

# 27

**April 29, 2022 Letting**

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



**Illinois Department  
of Transportation**

**Contract No. 66M41  
KENDALL County  
Section (108)RS-6  
Route FAP 326  
District 3 Construction Funds**

Prepared by

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Checked by

(Printed by authority of the State of Illinois)



## **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. April 29, 2022 prevailing time 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. 66M41  
KENDALL County  
Section (108)RS-6  
Route FAP 326  
District 3 Construction Funds**

**Work begin at US 30/IL 47 intersection and ends 0.3 mile North of Waterpark Way in Yorkville. The project is an interim improvement to address poor pavement condition which include milling 2.25" and replacing in kind.**

- 3. INSTRUCTIONS TO BIDDERS.** (a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 101.09 of the Standard Specifications for Road and Bridge Construction, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.  
  
(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.
- 4. AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

By Order of the  
Illinois Department of Transportation

Omer Osman,  
Secretary

INDEX  
FOR  
SUPPLEMENTAL SPECIFICATIONS  
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2022

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

No ERRATA this year.

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec.

Page No.

No Supplemental Specifications this year.

RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

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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”, 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 326 (IL 47), Section (108)RS-6, Kendall County, Contract No. 66M41 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 is located on FAP 326 (IL 47) in Kendall County, starting from 0.3 miles north of Waterpark Way to 100 feet south of the Kane County Line. The length of the project is 1.38 miles.

#### DESCRIPTION OF PROJECT

This project consists of milling 2.25” of the existing hot-mix asphalt pavement on the mainline pavement and resurfacing with 1.75” of hot-mix asphalt surface course within the same limits on FAP Route 326 (IL 47). The project also includes aggregate shoulders, pavement marking/raised reflectors and other construction related items to complete the work as described herein.

## **KEEPING ROADS OPEN TO TRAFFIC**

(Revised February 23, 2015)

All lanes shall be open to traffic during the legal holiday periods according to Article 107.09 of the Standard Specifications, during weekends defined as 3:00 p.m. Friday to 12:00 midnight Sunday, and at the end of each work day.

This work will not be paid separately but shall be included in the cost of the applicable traffic control items.

In addition to these requirements, the following hours of operation restrictions apply:

1. All work associated with this project, except pavement marking, shall be done at night from 7 p.m. to 6 a.m.

No additional compensation will be allowed to the Contractor for working at night, except as outlined in Section 702 of the Standard Specifications for Nighttime Work Zone Lighting.

## **SURFACE COURSE PAVING SEQUENCE**

(Effective July 1, 1990; Revised January 1, 2007)

The HMA surface course shall be placed in a sequence that will minimize the time the centerline edge is exposed to traffic. When at the end of a day's operations the exposed centerline edge is greater than 1000 ft. (300 m), the contractor will be required to pave in the adjacent lane on the following workday.

## **MAXIMUM DROP-OFFS BETWEEN ADJACENT LANES**

(Effective December 14, 2009; Revised July 31, 2020)

When the Contractor's operations cause a difference in elevation greater than 1.5 in. (38 mm) for a vertical milled face, or 2 in (50mm) for a lift of HMA resurfacing between adjacent lanes, the lane shall remain closed. The Contractor shall adjust his milling and paving operations so that all traffic lanes are open at the end of each workday.

To meet the above requirement, the Contractor shall

- Place the binder lift immediately following the milling operation before opening the lane to traffic or
- Perform several HMA surface removal passes, which may be variable in milling depth, to comply with the drop-off policy or
- Place a temporary wedge after the milling operations (minimum 1V:3H slope) or
- Mill a sloped wedge between lanes (minimum 1V:3H slope).

When the difference in elevation between adjacent open traffic lanes is greater than 1 in. (25 mm) and less than or equal to 1.5 in. (38 mm) for a vertical milled face or 2 in (50mm) for a HMA lift, "UNEVEN LANES" signs (W8-11(FO)) shall be erected at 1 mile (1.6 km) intervals.

The above requirements were developed based on IDOT Safety Engineering Policy Memorandum 4-15. Any changes to the proposed lift thicknesses, milling depths or sequence of operations that change drop-offs at the centerline or edge of pavement must follow this policy and be approved by the Engineer.

This work will not be paid for separately but shall be included in the cost of the applicable traffic control items.

### **TEMPORARY INFORMATION SIGNING**

(Effective: September 24, 2013, Revised July 31, 2020)

Description. This work shall consist of the furnishing, installation, maintenance, and removal of temporary information signs.

Materials. Materials shall be according to the applicable portions of Section 701 of the Standard Specifications and as shown on the plans.

Construction Requirements. The temporary information signs shall be in place at least one week prior to the beginning of construction activities that impact traffic flow and shall remain in place until the completion of the project. If all lanes are open for an extended period of time during the project the Contractor shall cover the signs until lane closures resume. If the project is shut down for the winter the signs shall read "Road Work Resumes Spring 20XX."

Signs shall be installed according to the requirements of Section 701.

Method of Measurement: This work will be measured for payment in square feet in place. The auxiliary sign panel will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per square foot for TEMPORARY INFORMATION SIGNING.

### **RESTORATION OF WORK AREA**

(Effective April 1, 2003; Revised July 31, 2020)

The Contractor shall restore the work area as specified in Article 104.06 of the Standard Specifications. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. Restoration of the work area will not be paid for separately but shall be included in the cost of the associated pay items.

### **DRAINAGE MITIGATION ON MILLINGS AND RESURFACING PROJECTS**

Milling operations on this project have the potential to cause water encroachment on the travel lanes during and after a rainfall event. The Contractor shall schedule the milling and resurfacing operations to minimize the potential for the encroachment. The Contractor shall be responsible for mitigating any encroachments as directed by the Engineer. Mitigation may include, but not be limited to constructing lateral ditches through shoulders and modifying then repairing curb inlets to provide drainage.

The work associated with drainage mitigation will be included in the cost of the Hot-Mix Asphalt Surface Removal pay item.

### **HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH**

This work shall consist of hot-mix asphalt surface removal in accordance with the applicable portions of Section 440 of the Standard Specifications as shown in the plans and as directed by the Engineer.

The intent is to taper the milling of the existing hot-mix asphalt pavement from 2 ¼" to 1 ¾" at locations noted in the plans to provide an adequate transition.

This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH which price shall include all labor and equipment necessary to complete the work as specified to the satisfaction of the Engineer

### **MODIFY EXISTING CONTROLLER AND CABINET**

In addition to the requirements of Section 895 of the Standard Specifications for road and bridge construction adopted January 1, 2022, this pay item shall include modifying the existing controller and cabinet to include all items needed to install Video Vehicle Detection System and Remote-Controlled Video System. Modify Existing Controller and Cabinet shall also include installing the latest version of the traffic signal controller with ethernet and USB port at the intersection of Illinois Route 47 and Galena Road. This item also includes installing any other equipment and rewiring anything in the cabinet needed to have the Video Vehicle Detection System and the Remote-Controlled Video System work properly. This item will also include removing all unnecessary equipment in the traffic signal cabinet. The controller, conflict monitor, Malfunction Management Unit, UPS inverter with batteries, Alpha Guard and loop detector amplifiers with rack shall be given to the traffic signal inspector. All other work inside the cabinet necessary for correct operation for the traffic signal equipment shall be included in this pay item. New cabinet drawings and new phase diagram sticker shall be needed as directed by the Engineer.

Basis of payment: This item will be paid for at the contract unit price each for MODIFYING EXISTING CONTROLLER AND CABINET, which price shall include payment in full for all labor and material necessary to perform the work.

### **REMOTE-CONTROLLED VIDEO SYSTEM**

Description. This work shall consist of furnishing and installing a Remote-Controlled Video System as specified herein.

- a) The Remote-Controlled Video System shall be installed in the proposed traffic control cabinet at the intersection of IL 47 and Galena Road. The cellular or any other reliable interconnectivity router shall provide secure internet connectivity for the video cameras, controller, MMU (conflict monitor), UPS, and all other devices in the existing controller cabinet.

This cellular or any other reliable interconnectivity service data plan shall also include unlimited hotspot service for the area covering the State of Illinois.

The Remote-Controlled Video System shall include a PTZ camera and shall be mounted on a mast arm with the extension bracket if needed, using the manufacturer's guidelines. The PTZ camera shall have great visibility for all 4 directions and the traffic signal cabinet.

- b) The Remote-Controlled Video System shall be downloaded and given access to nine (9) tablets, nine (9) laptops, and three (3) desktops controlled at the IDOT, District 3 office in Ottawa, Illinois. These devices shall have access to all video cameras and be able to watch all intersecting legs and a separate PTZ camera in real time, with real-life pictures of the roadway, vehicles, and signal controller cabinet. The Remote-Controlled Video System shall view all District 3 existing and proposed PTZ cameras in one window on each device.
- c) The Remote-Controlled Video System shall be run on a cellular or any other reliable interconnectivity based communication system and be able to monitor active signal timing and data, red flash, open/closed cabinet door, along with the battery backup alarms during power failure from the district three devices. The Remote-Controlled Video System shall also provide detector information and the most current timing software so the State of Illinois has the ability to change timings in the controller from any District 3 devices. All alert alarms shall be automatically emailed to three (3) District 3 personnel as specified and all major alert alarms shall be texted to three (3) District 3 personnel. Ten (10) District 3 personnel shall have the ability to change text or email alerts by themselves when needed at any time.
- d) The Remote-Controlled Video System shall have a ten (10) year warranty and a ten (10) year paid cellular or any other 10-year paid reliable interconnectivity service plan which would be used for cellular or any other reliable interconnectivity data for the three (3) tablets, three (3) laptops, and three (3) desktops . The Illinois Department of Transportation shall not have to pay for any cellular or any other reliable interconnectivity service plans or data until after the end of the ten (10) year plan. The plan should have unlimited data, roaming charges, and minutes for all incoming and outgoing connections. The ten (10) year paid cellular or any other 10-year paid reliable interconnectivity service plan shall also have unlimited and uninterruptible streaming video capabilities. The start date of the warranty and paid cellular or any other reliable interconnectivity service plan shall not begin until the Remote-Controlled Video System has been approved by the Engineer.
- e) The Remote-Controlled Video System shall include nine (9) licenses with the latest software which shall be downloaded on nine (9) existing laptops, (9) tablets and (3) desktops. located at the Illinois Department of Transportation in Ottawa, Illinois. The nine (9) licenses shall be used to remotely access all video cameras, controllers, MMU (conflict monitor), UPS, and all other devices in the existing controller cabinet at the existing traffic signal at IL 47 and Galena Road.
- f) The Remote-Controlled Video System shall also include three (9) Timing Software licenses which shall be downloaded on the nine (9) existing laptops, (9) tablets and (3) desktops at the Illinois Department of Transportation in Ottawa, IL.
- g) The contractor shall provide two (2) days of training by a factory representative on the software for up to ten (10) District 3 personnel and anyone else they invite. A ten (10) year software maintenance and update shall be provided for all nine (9) Remote-Controlled Video System licenses and for the nine (9) Timing Software licenses. All warranty documentation/procedures and contact information to whom to contact about warranty repairs shall be presented on training day.

Basis of Payment. This work shall be paid at the contract unit price per each for REMOTE-CONTROLLED VIDEO SYSTEM, which price shall be payment in full for all labor and materials for all items described above for the REMOTE-CONTROLLED VIDEO SYSTEM.

## **VIDEO VEHICLE DETECTION SYSTEM**

This specification sets forth the minimum requirements for a video detection system that shall detect an advanced vehicle on a roadway by processing video images, and that provides vehicle presence, traffic flow data, event alarms, and full-motion video for real-time traffic control and management systems.

The Video Vehicle Detection System shall be used at the traffic signal at the intersection of IL 47 and Galena Road. The Video Vehicle Detection System shall be the latest version of the industry standards and shall take the place of the existing detector loops.

The Video Vehicle Detection System shall have a 10-year paid cellular service plan or any other 10-year paid reliable interconnectivity service plan which would be used for cellular or interconnectivity data. The Illinois Department of Transportation (IDOT) shall not have to pay for any cellular or any other 10-year paid reliable interconnectivity service plans or data until after the end of the 10-year plan. The plan should have unlimited data, roaming charges, and minutes for all incoming and outgoing connections. The 10-year paid cellular or any other 10-year paid reliable interconnectivity service plan shall also have unlimited and uninterrupted streaming video capabilities. This cellular or any other 10-year paid reliable interconnectivity service data plan shall also include unlimited hotspot service for the area covering the State of Illinois. This cellular or any other 10-year paid reliable interconnectivity service plan should be the same plan as the Remote-Controlled Video System cellular or any other 10-year paid reliable interconnectivity plan.

The start date of the paid cellular service plan shall not begin until the Video Vehicle Detection System is approved by the Resident Engineer.

After the new system is up and running, the Video Vehicle Detection System shall include removing all existing detector wire from handhole, conduit, poles, and controllers due to installation of new cameras. Before removal, the contractor shall inform the City Engineer and District 3 Bureau of Operations, Traffic Signal Section.

The Video Vehicle Detection system also includes removing all detector harnesses, detector amplifier racks, amplifier detector loop panels and any other detector loop items inside controller cabinet. The amplifiers shall remain the property of the State of Illinois and the remaining detector loop items and wires shall be disposed of as outlined in the specification book.

The Video Vehicle Detection System shall include removing the existing nonfunctional handholes which are the ones that have existing detector loop cables only. The removal of existing handholes shall be according to section 895 of the Standard Specifications for Road Construction.

The contractor shall provide two (2) days of training by a factory representative on the software for up to ten (10) people.

The Video Vehicle Detection System shall provide remote access to nine (9) tablets, nine (9) laptops, and three (3) desktops at the IDOT District 3 office in Ottawa, Illinois. All devices shall have access to all video cameras to be able to watch or change detector zone placement, type, and size at all intersecting legs.

The Video Vehicle Detection System shall be capable of communicating with the Centrac's Advance Traffic Management System and the Tactic's Advance Traffic Management System. The Video Detection System shall work wirelessly to the new controller placed inside the new traffic signal cabinet.

The video camera shall provide real life pictures of the roadway and vehicles.

The manufacturer shall recommend the height and location of the video camera so the proper detection zones will detect and monitor all legs from ten (10) feet in front of the stop bar until 600 feet in advance of the stop bar. The Video Vehicle Detection System shall use as many cameras as needed to provide and monitor the proper detection for all legs. The video camera or cameras shall either be mounted on the luminaire arm, the mast arm, or a six (6) foot extension on the mast arm.

The Video Detection System shall include a monitor (minimum size of 12" by 12") with mouse and keyboard inside the cabinet so the maintainer can monitor the detector loops in each direction. Make sure the traffic signal cabinet is big enough to provide comfortable room for the monitor.

The complete system shall also include an 18 AWG 3 conductor unshielded 600V cable. The video detection system shall also include a 6-foot video detection pipe extension mounted on all mast arms to withstand 100 mph wind.

**System Hardware.** The video detection system shall be comprised of two major hardware components: a video sensor and a communications interface panel. An optional wired input/output card shall be available for certain cabinet types.

**Video Sensor.** The video detection system shall include a video sensor that integrates a high-definition (HD) camera with an embedded processor for analyzing the video and performing detection.

Camera and Processor.

- The camera shall be a color CMOS imaging array.
- The camera shall have HD resolution of at least 720p (1280x720 pixels).
- The camera shall include a minimum 10X optical zoom.
  - It shall be possible to zoom the lens as required to satisfy across-the-intersection detection objectives, including stop line and advance detection.
  - It shall be possible to zoom the lens remotely from the TMC for temporary traffic surveillance operations or to inspect the cleanliness of the faceplate.
- The camera shall have direct, real-time iris and shutter speed control by the integrated processor.
- The processor shall support H.264 video compression for streaming output.

Video Sensor Enclosure Assembly.

- The camera and processor shall be housed in a sealed IP-67 enclosure.
  - The faceplate of the enclosure shall be glass and shall have hydrophilic coating on the exterior surface to reduce debris accumulation and maintenance.
  - The faceplate shall have a thermostatically-controlled indium tin oxide (ITO) heater applied directly on the interior surface to keep the faceplate clear of condensation, snow, ice, and frost.
- An adjustable aluminum visor shall shield the faceplate from the sun and extraneous light sources.
- An integral aiming sight shall assist in aiming the camera for the detection objectives.
- A removable rear cap and cable strain relief shall seal the power connection.
  - The rear cap shall be tethered to the enclosure to avoid dropping the cap during installation.

- The rear cap shall be fastened to the body of the video sensor with a single, captive bolt.
- The rear cap and enclosure shall include Gore breathers to equalize internal and external pressure while preventing moisture from entering the camera.
- The sensor shall be self-supporting on the manufacturer's mounting brackets for easier fastening during installation.
  - It shall be possible to rotate the field-of-view 360° without changing the angle of the visor.

#### Power and Communications.

- Power and communications for the video sensor shall be carried over a single three-conductor cable.
  - Termination of the three-conductor cable shall be inside the rear cap of the enclosure on a three-position, removable Phoenix terminal block. Each conductor shall be attached to the Phoenix plug via a screw connection.
- The video sensor shall operate normally over an input voltage range of 89 to 265 VAC at 50 or 60 Hz.
- Power consumption shall be no more than 16 watts typical.
- No supplemental surge suppression shall be required outside the cabinet.
- All communications to the video sensor shall be broadband-over-power via the same three-conductor cable that powers the unit. Coaxial cable shall not be required.

**Communications Interface Panel.** The video detection system shall include an interface panel in the traffic cabinet that manages communications between the video sensors, the traffic management center, a maintenance technician, and the traffic cabinet itself.

#### Video Sensor Connection.

- The communications interface panel shall provide connection points for four video sensors.
  - Each sensor connection shall be a 3-pole terminal block, which supplies power and broadband-over-power communications to the sensor.
  - The broadband-over-power communications shall provide a throughput of 70 to 90 Mbps.
  - The broadband-over-power connection shall support at least 1,000 feet of cabling to the video sensor.
  - Each video sensor connection shall include a power switch.
  - There shall be an LED for each video sensor to indicate the state of the power to the sensor and an LED for each video sensor to indicate the status of communications.
  - Each video sensor connection shall contain a resettable fuse.
  - Each video sensor connection shall provide high-energy transient protection.
  -

#### Traffic Management Center (TMC) Communications.

- An Ethernet port shall be provided to connect to a remote Traffic Management Center (TMC).
  - The TMC connection shall support 10/100/1000 Mbps Ethernet communication.
  - The communications interface panel shall proxy all network requests that arrive on the TMC connection to avoid unwanted network traffic from reaching the broadband-over-power network between the communications interface panel and the video sensors.

- All communications to the video detection system through the TMC connection shall be to a single IP address.
- The system shall be able to provide Full HD quality video through its WAN port for use in streaming video back to the TMC or any remote location.

#### Local User Communications.

- A wired Ethernet port shall be provided to connect the technician at the cabinet to the video detection system for setup and maintenance purposes.
  - The maintenance port shall support 10/100/1000 Mbps Ethernet communication.
  - All communications to the video detection system through the maintenance port shall be to a single IP address.
  - The maintenance port shall support DHCP to automatically assign an IP address to the user's computer.
- An 802.11g Wi-Fi access point shall allow wireless connection to the video detection system at the cabinet for setup and maintenance purposes.
  - All communications to the video detection system through the Wi-Fi access point shall be to a single IP Address.
  - The Wi-Fi access point shall support DHCP to automatically assign an IP Address to the user's computer.
  - The Wi-Fi access point shall include a dipole, omnidirectional antenna.
  - A momentary pushbutton shall allow the user to turn the Wi-Fi access point on or off.
  - The Wi-Fi access point shall turn itself off automatically after a period of inactivity from connected devices.
  - An LED shall indicate when the Wi-Fi access point is enabled.
  - The Wi-Fi access point shall operate simultaneously with the wired maintenance port and with the TMC connection.
  - The WiFi access point shall require a password for connection by a user's computer. The default password shall be changeable.

Traffic Controller Connection. The communications interface panel shall provide one (1) connection to communicate to the traffic controller through the cabinet.

- The traffic controller connection shall support a TS2 Type 1 compatible SDLC interface.
  - The traffic controller connector shall be a 15-pin female metal shell D sub-miniature type connector to support a standard NEMA TS2 or TEES SDLC cable.
  - The traffic controller connection shall support a protocol interface to SDLC-capable traffic controllers (NEMA or TEES).
  - The traffic controller connection shall support the NEMA TS2 SDLC protocol to include up to 64 detector outputs and 32 inputs.
- The traffic controller connection shall be able to connect to a wired input/output card, which supports wired I/O in cabinets without a SDLC-capable controller.
  - The wired I/O data communications link shall support at least 24 outputs and 16 inputs.
- It shall be possible to connect and use both SDLC communications and communication to the wired input/output card simultaneously.

#### USB Ports.

- The communications interface panel shall include two USB 2.0 ports.
  - If a communications interface panel fails to start and run due to a software or operating system failure, it shall be possible to reinstall all system and application

software from a USB memory stick without necessitating removal of the communications interface panel from the cabinet.

- Video recording of up to 2 cameras simultaneously shall commence automatically when an appropriately configured USB memory stick is installed in either USB port.

**Power.**

- The communications interface panel shall accept input voltage in the range of 89-265 VAC, 50/60 Hz power from the transient-protected side of the cabinet.
- The communications interface panel shall be protected by two slow blow fuses. Spares shall be attached to the panel.

**Wired Input/Output Card.** The video detection system shall support an optional wired input/output card that communicates with the communications interface panel for real-time detection states and other I/O to the traffic controller. The card may reside in a standard detector rack or shelf-mount enclosure with power module.

The optional wired input/output card shall comply with the form factor and electrical characteristics to plug directly into a NEMA type C or D detector rack or Caltrans TEES Input File.

- The card shall occupy two slots of the detector rack.
- The card shall provide four detector outputs on its rear-edge connector.
- A front connector shall provide communication to the communications interface panel.
- A front connector shall allow 16 inputs and 24 contact-closure detector outputs for wiring into the cabinet.
  - A front panel LED for each of the 16 inputs and 24 outputs shall indicate the state of the input or output.
- The wired input/output card shall support optional expansion cards in other slots. Each expansion card shall support 4 outputs to the back edge of the card.
- The wired input/output card shall support optional harnesses for connection to Input Files or C1, C4, C11, and C12 ports to support Type 170 or Type 2070 controllers.

**System Software.** The video detection system shall include management software for configuration, monitoring and data collection purposes.

**Management Software.**

- Management software shall be a Windows-based application.
  - The software shall be compatible with latest Windows operating systems (OS).
  - The software shall communicate with the video detection system via Ethernet.
- The management software shall automatically determine all video sensors and communications interface panels available on the local network and populate a list of all devices.
- The management software shall provide a means to add video sensors and communications interface panels on routed networks by the communications panel's WAN IP address.
- The management software shall provide the user a means to name individual video sensors and communications interface panels.
- The management software shall provide a means for the user to zoom the camera optics while viewing a live video stream.
- The management software shall provide a means for the user to easily calibrate distances in the field of view so as to create a 3-dimensional mapping of the complete field of view.
- The management software shall provide the user a means to create 4-sided detection zones in the field of view using either a still snapshot or live video.

- The management software will overlay an outline of each detection zone over the background image.
- It shall be possible for the user to place detection zones anywhere in the field of view for stop line detection and/or advance detection.
- It shall be possible for the user to set the desired color of both the "on" and "off" states of the overlay for individual detection zones.
- It shall be possible for the user to alter the size and shape of any previously created zone.
  - It shall be possible for the user to click and drag any of the 4 sides of a zone and the system will automatically scale the length of the side consistent with the 3-dimensional field of view.
  - It shall be possible for the user to move an entire zone without automatic rescaling.
- It shall be possible for the user to create a new zone by selecting an existing zone and duplicating it on either the left or right side or specifying a new zone behind (for advance) with a specific length and distance back from selected zone.
- It shall be possible for the user to easily rotate a zone by selecting any of its four corners and dragging to rotate it.
- It shall be possible to easily flip the zone direction 180 degrees from its current orientation.
- It shall be possible for the user to name each zone uniquely.
- It shall be possible for the user to assign each zone to detect vehicles, to detect bicycles, or to detect both, and to specify different outputs for each type.
- It shall be possible for the user to specify the output of a zone as a presence, pulse, or snappy type output (presence during red and pulse during green signal phase state).
- The pulse output shall be usable for both approaching and receding traffic.
- The pulse output shall have a user programmable duration from 100 to 400 ms.
- It shall be possible for a zone to have multiple output types (presence, pulse, snappy) on separate output channels.
- It shall be possible for the user to tie the presence outputs of multiple zones as well as signal phase state together with AND/OR Boolean logic.
- It shall be possible for the user to assign the same output to multiple zones such that the output will be on if any of the zones are detecting a vehicle or bicycle.
- It shall be possible for the user to assign a single zone to more than one output such that if a vehicle or bicycle is detected, all the assigned outputs shall be turned on.
- The management software shall be capable of creating at least 99 detection zones per video sensor.
- It shall be possible for the management software to retrieve all configuration parameters from video sensors or communications interface panels.
  - It shall be possible for the user to save all the settings for a video sensor or a communications interface panel to a laptop file.
  - The management software shall provide a means to read or import all the settings from a previously saved configuration file for a video sensor or a communications interface panel.
- The management software shall be able to download a new version of the application software into a communications interface panel and its attached video sensors.
- The management software shall provide a screen to monitor operation of a video sensor.
  - The monitoring screen shall include a live video stream from the video sensor with at least HD 1280x720 pixel resolution.
  - The monitoring screen shall show indications of detection in real time by changing the color of the detection zone.

- It shall be possible for the user to configure different indications for vehicle detections vs. bicycle detections when both are configured for the same zone.
- The monitoring screen shall include the following optional, configurable objects. It shall be possible for the user to size and position them anywhere on the screen and to change the color and size of text.
  - An indication of when either a zone or an output is on or off, along with a user-configurable name for that indicator, applicable to any zone or output type.
  - The current time in the video sensor.
  - A user-configurable title or name.
  - The version number of the video sensor software.
  - Configurable text as defined by the user.
- Undo/Redo functions shall be available for operations during detection zone setup and programming.
- It shall be possible for the user to turn the overlay graphics on or off with a single setting.
- The management software shall provide a screen to monitor operation of the intersection with a quad-view video stream from the communications interface panel.
  - The quad-view video stream shall have a resolution of at least HD 1280x720 pixels, where each of the sensor videos comprising the quad-view shall be at least 640x360 pixels.
  - It shall be possible for the user to configure the order that the sensor videos appear in the quad-view.
  - The real-time quad-view video stream shall be capable of displaying the overlay graphics for all four sensors simultaneously.
- While monitoring the video of a single video sensor or of the quad-view, it shall be possible for the user to request a "snapshot" or single-frame image to save to a named file on a laptop.
- While monitoring the video of a single video sensor or of the quad-view, it shall be possible for the user to record a period of the video to save to a named file on a laptop.

**System Functionality.** The video detection system shall provide the following features and functionality.

**Detection Performance.**

- The video detection system shall detect the presence of vehicles in defined zones and turn on the assigned output when the vehicle is present in the zone.
  - Stop Line Detection
    - For detection zones placed at the stop line, the probability of not detecting the presence of a vehicle shall be 1% or less when aggregated over a 24-hour period when the video sensor is installed and configured properly.
    - For detection zones placed at the stop line, the probability of falsely detecting a vehicle that is not present shall be 3% or less when aggregated over a 24-hour period when the video sensor is installed and configured properly.
  - Advance Detection
    - It shall be possible to place advance detector zones such that the farthest point of the zone is up to 600 feet from stop bar. Advance detector zone placement shall include 2-3 car lengths of field-of-view beyond the farthest point of the zone.
  - Receding Zones
    - The video detection system shall be capable of detecting receding vehicles in day or night conditions when the video sensor is installed and configured properly.
- To ensure statistical significance for the above detection performance specifications, the data shall be collected over 24-hour time intervals (so as to avoid a single lighting

condition) and will contain a minimum of one hundred (100) vehicles per lane. The calculations of detection performance will not include turning movements where vehicles do not pass through the detectors, vehicle lane-change anomalies, or where they stop short or stop beyond the combined detection zones.

#### **Failsafe Mode.**

- The video detection system shall provide three (3) failsafe options during optical contrast loss. The default shall be maximum recall. The end-user may also choose to use minimum recall or fixed recall in which a user-defined number of seconds may be implemented to hold call during green.
- The video sensor shall continuously monitor the overall contrast in the video. If the overall contrast falls below a preset level (such as caused by dirty faceplate, severe glare, extreme fog, or temporary ice/snow on the faceplate), the sensor shall enable the chosen failsafe mode. When sufficient contrast is restored in the video, the sensor will exit the failsafe mode.
- The communications interface panel shall continuously monitor the connectivity status of the attached video sensors. If any video sensor goes offline due to either electrical failure or internal software failure, the communications interface panel shall enable the failsafe mode for that video sensor. If the video sensor comes back online, failsafe mode shall end.

#### **Data Collection.**

- The video detection system shall automatically collect and store traffic flow data in non-volatile memory for later retrieval and analysis. No additional hardware or software shall be necessary. Data functionality shall include the following:
  - Data shall be collected automatically for all zones created by the user once the learn period is complete and normal detection is active. No further setup shall be required.
  - Vehicle counts per zone.
  - Vehicle turning movements independent of zone.
  - Vehicle average speeds.
  - Vehicle lengths.
  - Detection statistics with the on/off timestamps when zones were activated.
  - Detection actuation statistics for whether a zone was triggered by a vehicle or a bicycle.
- The management software shall be able to retrieve collected data over a specified period of . time or for all currently stored data and save into a standard CSV file.
- The sensor hardware shall include up to 8GB of memory storage capacity for data collection.
- Data Download Types
  - Options shall be provided for downloaded data in the form of a .csv file for Raw data, Binned data, Detections and Zone Status as defined below:
    - Raw Data - Includes time stamped Zone statistics for vehicle or bike actuations and average speed as well as time stamped Exiting Vehicle Statistics which include volume, turning movement direction, speed and length for vehicles exiting each zone.
    - Binned Data - Pre-binned data with bin time set by the user down to as little as 1 minute. Data shall include volume, occupancy, turning movement counts and speed for vehicles for each zone.
    - Detections - Date/time stamped data regarding vehicles exiting zones including type of object (vehicle or bike), speed, length and direction of movement (through, left, right).

- Zone Status – Date/Time stamped indications of whether a vehicle or bicycle actuated a zone and the average speed of all objects in the zone.
- Remote Data Interface
  - Data including counts, turning movements, speed and length, as well as zone names, sensor status, and video snapshots shall be available to remote systems via remote communication to the system using an Applications Programming Interface (API). This API shall consist of a set of GET commands embedded in HTTP protocol. The resulting data returned shall be in JSON format.

### **Operations Log.**

- The communications interface panel and each video sensor shall maintain a time-stamped operations log of routine and special events in non-volatile memory for later retrieval and analysis.

### **Time Synchronization.**

- The video detection system and management software shall provide three methods to synchronize the time of day clocks in the communication interface panel and the video sensors, as follows:
  - Manual time synchronization operation by the user, which sets the time to the current time on the laptop where the management software is running.
  - A configuration setting to allow the communications interface panel to automatically obtain time from the NEMA TS2 protocol on the SDLC channel and broadcast it to the video sensors.
  - A configuration setting to allow the communications interface panel to automatically obtain time from up to five Network Time Protocol (NTP) sources and broadcast it to the video sensors.

### **Video Streaming.**

- In addition to the ability to view video streams in the management software, it shall be possible to view video from individual sensors or to view the quad-view from the communications interface panel using a third-party video player application on a Microsoft Surface Laptop 4 or equivalent, smartphone or laptop computer.
- Video bitrate is user-definable between 100 Kbps-5000 Kbps. The default shall be 2048 Kbps. All bitrates shall provide 30 fps.

**Installation and Setup.** The video detection system hardware shall be designed for flexible, fast and easy installation and setup.

It shall be possible to mount the video sensor on an intersection pole, mast arm, or luminaire arm.

No special tools or extra equipment, other than a laptop for configuration, will be required.

Once all hardware is installed, connected and functional, it shall be possible to configure the video detection system for a typical 4-approach, 8-phase intersection in 15 minutes or less.

### **Warranty, Service, and Support**

The video detection system shall be provided with the following warranty, service, and support options.

**Warranty.**

- The manufacturer shall warrant the video detection system and three (3) devices for a minimum of ten (10) years, along with ten (10) years of software maintenance and upgrades.

**Service.**

- Ongoing software support by the manufacturer will include software updates of the video sensor, communications interface panel, and management software. These updates will be provided free of charge during the warranty period. The manufacturer will maintain a program for technical support and software updates following expiration of the warranty period. This program will be available to the contracting agency in the form of a separate agreement for continuing support.

**Support.**

- A quick-start guide, installation guide, application notes, and other materials shall be available from the manufacturer to assist in product installation and setup for various applications. In addition, training online or in person shall be available.
- Training shall be available to personnel of the contracting agency in application design, operation, setup, and maintenance of the video detection system.
- Manufacturer shall provide a tech support website, support email address and a 1-800 number for technical support.

**Basis of Payment.** This work will be paid for at the contract unit price EACH for VIDEO VEHICLE DETECTION SYSTEM, which price shall be payment in full for all labor and materials for all items described above for VIDEO VEHICLE DETECTION SYSTEM.

**AUTOMATED FLAGGER ASSISTANCE DEVICES (BDE)**

Effective: January 1, 2008

**Description.** This work shall consist of furnishing and operating automated flagger assistance devices (AFADs) as part of the work zone traffic control and protection for two-lane highways where two-way traffic is maintained over one lane of pavement. Use of these devices shall be at the option of the Contractor.

**Equipment.** AFADs shall be according to the FHWA memorandum, "MUTCD - Revised Interim Approval for the use of Automated Flagger Assistance Devices in Temporary Traffic Control Zones (IA-4R)", dated January 28, 2005. The devices shall be mounted on a trailer or a moveable cart and shall meet the requirements of NCHRP 350, Category 4.

The AFAD shall be the Stop/Slow type. This device uses remotely controlled "STOP" and "SLOW" signs to alternately control right-of-way.

Signs for the AFAD shall be according to Article 701.03 of the Standard Specifications and the MUTCD. The signs shall be 24 x 24 in. (600 x 600 mm) having an octagon shaped "STOP" sign on one side and a diamond shaped "SLOW" sign on the opposite side. The letters on the signs shall be 8 in. (200 mm) high. If the "STOP" sign has louvers, the full sign face shall be visible at a distance of 50 ft (15 m) and greater.

The signs shall be supplemented with one of the following types of lights.

- (a) Flashing Lights. When flashing lights are used, white or red flashing lights shall be mounted within the "STOP" sign face and white or yellow flashing lights within the "SLOW" sign face.
- (b) Stop and Warning Beacons. When beacons are used, a stop beacon shall be mounted 24 in. (600 mm) or less above the "STOP" sign face and a warning beacon mounted 24 in. (600 mm) or less above, below, or to the side of the "SLOW" sign face. As an option, a Type B warning light may be used in lieu of the warning beacon.

A "WAIT ON STOP" sign shall be placed on the right hand side of the roadway at a point where drivers are expected to stop. The sign shall be 24 x 30 in. (600 x 750 mm) with a black legend and border on a white background. The letters shall be at least 6 in. (150 mm) high.

This device may include a gate arm or mast arm that descends to a horizontal position when the "STOP" sign is displayed and rises to a vertical position when the "SLOW" sign is displayed. When included, the end of the arm shall reach at least to the center of the lane being controlled. The arm shall have alternating red and white retroreflective stripes, on both sides, sloping downward at 45 degrees toward the side on which traffic will pass. The stripes shall be 6 in. (150 mm) in width and at least 2 in. (50 mm) in height.

**Flagging Requirements.** Flaggers and flagging requirements shall be according to Article 701.13 of the Standard Specifications and the following.

AFADs shall be placed at each end of the traffic control, where a flagger is shown on the plans. The flaggers shall be able to view the face of the AFAD and approaching traffic during operation.

To stop traffic, the "STOP" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall descend to a horizontal position. To permit traffic to move, the "SLOW" sign shall be displayed, the corresponding lights/beacon shall flash, and when included, the gate arm shall rise to a vertical position.

If used at night, the AFAD location shall be illuminated according to Section 701 of the Standard Specifications.

When not in use, AFADs will be considered nonoperating equipment and shall be stored according to Article 701.11 of the Standard Specifications.

**Basis of Payment.** This work will not be paid for separately but shall be considered as included in the cost of the various traffic control items included in the contract.

## **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.

## 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."

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

Effective: September 1, 2000

Revised: March 2, 2019

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

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

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

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

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or

(d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform **10.00%** of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

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

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

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

BIDDING PROCEDURES. Compliance with this Special Provision is a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not

responsive, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty and may deny authorization to bid the project if re-advertised for bids.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. This means the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts the bidder has made. Mere *pro forma* efforts, in other words efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases and will be considered by the Department.
  - (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
  - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Contractor might otherwise prefer to perform these work items with its own forces.
  - (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
  - (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

- b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines the bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided it is otherwise eligible for award. If the Department determines the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification will also include a statement of reasons for the adverse determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period to cure the deficiency.
- (c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "[DOT.DB.E.UP@illinois.gov](mailto:DOT.DB.E.UP@illinois.gov)" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer,

the bidder will be sent a written decision within ten working days after receipt of the request for reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

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

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.
- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
  - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
  - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
  - (2) 100 percent goal credit for the cost of materials or supplies obtained from a DBE manufacturer.

- (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

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

- (a) NO AMENDMENT. No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be emailed to the Department at [DOT.DBE.UP@illinois.gov](mailto:DOT.DBE.UP@illinois.gov).
- (b) CHANGES TO WORK. Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (c) SUBCONTRACT. The Contractor must provide copies of DBE subcontracts to the Department upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (d) ALTERNATIVE WORK METHODS. In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
  - (1) The replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or

- (2) The DBE is aware its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
- (3) The DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.

(e) TERMINATION AND REPLACEMENT PROCEDURES. The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;
- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.

- (6) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated or fails to complete its work on the Contract for any reason, the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (f) FINAL PAYMENT. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than 30 calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.
- (g) ENFORCEMENT. The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (h) RECONSIDERATION. Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract

Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of “Good Faith Effort Procedures” of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

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

Effective: April 1, 2022

Replace Article 442.08(b) of the Standard Specifications with the following:

“(b) Density. The density of the compacted HMA shall be according to Articles 1030.06, 1030.09(b), 1030.09(c), and 1030.09(f).”

### **HOT-MIX ASPHALT – START OF PRODUCTION (BDE)**

Effective: January 1, 2022

Add the following paragraph between the third and four paragraphs of Article 1030.10 of the Standard Specifications:

“When a test strip is not required, each HMA mixture with a quantity of 3,000 tons (2,750 metric tons) or more shall still be sampled on the first day of production: I-FIT and Hamburg wheel testing for High ESAL; I-FIT testing for Low ESAL. Within two working days after sampling the mixture, the Contractor shall deliver gyratory cylinders to the District laboratory for Department verification testing. The High ESAL mixture test results shall meet the requirements of Articles 1030.05(d)(3) and 1030.05(d)(4). The Low ESAL mixture test results shall meet the requirements of Article 1030.05(d)(4).”

### **ILLINOIS WORKS APPRENTICESHIP INITIATIVE – STATE FUNDED CONTRACTS (BDE)**

Effective: June 2, 2021

Revised: September 2, 2021

Illinois Works Jobs Program Act (30 ILCS 559/20-1 et seq.). For contracts having an awarded contract value of \$500,000 or more, the Contractor shall comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules. The goal of the Illinois Apprenticeship Works Initiative is that apprentices will perform either 10% of the total labor hours actually worked in each prevailing wage classification or 10% of the estimated labor hours in each prevailing wage classification, whichever is less. The Contractor may seek from the Department of Commerce and Economic Opportunity (DCEO) a waiver or reduction of this goal in certain circumstances pursuant to 30 ILCS 559/20-20(b). The Contractor shall ensure compliance during the term of the contract and will be required to report on and certify its compliance. An apprentice use plan, apprentice hours, and a compliance certification shall be submitted to the Engineer on forms provided by the Department and/or DCEO.

**MATERIAL TRANSFER DEVICE (BDE)**

Effective: June 15, 1999

Revised: January 1, 2022

Add the following to Article 406.03 of the Standard Specifications:

“(n) Material Transfer Device .....1102.02”

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

“When required, a material transfer device (MTD) shall be used to transfer the HMA from the haul trucks to the spreading and finishing machine. The particular HMA mixtures for which an MTD is required will be specified in the plans. When not required, an MTD may still be used at the Contractor’s option, subject to the requirements and restrictions herein. Use of MTDs shall be according to the following.

MTD Category	Usage
Category I	Any resurfacing application Full-Depth HMA where the in-place binder thickness is $\geq 10$ in. (250 mm)
Category II	Full-Depth HMA where the in-place binder thickness is $< 10$ in. (250 mm)

Category I MTD’s will only be allowed to travel over structures under the following conditions:

- (1) Approval will be given by the Engineer.
- (2) The MTD shall be emptied of HMA material prior to crossing the structure and shall travel at crawl speed across the structure.
- (3) The tires of the MTD shall travel on or in close proximity and parallel to the beam and/or girder lines of the structure.”

Add the following to the end of Article 406.13(b) of the Standard Specifications:

“The required use of an MTD will be measured for payment in tons (metric tons) of the HMA mixtures placed with the MTD. The use of an MTD at the Contractor’s option will not be measured for payment.”

Add the following between the second and third paragraphs of Article 406.14 of the Standard Specifications:

“The required use of an MTD will be paid for at the contract unit price per ton (metric ton) for MATERIAL TRANSFER DEVICE. The HMA mixtures placed with the MTD will be paid for separately according to their respective specifications.”

Revise Article 1102.02 of the Standard Specifications to read:

**“1102.02 Material Transfer Device (MTD).** The MTD shall be according to the following.

- (a) Requirements. The MTD shall have a minimum surge capacity of 15 tons (13.5 metric tons), shall be self-propelled and capable of moving independent of the paver, and shall be equipped with the following.
  - (1) Front-Dump Hopper and Conveyor. The conveyor shall provide a positive restraint along the sides of the conveyor to prevent material spillage. MTDs having paver style hoppers shall have a horizontal bar restraint placed across the foldable wings which prevents the wings from being folded.
  - (2) Paver Hopper Insert. The paver hopper insert shall have a minimum capacity of 14 tons (12.7 metric tons).
  - (3) Mixer/Agitator Mechanism. This re-mixing mechanism shall consist of a segmented, anti-segregation, re-mixing auger.
- (b) Qualification and Designation. The MTD shall be on the Department’s qualified product list with one of the following designations.
  - (1) Category I. The MTD has a documented maximum HMA carrying capacity contact pressure greater than 25 psi and has a central surge hopper of sufficient capacity to mix upstream HMA with downstream HMA.
  - (2) Category II. The MTD has a documented maximum HMA carrying capacity contact pressure less than or equal to 25 psi.”

**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 PAYROLL RECORDS (BDE)**

Effective: April 1, 2021

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.”

**VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)**

Effective: November 1, 2021

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. The lights shall be in operation while the vehicle or equipment is engaged in construction operations.”

## WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: November 1, 2021

The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

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

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

## WORK ZONE TRAFFIC CONTROL DEVICES (BDE)

Effective: March 2, 2020

Add the following to Article 701.03 of the Standard Specifications:

"(q) Temporary Sign Supports .....1106.02"

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 manufactured after December 31, 2019 shall be MASH-16 compliant. Category 1 devices

manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

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 manufactured after December 31, 2019 shall be MASH-16 compliant. Category 2 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, may be used on contracts let before December 31, 2024.

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-16 compliant. Category 3 devices manufactured on or before December 31, 2019, and compliant with NCHRP 350 or MASH 2009, 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 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-16 compliant is available, an NCHRP 350 or MASH-2009 compliant device may be used, even if manufactured after December 31, 2019.”

Revise Articles 1106.02(g), 1106.02(k), and 1106.02(l) 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.”

**WORKING DAYS (BDE)**

Effective: January 1, 2002

The Contractor shall complete the work within 25 working days.

## **REVISIONS TO THE ILLINOIS PREVAILING WAGE RATES**

The Prevailing rates of wages are included in the Contract proposals which are subject to Check Sheet #5 of the Supplemental Specifications and Recurring Special Provisions. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and Check Sheet #5 of the Contract, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at <http://www.state.il.us/agency/idol/> or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.