gender identity, 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 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 or other knowledgeable company official.

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, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure 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. 23 CFR 230.409. 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, sexual orientation, gender identity, 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, sexual orientation, gender identity, 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 thereunder. Employers must provide reasonable accommodation in all employment situations 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, sexual orientation, gender identity, 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, 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. Assurances Required:**

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. 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 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 recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

**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 more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, 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, sexual orientation, gender identity, 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), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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 (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov). 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.

(4) 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 will, by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov), refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.*

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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

## 2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

### 3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must 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.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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 [29 CFR part 3](#); and

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

#### **4. Apprentices and equal employment opportunity (29 CFR 5.5)**

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeymen under this part must be in conformity with



the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. 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. 23 CFR 230.111(e)(2). 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 as provided in 29 CFR 5.5.

**6. Subcontracts.** The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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 as provided in 29 CFR 5.5.

**9. Disputes concerning labor standards.** As provided in 29 CFR 5.5, 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 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 [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

**11. Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

## **V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

Pursuant to 29 CFR 5.5(b), 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 watchpersons 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. 29 CFR 5.5.

**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 and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)\* 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.

\* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

### 3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. **Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

## VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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" in paragraph 1 of Section VI 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: (based on longstanding interpretation)

- (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. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), 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. Pursuant to 23 CFR 635.116(c), 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. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

## **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 Part 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. 23 CFR 635.108.

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 Part 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). 29 CFR 1926.10.

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 Part 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 11, 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 (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)**

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

**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. 2 CFR 180.220 and 1200.220.

**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. 2 CFR 180.320.

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. 2 CFR 180.325.

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. 2 CFR 180.345 and 180.350.

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, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 180.330.

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. 2 CFR 180.220 and 180.300.

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. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. 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 System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

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 CFR 180.325.

\* \* \* \* \*



## **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 CFR 180.335;.

(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, 2 CFR 180.800;

(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, 2 CFR 180.700 and 180.800; 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. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

\* \* \* \* \*

## **3. 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). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant 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. 2 CFR 180.365.

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, Subpart I, 180.900 – 180.1020, 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 recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient 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. 2 CFR 1200.220 and 1200.332.

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. 2 CFR 180.220 and 1200.220.

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 System for Award Management website (<https://www.sam.gov>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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. 2 CFR 180.325.

\* \* \* \* \*

#### **4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should 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 Part 20, App. A.

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.

#### **XII. USE OF UNITED STATES-FLAG VESSELS:**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor 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. 46 CFR 381.7.

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 Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY  
SYSTEM OR APPALACHIAN LOCAL ACCESS**

**ROAD CONTRACTS** (23 CFR 633, Subpart B, Appendix B)  
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.